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Annegret F. Hannawa, Anne Wendt

NEW HORIZONS IN PATIENT SAFETY: UNDERSTANDING COMMUNICATION

CASE STUDIES IN NURSING

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New Horizons in Patient Safety: Safe Communication

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Evidence-Based Core Competencies with Case Studies from Nursing Practice

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Foreword

Professor Annegret Hannawa and her colleagues have written an extraordinary book recasting the focus of patient safety from checklists and electronic records to pervasive, largely unexamined impacts of poor communication on a lack of shared understanding between healthcare team members, patients, and families. This work puts the relational and contextual nature of communication front and center. The case studies demonstrate the principles and theory presented in the first part of the book, showing how and when unsafe communication occurs and contributes to undesirable patient care outcomes.

Nurses pride themselves on providing patient-centered, relationally attuned nursing care. Such relational care requires multifaceted communication skills to overcome common barriers to a shared interpersonal understanding. This book can function as an invaluable consciousness-raising tool to help students, nurses, and healthcare teams pay attention to the requirements of a kind of communication that effectively reduces errors in patient care. As this book demonstrates, relationship-centered and attuned patient care requires well-developed "safe communication" skills based upon an understanding of how to co-create communication with others. The goal is to establish adequate shared understandings between nurses, patients, families, and team members in order to prevent patient safety events.

The case studies provide opportunities for students and practitioners of nursing to reflect upon their own communication strengths and weaknesses. The impediments to a shared interpersonal understanding in healthcare settings are numerous. The barriers to such "safe communication" are spelled out in the theory section of the book, and illustrated in the case studies. Guides for reflection and experiential learning from the cases are also provided.

Typically, communication lies in the background with the focus being on just transmitting information in an unexamined way. When miscommunication occurs in everyday exchanges, there is usually time to clear things up with the consequences being nothing more than inconvenience and delay. In fast-paced healthcare settings, ordinary mistakes in establishing shared communication can lead to life-and-death failures. Using this book to focus on "safe communication" practices in the context of patient care places the demands and barriers to successful healthcare communication in bold relief. Readers will learn to identify their own miscommunication tendencies, and correct them through studying authentic cases illustrating types of communication errors that occur frequently in nursing practice.

This book provides essential insights and experiential learning for practitioners, undergraduate and graduate students of nursing. If adopted broadly in schools of

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nursing, it can make a huge impact on improving patient safety. This book delivers a needed new emphasis in patient safety that can help preserve the front-line thinking and actions of the whole healthcare team.

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List of Abbreviations

ACE	angiotensin-converting enzyme
ACL	anterior cruciate ligament
AHRQ	Agency for Healthcare Research and Quality
AIDS	acquired immunodeficiency syndrome
Beta-hCG	human chorionic gonadotropin beta
BIPAP	bi-level positive airway pressure
BP	blood pressure
C. difficile	clostridium difficile
CBC	complete blood count
CD	compact disc
CHF	congestive heart failure
COPD	chronic obstructive pulmonary disease
CPR	cardiopulmonary resuscitation
CT	computed tomography
CVA	cerebrovascular accident
DNI	“do not intubate”
DNR	“do not resuscitate”
ED	emergency department
EHR	electronic health record
GERD	gastroesophageal reflux disease
GI	gastroenterology
H1–H2	histamine receptors 1 and 2
HRO	high-reliability organizations
ICHOM	International Consortium for Health Outcomes Measurement
ICU	intensive care unit
IDDM	Insulin-dependent diabetes mellitus
INR	international normalized ratio
IOM	Institute of Medicine
ISMP	Institute for Safe Medication Practices
IUP	intrauterine pregnancy
LMP	last menstrual period
MRSA	Methicillin-resistant staphylococcus aureus
NP	nurse practitioner
NSTEMI	non-ST segment elevation myocardial infarction
OBGYN	obstetrics and gynecology
OR	operating room
ORIF	operative reduction-internal fixation
PACS	picture archiving and communication system
PACU	post-anesthesia care unit
PCI	percutaneous cardiac intervention
PCP	primary care provider
PEA	pulseless electrical activity
PICU	pediatric intensive care unit
PO	per os (orally/by mouth)
POLST	physician orders for life-sustaining therapy
PSA	prostate-specific antigen

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PSNet	Patient Safety Network
PTSD	post-traumatic stress disorder
RRT	Rapid Response Team
SACCIA	Sufficiency, Accuracy, Clarity, Contextualization, Interpersonal Adaptation
SNF	skilled nursing facility
STAT	signal transducer and activator of transcription
TBI	traumatic brain injury
TTP	thrombocytopenic purpura
UTI	urinary tract infection
VRE	Vancomycin-resistant enterococci
VTE	venous thromboembolism
WebM&M	Morbidity and Mortality Rounds on the Web
WHO	World Health Organization

Contents

Preface

Significance of the problem

Health expenditures in industrialized countries have doubled in the last 30 years (Leatherman and Sutherland 2004). However, the quality of healthcare in these countries has remained uneven and is often inadequate (Chassin 2013; Classen et al. 2011; Landrigan et al. 2010; McGlynn et al. 2003; World Health Organization 2000). Healthcare systems around the world produce substantial unnecessary costs through the underuse, overuse, and misuse of resources, services, and interventions (McLoughlin and Leatherman 2003). Even in developed countries, only every second patient receives recommended treatments (Harrison et al. 2015; McGlynn et al. 2003; Schuster et al. 2005; Jha et al. 2010, 2013) and many providers do not follow medical guidelines (Farquhar et al. 2002). These figures call for urgent intervention to improve the quality of care worldwide.

Although healthcare provides benefits, it also poses a safety risk to patients. Initial global estimates from the World Health Organization (WHO) show that at least 43 million patients are harmed by hospital care each year at a cost of at least 23 million disability-adjusted life years and $132 billion in excess healthcare spending (Jha et al. 2013). More than two-thirds of these incidents result from preventable errors, ranking errors in healthcare among the third most common causes of death in the United States (Makary and Daniel 2016) and among the 10 leading causes of disability in the world (Jha et al. 2013). In colloquial terms, this count exceeds the fatalities that would be incurred by three jumbo jets crashing every 2 days and the combined number of injuries and deaths that result from motor and air crashes, suicides, falls, poisonings, and drownings (Kohn et al. 2000). This makes errors in healthcare a worldwide public health problem, ahead of high-profile diseases like acquired immunodeficiency syndrome (AIDS) and breast cancer.

Ineffective communication has been identified repeatedly as a major root cause of harmful events in healthcare, accounting for between 25% (Wakefield 2007; Australian Institute of Health and Welfare & the Australian Commission on Safety and Quality in Healthcare 2007) and 80% (Joint Commission 2007, 2012) of sentinel event reports. The literature consistently shows that health outcomes are enhanced when clinicians communicate well with colleagues and patients. Conversely, when communication is poor, both health outcomes and patients are placed at significant risk (Kesten et al. 2010; Klipfel et al. 2011; Pfrimmer 2009; Twedell and Pfrimmer 2009).

Because healthcare is a particularly unforgiving context for communication deficiencies, competent communication must be considered a fundamental criterion of "good clinical practice" (Beyer et al. 2009). This necessity has been widely recognized in the field of nursing. Leading organizations in nursing education have included communication as an essential competency. For example, the *American Association of Col-*

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leges of Nursing (AACN) in the United States regards effective inter- and intraprofessional communication as an essential skill of the new baccalaureate generalist nurse (American Association of Colleges of Nursing, 2008). The *Quality and Safety Education for Nurses* project (QSEN, 2017) identifies communication as a key feature of the defined competencies nurses need in order to fully participate in improving the quality and safety of healthcare systems. The QSEN project also includes communication-specific knowledge, skills, and attitudes for each competency for undergraduate and graduate nursing students.

Gap in the existing literature

To date, research on the role of communication in patient safety and quality of care has generally concentrated on optimizing the *quantity* and *clarity* of communicated content in healthcare interactions. However, human interaction encompasses much more than that. Miscommunication entails more than insufficient or unclear message content. It is a frequent byproduct of the complex process of co-constructed human communication. Thus, beyond optimizing the quantity and clarity of messages to avoid or minimize error, it is important to understand the communication *processes* that hinder and foster favorable patient outcomes.

Health practitioners tend to be overconfident in their own abilities to communicate (*Lake Wobegon Effect*; see Alicke and Govorun 2005; Sedikides et al. 2003). Thus, one of the bigger hurdles to individuals developing better communication is the *awareness* that they *need to* and *could* benefit from doing so. Communication problems are easy to find in others and hard to see in oneself. This bias is reinforced by the relative lack of catastrophic communication errors in everyday life (e.g. "no one that I know of has died from my inability to communicate, so I must be a good communicator") and impedes self-reflection. However, the fact that we communicate every day of our lives does not mean that we communicate *competently* all the time. And the consequences of *incompetent* communication can be much greater in the context of healthcare than in everyday encounters.

For over 100 years, scholars in communication science have applied scientific methods and systematic observations to describing communication processes across a variety of contexts. Communication science focuses on understanding these processes as a prerequisite for the successful translation of communication-centered issues into safe and high-quality nursing practice. Insights from communication science thus have the potential to advance healthcare's pressing agenda to improve communication. However, few investigations to date have attempted to shed light on the critical interdisciplinary connections that could directly enhance the quality and safety of care (Pannick et al. 2015).

Unique features of this book

This book is unique in its integration of the literature from communication science with key topics in patient safety. It manifests a valuable interdisciplinary collaboration that translates the basic tenets of human communication science for educators, students, and practitioners of nursing, providing a conceptual, evidence-based foundation for practices that can advance patient safety and quality of care. The models and typologies are based on established theory, knowledge, and published research from communication science. The discussions are based on real incidents that were reported by clinicians and subjected to expert analysis. A majority of the case descriptions are based on actual cases provided by nurses. The remaining cases were taken from the *Agency of Healthcare Research and Quality* (AHRQ) Morbidity and Mortality Rounds on the Web (WebM&M). All of the cases have undergone a rigorous process of review and editing. Through the discussion and analysis of these cases, communication theory is put into practice to facilitate experiential learning, granting insights into diverse aspects of healthcare delivery. Thought-provoking discussion questions, illustrative activities, and references for further reading make this book an indispensable resource for nurse clinicians, nurse educators, nursing students, and safety officers around the world.

Synopsis of contents

This book features a collection of 36 critical incident descriptions that exemplify perennial "hot topics" in patient safety, such as handoffs and handovers (also known as "care transitions"), falls, adverse drug events, wrong-site surgery, and diagnostic errors. The cases were not a random sample of all safety incidents, so they do not provide a representative estimate of the prevalence of communication problems and medical errors. However, they indicate the pervasiveness and extent of communication problems in healthcare, highlighting positive and negative situations and places when communication commonly fails or succeeds in ensuring high-quality care and preventing patient harm. The book presents interdisciplinary and evidence-based perspectives on communication processes (e.g. conflict, hierarchical communication, whistle-blowing, speaking up) that contribute to close calls and adverse events, applying principles from communication science to illuminate the case studies with practical communication insights.

In summary, this book is a unique, practical, cutting-edge resource for educators, students, and front-line practitioners of nursing. It is organized chronologically along the continuum of healthcare delivery, providing quick access to solutions in safety and quality-compromised situations, and illustrating how skillful communication can be the key to a more effective prevention, intervention, and response to "close calls" and adverse events.

Structure and layout

This book is organized into two parts. Part I contains six chapters that focus on core principles and challenges related to healthcare quality, patient safety, and interpersonal communication. With consistent cross-referencing to the case studies in Part II of the book, these chapters discuss (1) core principles of healthcare quality and patient safety, (2) myths and truths about human communication, (3) communication topics in healthcare quality and patient safety, (4) key challenges and issues in interpersonal communication, (5) the Hannawa SACCIA typology of core competencies for safe communication in healthcare, and (6) lessons learned from communication science.

Part II of the book contains the 36 cases. The cases are arranged along a "go-to" timeline that represents six stages of nursing practice: (1) data collection, (2) assessment/diagnosis, (3) planning, (4) active waiting, (5) implementation, and (6) evaluation. These stages do not represent linear, discrete events, and they do not imply that nursing care proceeds in a step-wise, forward progression. They are presented here as separate stages merely to facilitate the organization and categorization of the cases. In reality, these stages overlap and nurses move through them in adaptive ways.

Each of the six stages of nursing practice contains three layers of interpersonal communication that range from micro-, meso-, to macrolevel interactions. *Microlevel* interactions include provider-patient and provider-family encounters. *Mesolevel* interactions entail clinical teams (i.e. clinicians and staff who work within a healthcare institution) and inter-professional encounters (i.e. a few single clinicians from dissimilar backgrounds interacting with each other). *Macrolevel* cases include cross-professional (i.e. among many clinicians from diverse backgrounds) and inter-institutional (i.e. across at least two healthcare sites) interactions. To promote recognition of these communicative levels across the case chapters, each case is labeled with a representative icon on top of the page (see Table A).

The cases further relate to nine common topics of patient safety. For easy reference, these topics are also identified with representative icons. Table B shows the nine topics with their corresponding icons and the frequency of occurrence across the 36 cases in Part II of this book (note that some of the cases are associated with multiple safety topics, so the number of occurrences sum up to more than 36).

Additional characteristics of the cases are summarized in Table C. The frequencies in this table demonstrate that the 36 cases represent a broad variety of patient safety events that include *near misses* (cases 3, 4, 8, 17, 31, 35), *harmless hits* (cases 2, 9, 11, 12, 15, 18, 20, 22, 23, 36), *adverse events* (cases 1, 5, 7, 13, 16, 19, 21, 26, 27, 28, 29, 30, 32), and *sentinel events* (cases 6, 10, 14, 24, 25, 33, 34). Definitions of these patient safety events and other key terminology are provided in Table D. Most of the cases occur in acute inpatient hospital care settings, but they also cover examples of outpatient and "acute-on-chronic" care scenarios within and in transition to skilled nursing and residential care facilities.

Tab. A: Structure of Part II of this book.

Level of communication		Stage 1: Data collection	Stage 2: Assessment/ diagnosis	Stage 3: Planning	Stage 4: Active waiting	Stage 5: Implementation	Stage 6: Evaluation
Microlevel	Provider-patient	Case 1 **AE**	Case 7 **AE**	Case 13 **AE**	Case 19 **AE**	Case 25 **SE**	Case 31 **NM**
	Provider-family	Case 2 **HH**	Case 8 **NM**	Case 14 **AE**	Case 20 **HH**	Case 26 **AE**	Case 32 **AE**
Mesolevel	Clinical team	Case 3 **NM**	Case 9 **HH**	Case 15 **HH**	Case 21 **AE**	Case 27 **AE**	Case 33 **SE**
	Inter-professional	Case 4 **NM**	Case 10 **SE**	Case 16 **AE**	Case 22 **HH**	Case 28 **AE**	Case 34 **SE**
Macrolevel	Cross-professional	Case 5 **AE**	Case 11 **HH**	Case 17 **NM**	Case 23 **HH**	Case 29 **AE**	Case 35 **NM**
	Inter-institutional	Case 6 **SE**	Case 12 **HH**	Case 18 **HH**	Case 24 **SE**	Case 30 **AE**	Case 36 **HH**

Note: SE = sentinel event; AE = adverse event; HH = harmless hit; NM = near miss; see Table 4 for definitions of these terms.

Tab. B: Patient safety topics and icons.

Icon	Patient safety topic	Incident	Count
	Medication	Misuse	6
		Overuse	3
		Inadvertent use	2
		Underuse	1
	Assessment/diagnosis	Incorrect	4
		Delayed	3
	Handoff	Inadequate	7
	Timeliness	Delayed treatment	8
		Delayed diagnosis	3
	Postoperative monitoring	Insufficient	1
	Resuscitation/intubation	Inadvertent	3
	Discharge	Inadequate	3
		Inadvertent	1
	Surgery	Wrong-site	1
	Patient falls	Preventable	3

Tab. C: Additional (non-iconized) case characteristics.

Type of event		Care setting		Type of care	
Adverse event	13	Inpatient	25	Acute	30
Harmless hit	10	Outpatient	5	Acute-on-chronic	6
Sentinel event	7	Primary care	4		
Near miss	6	In- and outpatient	5		

Each case is followed by a "diagnostic" section that lists and labels communication errors, organized within the core principles of human communication. A brief discussion presents additional comments on each case in reflection of content discussed in Part I of the book. Each case study chapter closes with discussion questions and applied exercises, and with a "lessons" activity that encourages nursing educators, students, and practitioners to identify and apply the respective "Lessons from communication science" from Chapter 6 to each case scenario in Part II of this book.

This pedagogical activity facilitates experiential comprehension of the communication principles and their implications for nursing practice.

Tab. D: Key terminology in the fields of healthcare quality and patient safety.

Error	An act of commission (doing something wrong) or omission (failing to do the right thing) that leads to an undesirable outcome or carries significant potential for such an outcome. Errors are commonly categorized as active versus latent. *Active errors* occur at the point of contact with the patient and generally involve a frontline caregiver. They are sometimes referred to as errors at the "sharp end." *Latent errors* refer to less apparent failures of organization or design that contribute to close calls or adverse events. These occur at the opposite "blunt end," distal from the frontline provider and patient. Errors can but do not necessarily lead to patient harm.
Adverse event	Patient injury caused by healthcare. Some adverse events are preventable, others are not. Preventable adverse events are caused by active or latent errors. Nonpreventable adverse events are caused by inevitable harmful effects of treatment (i.e. unpredictable accidents or predictable complications/side effects).
Sentinel event	An adverse event in which there is death or serious, nonreversible harm to a patient that has been designated as particularly egregious and unacceptable. Examples include wrong-site surgery or inpatient suicide.
Bad outcome	An undesirable outcome sustained by the patient. These may be intended or not intended, and may or may not be related to healthcare – they may also be a consequence of the natural history of disease.
Negligence	A legal term that implies care by a clinician that deviates from a generally accepted standard of care. The concept hinges on attributing legal fault to an individual. The concept of legal fault is at odds with the conceptualization of errors and harm as properties of systems rather than individual practitioners.
Patient safety incident	An event or circumstance that could have resulted, or did result, in unnecessary harm to a patient.
No harm event	An incident that reached a patient, but with no discernable harm. This concept is related to *close calls* and *near misses* as noted below.
Close call	An event that did not result in patient harm because it did not reach the patient, either due to chance or to capture; or, if it did reach the patient, due to robustness of the patient or to timely intervention. Close calls include near misses, which did not "reach" the patient, and harmless hits, which reached the patient but caused no appreciable harm.
Hazardous circumstance	A situation in which there was potential for harm, but no incident occurred. Includes hazards and unsafe conditions.

Tab. D: (continued)

Safety culture	Safety culture is an important concept in patient safety that originated in studies of high reliability organizations outside of healthcare (i.e. organizations that consistently experience few adverse events despite the conduct of high-hazard work). Key features include: (1) Recognition of the high-risk nature of the organization's activities and commitment to achieving consistently safe operations; (2) a blame-free environment where individuals are able to report incidents without fear of reprisal; (3) encouragement of collaboration across ranks and disciplines to seek solutions to patient safety problems; and (4) organizational commitment of resources to address safety problems. In healthcare, achieving a safety culture is seen as essential to minimizing patient harm and improving the quality of care.

Note: Definitions in Table D were adapted from the AHRQ Patient Safety Network: Shojania KG, Wachter RM, Hartman EE. AHRQ Patient Safety Network Glossary. Available at: http://psnet.ahrq.gov/glossary.aspx

How to use this book

This book is best used as a reference guide. Although some will want to read it from front to back, students and clinicians may find it most useful by skipping to relevant cases, based on their individual needs and interests. Educators teaching about patient safety may recommend some or all of the chapters in Part I of the book, and focus on cases covering different patient safety topics in Part II. Nursing educators in general may want to select cases to enhance their presentation of specific stages of care. Patient safety professionals and risk managers investigating patient safety incidents may be able to enhance their analysis by referring to related case studies.

Part I of this book contains pedagogical value on its own, whereas Part II presents practical communication insights, discussions, and experiential learning exercises that offer opportunities to *apply* the insights obtained from Part I of the book to the cases. Pedagogical value can also be gained from the "communication lessons" activities that appear in the form of a number-coded box at the end of each case chapter in Part II. These sections encourage readers to cross-reference applicable "Lessons from communication science" from Chapter 6 (Part I) of the book to summarize the problematic interpersonal processes in each case. In addition, advanced insights can be gained from discussions that consider the *interplay* across the various categorical schemes that are introduced in this book to identify ways in which additional factors can either add to, mitigate, or prevent the communication errors in each case.

Summary

The contents and layout of this book facilitate a rich learning experience. The book sharpens the reader's eye for common communication processes, themes, and errors that are relevant to the quality and safety of care. It promotes deeper comprehension of these issues and trains recognition skills that can trigger diagnostic and corrective mechanisms during the provision of care. It is evident that safe and high-quality care processes require active contributions from all care participants. Thus, on several occasions, this book refers to patients and family members as "active partners" for safe and high-quality care. In the same vein, this book uses "error" and "failure" as terminologies to connote and promote a *culture of learning* that should replace preceding *cultures of blame*.

Part I: **Principles and challenges of healthcare quality, patient safety, and interpersonal communication**

1 Healthcare quality and patient safety – A global perspective

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Healthcare delivery systems across the globe are striving to deliver consistently safe and high-quality care. A platform to increase the focus on healthcare safety and quality was established at the turn of the twenty-first century through several reports, *To Err is Human*, *Crossing the Quality Chasm*, and *Unequal Treatment* (Kohn et al. 2000; IOM 2001; IOM 2003). These paradigm-shifting reports cast a lens internationally on how we ensure the safety of patients (Leape and Berwick 2005).

The simplest definition of patient safety is the *prevention of errors and adverse effects to patients associated with healthcare* (WHO 2017). Unexpected and unwanted events can take place in any setting where healthcare is delivered (primary, secondary and tertiary care, community care, social and private care, acute and chronic care). While aspects of healthcare have become more effective, healthcare delivery has become exponentially more complex, with rapidly advancing technologies, medications, and treatments often associated with increasingly difficult decisions regarding healthcare priorities. Increasing complexity and economic limitations contribute to a stressed healthcare delivery system.

An overview of the world's literature on patient safety research demonstrates that much of the evidence of the outcomes of unsafe care is from developed nations, where prevalence studies show that between 3% and 16% of hospitalized patients suffer harm from healthcare (Jha et al. 2010). Data, though limited, from transitional and developing countries also suggest substantial harm from healthcare (Jha et al. 2010). However, considerable gaps in knowledge about the structural and process factors that underlie unsafe care globally make solutions difficult to identify, especially in resource-poor settings (Jha et al. 2010).

In spite of the numerous examples of system failure that are reported, some strides have been made in improving healthcare as a consequence of this increased scrutiny, training, systems engineering, and accountability (Pronovost et al. 2008; NHS 2017; Pronovost et al. 2015; Ghandi et al. 2016; Hughes and Clancy 2009). Safety improvement efforts place emphasis on a system of care delivery that (1) prevents errors; (2) learns from the errors that do occur; and (3) is built on a culture of safety that involves healthcare professionals, organizations, and patients (Kohn et al. 2000; Hughes and Clancy 2009).

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The World Health Organization (WHO) has been a global leader in patient safety. *WHO Patient Safety* has been created to facilitate the development of patient safety policy and practices and to act as a major force for patient safety improvement across the world (WHO 2017). The mission of *WHO Patient Safety* is to coordinate, facilitate, and accelerate patient safety improvements around the world by: (1) being a leader and advocating for change; (2) generating and sharing knowledge and expertise; and (3) supporting Member States in their implementation of patient safety actions. Table 1.1 lists ten facts on patient safety identified by the WHO (2014).

Tab. 1.1: Ten facts on patient safety (WHO 2014).

1. Patient safety is a serious global public health issue There is now growing recognition that patient safety and quality is a critical dimension of universal health coverage. Since the launch of the WHO Patient Safety Program in 2004, over 140 countries have worked to address the challenges of unsafe care.
2. One in 10 patients may be harmed while in hospital Estimates show that in developed countries, as many as 1 in 10 patients is harmed while receiving hospital care. The harm can be caused by a range of errors.
3. Hospital infections affect 14 out of every 100 patients admitted Of every 100 hospitalized patients at any given time, 7 in developed and 10 in developing countries will acquire healthcare-associated infections (HAIs). Hundreds of millions of patients are affected worldwide each year. Simple and low-cost infection prevention and control measures, such as appropriate hand hygiene, can reduce the frequency of HAIs by more than 50%.
4. Most people lack access to appropriate medical devices There are an estimated 1.5 million different medical devices and over 10,000 types of devices available worldwide. The majority of the world's population is denied adequate access to safe and appropriate medical devices within their health systems. More than half of low- and lower middle-income countries do not have a national health technology policy which could ensure the effective use of resources through proper planning, assessment, acquisition, and management of medical devices.
5. Unsafe injections decreased by 88% from 2000 to 2010 Key injection safety indicators measured in 2010 show that important progress has been made in the reuse rate of injection devices (5.5% in 2010), while modest gains were made through the reduction of the number of injections per person per year (2.88 in 2010).
6. Delivery of safe surgery requires a teamwork approach An estimated 234 million surgical operations are performed globally every year. Surgical care is associated with a considerable risk of complications. Surgical care errors contribute to a significant burden of disease despite the fact that 50% of complications associated with surgical care are avoidable.
7. About 20%–40% of all healthcare spending is wasted due to poor-quality care Safety studies show that additional hospitalization, litigation costs, infections acquired in hospitals, disability, lost productivity, and medical expenses cost some countries as much as US$ 19 billion annually. The economic benefits of improving patient safety are therefore compelling.

Tab. 1.1: (continued)

8. A poor safety record for healthcare Industries with a perceived higher risk such as the aviation and nuclear industries have a much better safety record than healthcare. There is a 1 in 1,000,000 chance of a traveler being harmed while in an aircraft. In comparison, there is a 1 in 300 chance of a patient being harmed during healthcare.
9. Patient and community engagement and empowerment are key People's experiences and perspectives are valuable resources for identifying needs, measuring progress, and evaluating outcomes.
10. Hospital partnerships can play a critical role Hospital-to-hospital partnerships to improving patient safety and quality of care have been used for technical exchange between healthcare workers for a number of decades. These partnerships provide a channel for bi-directional patient safety learning and the co-development of solutions in rapidly evolving global health systems.

A constellation of factors including identification of serious flaws in healthcare delivery, increased acuity of illness and demand for services, heightened consumer expectations, financial pressures, and technological innovation has led to an increased focus on not only how we deliver nursing care, but also how we monitor and improve patient outcomes (Aiken et al. 2012). In spite of advancements in clinical care, favorable patient outcomes are not universally experienced with disparities in care and outcomes all too common (IOM 2001; IOM 2003). Maintaining consistently high levels of safety and quality over time and across all healthcare services and settings remains a challenge and is increasingly linked to the level and quality of nursing practice as well as teamwork and cohesion (Drenkard 2012).

1.1 The critical role of nurses in safe, high-quality healthcare

The report *The Future of Nursing: Leading Change, Advancing Health* (IOM 2012) reinforces that collaboration between health professionals and preparation of nurse leaders is critical to improving the coordination and quality of care and increasing access to healthcare services. This report identifies the need for nurses to practice to their full capabilities – that is, to ensure that their full scope of practice reflects their training and capacity – to rise to the challenge of contemporary healthcare delivery systems. Collaborative, inter-professional practice environments, an essential ingredient for patient safety, foster improved patient outcomes and also increase the satisfaction of nurses and their engagement in the workplace (Clavelle et al. 2012). As a consequence, there is a call for nurses to achieve higher levels of education and training in preparing to become leaders in redesigning the healthcare system (IOM 2012; Pronovost et al. 2008).

The role that effective inter-professional teamwork plays in improving healthcare quality, safety, and practice environments has been increasingly recognized (Interprofessional Education Collaborative 2016; Salas and Rosen 2013; Weaver et al. 2013). Academic institutions and healthcare systems are urged to educate health professionals to work collaboratively through inter-professional education, whereby two or more professions learn about, from and with each other (WHO 2011). The following core competencies for inter-professional collaborative practice (Interprofessional Education Collaborative 2016) have been established:

1. Values and ethics for inter-professional practice;
2. Roles and responsibilities;
3. Inter-professional communication; and
4. Teams and teamwork.

Though inter-professional education and collaborative teamwork are essential to improving healthcare quality advances, these approaches remain in their infancy with the practice and science of teamwork in healthcare in development (Salas and Rosen 2013; Weaver et al. 2010; Dietz et al. 2014). Both simulation and classroom-based team-training interventions can improve teamwork processes (e.g. communication, coordination, and cooperation), and implementation has been associated with improvements in patient safety outcomes across a range of clinical contexts (Weaver et al. 2014). Greater effects were reported for bundled team-training interventions that included tools and organizational changes to support sustainment and transfer of teamwork competencies into daily practice (Weaver et al. 2014). As cadres of healthcare workers diversify, there will be an increasing number of nurses with varying levels of educational preparation and increasingly, the nurse will be leading teams of nurses, other healthcare professionals, and unlicensed care assistants as well as working in inter-professional teams.

Nurses play an important role in monitoring and improving healthcare quality and safety within the context of inter-professional teams and often complex organizations. As a consequence, nurses need a range of skills to develop, implement, monitor, and lead quality and safety improvement projects and leveraging change in the healthcare team (Pronovost et al. 2008; QSEN 2017; WHO 2011; Will et al. 2006). Internationally, some cultural factors limit the voice of nurses and their confidence and ability to address quality and safety issues and to have control over their professional practice environment (Soh et al. 2013). This underscores the role of education and leadership in promoting the effectiveness of patient safety initiatives. Response to errors and the capacity to question authority are important determinants of safety culture in healthcare organizations. This also includes eliminating a fear of blame and creating mechanisms for open communication and disclosure.

1.2 Factors driving healthcare quality and patient safety

Since the landmark Institute of Medicine (IOM) report (Kohn et al. 2000), the healthcare industry has been striving to identify system flaws, create meaningful quality measures and eliminate preventable harm. Accreditation agencies such as The Joint Commission (TJC) and Joint Commission International (JCI 2017) have developed standards that focus on patient safety and constant readiness. The survey process is designed to trace the care of a patient throughout their hospitalization rather than former methods of policy and retrospective chart review.

One strategy adopted by TJC and JCI was to create a set of goals within their standards that focus on areas of significant risk for healthcare organizations. First introduced in 2003 by TJC, *National Patient Safety Goals* (NPSG) defined standards for preventing some of the more common medical errors (JCH 2016). Subsequently, JCI released a similar set of goals (JCI 2017) listed in Box 1.1.

International Patient Safety Goals

Goal 1: Identify patients correctly
Goal 2: Improve effective communication
Goal 3: Improve the safety of high-alert medications
Goal 4: Ensure correct-site, correct-procedure, correct-patient surgery
Goal 5: Reduce the risk of healthcare-associated infections
Goal 6: Reduce the risk of patient harm resulting from falls

In the past two decades, demand for quality healthcare and services by patients and employers has grown. Consumer advocacy groups such as *Consumers Advancing Patient Safety* (CAPS) have formed with the goal of preventing harm through collaboration with patients and healthcare providers (Consumers Advancing Patient Safety 2017). Healthcare purchaser watchdog groups like the *Leapfrog Group* have developed methods of surveying healthcare provider organizations about their adoption of known best practices to reduce preventable harm and improve quality of care (The Leapfrog Group 2017). Government agencies that fund and deliver healthcare have turned to public reporting of quality metrics to incentivize quality care, hold providers accountable for care, and seek to rebuild public trust in the healthcare delivery system. Examples include the *Centers for Medicare and Medicaid Services* (CMS) Medicare program in the United States and the *National Health Service* (NHS) Quality and Outcomes Framework in the United Kingdom (CMS 2017; NHS 2017).

International agencies like the WHO have approached healthcare quality and patient safety as a matter of public health with strategies to advance the science (WHO 2017). Using their global influence, the organization promotes evidence-based practice, research, and policies that support patient safety. Not only do their efforts en-

gage healthcare workers, they also encourage the engagement of patients and families through the *Patients for Patient Safety* program (WHO 2017).

Healthcare organizations are also creating the infrastructure needed to advance patient safety and quality of care delivery. The Johns Hopkins Medicine Armstrong Institute for Patient Safety and Quality aims to reduce preventable harm, improve quality outcomes and patient experience, and eliminate waste in healthcare within their healthcare system and globally. This mission is delivered upon through research, translating evidence into practice, and training programs focused on preparing healthcare providers to lead safety and quality initiatives (Pronovost et al. 2015).

1.3 Theories to inform improvement efforts

Several theories provide a conceptual framework to understand how medical errors occur, what can be done to prevent them, and how to design a safe healthcare delivery system. Among the classic theories is that offered by Donabedian (1988) who suggested that if we are to study the quality of healthcare delivery, it is important to understand the relationship between a structure and the processes as well as between the processes and outcomes. Implied in this theory is that well-designed structural system elements will enable sound processes to achieve superior outcomes (Donabedian 1988).

Reason's (1990) cognitive psychology theory of human error provides a framework for understanding the complex circumstances and human vulnerabilities that lead to mistakes. The unsafe acts committed by individuals can be characterized as either unintentional and intentional errors (slips, lapses, or mistakes) or intentional violations. Both types of behavior can be influenced by active failures or latent conditions, yet they arise from very different psychological mechanisms. Errors come from an information processing problem related to individual cognitive functions. Unintended actions may lead to two types of error – attentional errors (slips) or memory failures (lapses). Intentional actions may lead to knowledge- or skill-based errors (mistakes). Intentional actions may also result in violations. Violations are motivationally rooted and social in nature, only understood in a context of the organization (Reason 1990; Reason 1993). Errors can be prevented through training, redesign, and improved information, whereas prevention of violations requires changing the attitudes, beliefs, and norms of the workgroup. There are four types of violation: routine (e.g. shortcuts between tasks), optimizing (to achieve a goal other than safety), exceptional (one-time breaches because of unusual circumstances), and deliberate sabotage (intentional deviation and harm). The distinctions among these types of errors is important in event investigation to ensure that proper corrective action is pursued (Reason 1993).

Reason's theory extends to the organizational level pointing to latent system failures as the precursors to error that may contribute to accidents. He categorizes failures within a system as either active or latent. *Active failures* in healthcare occur at the sharp-end or when the clinicians closest to the patient interact with the

hazardous processes in carrying out their care delivery responsibilities in which the negative effects are often immediate. In contrast, *latent failures* are created by well-intentioned but inadequately planned decisions at the higher levels of a healthcare system or "blunt-end," by regulators, managers, administrative leaders, suppliers, or policy makers and have a delayed impact (Reason 1990; Reason 1993; Bogner 1994).

More recently, healthcare has turned to high-risk, highly safe industries characterized as "High Reliability Organizations" to gain insight into harm prevention. Weick and Sutcliffe (2011, 2015) describe *high-reliability organizations* (HROs) as having cognitive and behavioral norms of respectful interactions, heedful interrelations, and a mindful infrastructure that are required to achieve reliable performance. In contrast to Reason's "failure"-centered model, Weick and Sutcliffe's high-reliability theory offers a more positively valenced approach to understanding the organizational norms required for safe performance under unforgiving conditions. The principles of a mindful infrastructure support individual and organizational habits that encourage and value (1) preoccupation with failure; (2) reluctance to simplify; (3) sensitivity to operations; (4) commitment to resilience; and (5) deference to expertise (Weick and Sutcliffe 2011, 2015). This model is a more integrated conceptualization of the components of an organization without suggesting specific error causation. Nonetheless, it does reinforce the role of culture in organizational performance and offers specific organizing principles that will drive performance and defend against failure.

1.4 Conclusion

Globally, healthcare delivery systems are striving to deliver safe, high-quality care. Gaps in knowledge exist about the structural and process factors that underlie unsafe care globally; this makes it difficult to identify solutions, especially in resource-poor settings. However, the critical role of nurses in promoting a safe, collaborative practice environment in the current, complex healthcare delivery system has been well established. Furthermore, nurses need a range of skills and tools, including effective communication strategies, to develop, implement, monitor, and lead quality and safety improvement projects and leverage change in the healthcare team. Numerous factors outside of the healthcare delivery team and environment influence quality and safety, often through provision of regulations, resources, and training. Key theories that integrate the healthcare delivery system and external forces have been influential in guiding successful efforts to improve quality and safety. As illustrated in this book, a systems perspective and effective communication and teamwork are pervasive factors that both contribute to problems with healthcare quality and safety, and mitigate them. This book aims to inspire opportunities to improve communication and, in so doing, close some of the gaps in communication that contribute to preventable harm.

2 Myths and truths of human communication

Annegret F. Hannawa, Ph.D.

2.1 What is "communication"?

Communication science conceptualizes human communication as a complex, dynamic, holistic, interactive meaning-making activity that is co-produced between two or more individuals. By definition, it encompasses **"all procedures by which one mind [and body] may affect another"** (Shannon and Weaver 1964). In the context of healthcare, this means that communication constitutes the vehicle through which understanding, affection, conflict, compassion, social support, and trust transpire in both provider-patient and inter-professional interactions.

This conceptualization requires a more holistic and nuanced understanding than is generally found in the medical literature on how care objectives are achieved through interpersonal interactions, and a more robust consideration of contextual factors that influence interpersonal communication processes in the healthcare setting. Clinical encounters are commonly compromised by insufficient or unclear information, time pressures, professional hierarchies, and conflictual relationships. In this context, the achievement of a mutual understanding is a necessary quality standard that requires advanced interpersonal skills (see Hannawa 2015).

Successful communication encompasses complex encoding, decoding, and transactional sense-making activities of nonverbal and other metalinguistic cues that commonly make it difficult to reassemble what a speaker originally meant and intended. This is especially true when an interaction involves high emotional content, as is often the case in healthcare encounters. This sense-making process is complicated by the fact that encoding activities can be either intentional or unintentional in nature. For example, even silence, withdrawal, or immobility can elicit an interpretation of what these behaviors could mean. Furthermore, both intentionally and unintentionally encoded messages can be decoded in three ways: (1) inaccurately; (2) accurately; or (3) not at all (Guerrero and Floyd 2006).

A combination of these encoding and decoding scenarios yields six potential communication situations that illustrate the complexity of interpersonal encounters (see Guerrero and Floyd 2006):

An *intentionally encoded* message and/or behavior can lead to:

1. **"Attempted communication"** – when the target does not decode it.
2. **"Miscommunication"** – when the target decodes it inaccurately.
3. **"Successful communication"** – when the target decodes it accurately.

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An *unintentionally encoded* message and/or behavior can lead to:
4. **"Unattended behavior"** – when no one decodes it.
5. **"Misinterpretation"** – when it is decoded inaccurately.
6. **"Accidental communication"** – when it is decoded accurately.

2.2 Common myths about communication

There are several incorrect assumptions or "myths" about human communication that are commonly shared by both patients and healthcare providers. These misperceptions often lead to insufficient understandings that, in turn, compromise the safety and quality of care. This chapter demonstrates some of these common myths and substantiates them with cross-references to the respective cases in Part II of this book that illustrate the myths with practical examples.

The failure by clinicians and patients/families to communicate successfully with each other is often the byproduct of the following inaccurate beliefs:

Myth 1: Communication is a simple and functional task

Across the cases in Part II of this book, care participants tend to assume that communication is a simple, almost automatic task that generally works well if left alone. There are several examples in the case scenarios where both providers and patients/families assume incorrectly that communication is taking place (cases 28 and 33), understood (case 35), and "passing" accurately from one person to the next (case 22). In other words, care participants incorrectly conceptualize communication as a linear task of transferring a message, rather than as a complex, interactive meaning-making process. The truth is, however, that communication is an intensive, interactive, error-prone activity that often fails to accomplish its purpose of attaining a shared understanding. As a result, it has the potential to cause patient harm.

Because of this limited understanding of communication, care participants abdicate their responsibility for communication as soon as they "sent" it. Instead of thinking and acting out their communication objectives to the "end" (i.e. to the point where all participants share one perspective), they abandon the communication process prematurely.

Myth 2: Communication equals words

The participants in the case scenarios commonly interact with one another under the incorrect assumption that communication is equivalent to conveying words. For example, they assume that the necessary information could simply be passed through a series of people to an intended receiver. This assumption fails to recognize that such **latent communication** – communication that sequentially passes through a chain of several individuals – typically falls victim to a "**game of telephone**" (also referred to

as a "rumor game"), whereby the quantity and quality of that information is degraded with repeated passage (see case 4). There are several instances of handoffs in which this incorrect assumption leads to a preventable patient safety event.

Care participants also underestimate the role of nonverbal communication, including "nonbehavior" and "missing" verbal messages, as powerful carriers of message contents. "Nonbehavior" is a paradox, because there is no way to *not behave*. There are plenty of ways to *mis*behave, and there are plenty of ways of engaging in one behavior when another behavior would have been more functional. But it is impossible to *not* behave. For example, a nursing student who does not ask questions in class or during clinical conferences is not "not behaving," but is behaving in a way she/he should not. Even "noncommunication" (such as silence or lack of contact) can convey a message in its own right. In numerous cases in Part II of this book, clinicians decode patients' nonverbal messages insufficiently for diagnostic and treatment purposes (cases 15 and 26), and both clinicians and patients assign meaning to such "missing" communication (cases 21 and 33).

Myth 3: Communication equals information transfer

Care participants generally think of communication as merely conveying *factual* information. In several of the cases, care participants do not understand that their communication also carries important relationship-defining messages that can affect the safety of care and compromise objective patient outcomes. For example, clinicians' disregard of relational information contribute to a young patient's mother not feeling heard (case 20); a patient's syncope as a result of low blood sugar and dehydration (case 20); a patient not daring to speak up to prevent wrong-site surgery (case 25); an incorrect diagnosis (case 26); and unsuccessful discharge instructions that lead to readmission (case 31).

Myth 4: Communication can be accessed, deposited, and delegated

Care participants tend to view communication as containing reliable, accurate, static information that is accessible and recognized as "intended" by anyone who "sees it." For example, they tend to think that "writing down" or "depositing" information into health records constitutes communication. They assume but never verify that the words they write are received and understood as intended by other care participants. In other words, they assume that communication is synonymous with *understanding* and *retention*.

Even when information is properly deposited and documented, and even when receivers try to access available information, a shared understanding of this information is rarely attained. The written documentation may be in place to *initiate* communication, but the communication process never actually occurs. As a result, the meaning of critical information remains within written words and the interpersonal exchange never advances to a shared meaning-making process.

Myth 5: Communication is not about individual understanding

Care participants generally fail to recognize that communication is an interpersonal meaning-making process that is essential for safe and high-quality care. Instead, they tend to assume incorrectly that sense-making occurs *within* people. What in fact resides within people, however, are perceptual biases and preconceptions that *inhibit* the co-establishment of a shared understanding (see case 7). As a result, care participants often engage in inadequate communication that establishes a porous "common ground" (the sum of people's shared knowledge, presuppositions, and beliefs; see Clark 1996), allowing critical information to fall through the cracks and triggering patient safety incidents. There are several instances in the cases in Part II of this book where care participants fall victim to this **common ground fallacy**, incorrectly assuming that others will understand their intentions, feelings, thoughts, and meanings. This implies that shared understanding is the goal, but a taken-for-granted common ground is often an obstruction to achieving that goal.

Myth 6: More communication is better

The cases in Part II of this book also evidence a general belief among providers that communication is linearly related to competence. Providers tend to assume that *more* communication is *better* communication. The truth, however, is that the functional form of the association between communication skills and competence is an inverted U, with both too little and too much of any given behavior being perceived as inappropriate and ineffective in most healthcare interactions (e.g. case 26; see also Spitzberg 2000). This recognition is in line with the notion of both "underuse," and "overuse," being problematic issues in the healthcare literature.

Myth 7: Communication "breaks down"

A *meta*-assumption that encompasses the six myths outlined above is that care participants commonly attribute "failed communication" to a "breakdown" in communication. This analogy is based on the assumption that communication generally works, but "breaks down" at times as a result of at least one care participant *not communicating*. This perspective is problematic because it mistakenly implies that communication failure equates to a mere *lack of* communication rather than *incompetent* communication. Furthermore, it reinforces the mistaken belief in the individual causation of adverse events, which perpetuates a "blame culture." It is also based on an incorrect understanding of communication. Across the 36 cases in Part II of this book, poor outcomes are the result of no established shared understanding – and what was never established cannot "break down."

2.3 Principles of human communication

There are a number of widely accepted principles of human communication. In contrast to the myths described in the previous section, this section elaborates eight such core "truths" of human interaction to inform the cases in Part II of this book, and to promote a better understanding of how **competent communication** – interpersonal processes that are perceived as both **appropriate** and **effective** (see Spitzberg 2000) – can enhance the safety and quality of patient care. At the end of this Chapter, Table 2.1 cross-references the respective cases in Part II of this book with these principles, and illustrates applied examples.

Core principles of human communication:

Principle 1: Communication varies between thought, symbol, and referent.
Principle 2: Communication is a nonsummative process.
Principle 3: Communication is functional.
Principle 4: Communication is more than words.
Principle 5: Communication entails factual and relational information.
Principle 6: Communication is contextual.
Principle 7: Preconceptions and perceptions vary among communicators.
Principle 8: Redundancy in content and directness in channel enhance accuracy.

Principle 1: Communication varies between thought, symbol, and referent

The first principle of human communication is that communication is fundamentally an interactive meaning-making process. Humans "make meaning" through the joint creation and interpretation of symbols, which comprise words, gestures, images, sounds, and artifacts.

Communication starts with a thought (i.e. "reference") that a person has in mind. If a person wants to convey that thought to others, then the person "makes meaning" by creating and attaching "symbols" to that thought. In other words, the original thought is *encoded* into symbols and behaviors (Ogden and Richards 1946; de Saussure 1959).

These "symbols" have no intrinsic meaning of their own. They become "symbols" only when humans invest them with meaning (i.e. by attributing them with a thought they have in mind). In other words, symbols are chosen arbitrarily to refer to a signified thought, known as a "referent," or a concept that the symbol stands for (de Saussure 1959).

People assign symbols to their thoughts based on the conceptual world with which they are familiar. In semiotic terms, no two languages or cultures categorize such a reality in precisely the same way. As such, the symbolization process is not

a consequence of some predefined structure that is inherent in a given language or culture. Rather, language is a *vehicle* that humans use to construct a shared reality.

We even use this kind of symbolization in this book. We use icons at the beginning of each chapter in Part II of this book as symbols that resemble a referent. For example, we use an icon that symbolizes two figures – one with a stethoscope and one sitting on a bed – to resemble a care situation we have in mind in which a nurse communicates with a patient. We assume that there will be sufficient common ground with our readers for conveying that thought successfully, but we use a variety of other ways of communicating this thought to facilitate a shared understanding.

In summary, the first principle of human communication demonstrates the inherent challenge of "making meaning" – the challenge of coming to a **shared understanding** based on arbitrary symbols. This is a complex dyadic process that requires high accuracy in terms of people's encoding and decoding of such symbols. This interpretive process is further challenged by significant "between-subject variance." As a result of people's dissimilar personal and cultural backgrounds, as well as their own idiosyncrasies, the accomplishment of a complete "shared understanding" is an unlikely, error-prone (because of perceptual biases), and effortful intersubjective task.

Principle 2: Communication is a nonsummative process

Human communication is an interpersonal process that involves much more than the mere sum of its informational components. Whereas the assignment of symbols to thoughts happens *within* individual people, the meaning-making process (i.e. communication) of such symbols occurs *between* people. This notion implies that communication is an interactive process through which people approximate their attributions between referents, symbols, and thoughts so that they become equivalent. Sufficient efforts at skilled communication are needed to achieve this goal of a shared understanding.

On the basis of this notion, communication does not "fail" or "break down" in the same way as an engine breaks down or a telephone fails to operate – a conduit metaphor that is common in the medical literature and in everyday use. When a car breaks down, it no longer functions to do what it is intended to do. When a light bulb burns out, it stops being a light bulb. It ceases to function. If someone drops a cellphone during a conversation and it breaks, that is the end of that conversation on that phone at that time. Communication cannot *break down* in this way. **Communication *malfunctions*, but it cannot stop functioning at all.** Not saying something or saying something that is not fully understood is still a *process* of communication – communication that is functioning poorly.

Along the same vein, most critical incidents in healthcare do not occur because communication *stopped*. They occur because communication stopped working *competently*. Problems in healthcare interactions generally arise from both *insufficient* (in quantity) and *poor quality* communication that fails to establish a shared understand-

ing. Such **shared understanding** emerges from a complex, interactive meaning-making process that takes place in the space *between* people and generally constitutes an outcome that is different from the sum of its parts.

Principle 3: Communication is functional

It is challenging to establish a shared understanding of original thoughts in interactions with others, particularly when the content entails more than mere factual information. This process becomes even more challenging when people interact for *communicative functions* that do not prioritize a shared understanding. Whereas shared understanding is enhanced by **transactional communication** of clear and accurate messages, people frequently interact for functions that are *not* facilitated by clear and accurate symbolization. More often than not, people engage in sarcasm or humor, persuasion, or various forms of deception (including exaggerations and understatements) to avoid conflict, be polite, maintain relationships, "save face," and appear competent. Some of these communicative functions are attained through strategic vagueness or purposeful ambiguity in the symbolization process that make the establishment of a shared understanding more difficult to attain. In the healthcare context, for example, nurses often do not "speak up" to physicians in clear and straightforward ways in order to avoid conflict and save face. Similarly, clinicians sometimes communicate in "soft" rather than straightforward ways with colleagues and patients to maintain good relations and avoid getting sued. Such "soft" ways of communicating can have "hard" outcomes – in the cases in Part II of this book, for example, nurses prioritize maintaining good relations with their colleagues, patients, and family members over being more assertive to establish a shared understanding, which contributes to inaccurate diagnoses (e.g. case 19), inadequate treatment (e.g. case 13), and treatment delays (e.g. case 23) that lead to preventable patient harm.

Principle 4: Communication is more than words

Communication is often thought of as an exchange of words. However, all behaviors – even passiveness or silence – have the potential to communicate volumes. For example, a physician making rounds with an intern who does not talk with a patient is still communicating to that patient. Along the same vein, *not* visiting a patient can communicate a lack of concern for the patient. In turn, others *cannot* "not respond" to messages – even silence, withdrawal, and immobility can elicit an interpretation. For example, a patient's silence in the face of a clinician's inquiry "says" something even in the absence of words.

Verbal messages are always accompanied by nonverbal characteristics such as pitch, pace, intensity, and inflection of the voice, as well as facial expressions and gestures – all of which can influence the intended meaning of a verbal message. Nonverbal communication can repeat, illustrate, augment, accentuate, or contradict the words it accompanies. It can also disrupt the decoding process by distracting atten-

tion from words or contradicting their content. Furthermore, nonverbal behaviors can precede words, inflect, substitute, or override them, and become "message bearers in their own right" (Burgoon and Hoobler 2002).

Thus, in everyday interactions, the transmission and reception of any message depends on what we simultaneously say, hear, see, and show. Generally, when verbal and nonverbal messages contradict each other, people tend to believe the nonverbal more than verbal messages (see Seiler and Beall 2000). Because nonverbal behaviors are perceived as more valid than verbal communication, they must be recognized as a core mode of human interaction.

Principle 5: Communication entails factual and relational information

In the same way that verbal messages are always accompanied by nonverbal messages, *factual* messages are generally accompanied by *relational* messages (i.e. messages about the nature of the interactants' relationship with each other, their status in that relationship, and the social context within which their interaction occurs; see Watzlawick et al. 2014). This can be seen, for example, in a medical error disclosure to a patient – while the disclosure may primarily contain factual information about the events leading up to the mistake and implications for the patient's health, the clinician's attentiveness and calming tone of voice communicate genuine concern for the patient. In contrast, a neglect of such relational emphasis might communicate distance and disregard to the patient. Similarly, at first glance, a nurse anesthetist's question to a surgeon of whether she can prepare the next patient for surgery seems purely informational. However, depending on the way in which the question is stated, it may come across as either caring or critical (e.g. suggesting that the surgeon is not working fast enough).

It is important for providers to understand that their communication conveys both factual and relational messages to other care participants. They need to understand the constraining and enabling potential of such relational messages in communication with both colleagues and patients. With respect to colleagues, this recognition can enhance a shared understanding and prevent conflict escalation. With respect to patients, ample evidence has established measurable "placebo" effects of relational messages on care outcomes. For example, studies have found that relational communication can enhance patients' course of recovery, decrease their anxiety, decrease the need for postoperative pain medication, and lead to earlier hospital discharge (e.g. DiMatteo and Taranta 1979; Egbert et al. 1964; Ben-Sira 1976). Thus, this principle is directly relevant to the quality and safety of care.

Principle 6: Communication is contextual

The meaning of a communicated message largely depends on the context in which it is encoded and received. Such context contains multiple layers (see Spitzberg 2000):

- **Functional context** – the goals people pursue in their interaction.
- **Relational context** – people's relational history or composition.
- **Environmental context** – the physical setting in which an interaction takes place.
- **Chronological context** – the sequencing, timing, timeliness, available time, and duration of an interaction.
- **Cultural context** – people's cultural rules, norms, and belief systems.

Communication in clinical encounters is particularly context-dependent. Care participants' (i.e. clinicians, patients, and care companions) failure to recognize the **constraining** and **facilitating** effects of these contextual dimensions on establishing a shared understanding can directly compromise the safety and quality of care.

For example, across the cases in Part II of this book, care participants communicated with the wrong target (misuse of *functional* context), allowed relational biases and professional hierarchies to compromise safety-relevant care processes (overuse of *relational* context), did not allocate the necessary time to communicate with each other (underuse of *chronological* context), and neglected to recognize that working in a new organization requires adapting one's learned communication protocols to the new institution's communication standards and norms (underuse of *cultural* context). These failures to recognize that communication is contextual contributed to numerous preventable patient safety events (Table 2.1 lists the respective cases).

Principle 7: Preconceptions and perceptions vary among communicators

Individuals' life experiences contribute to idiosyncratic preconceptions and perceptions of communicated messages and behaviors. Such dissimilarities between people are rooted in personal traits (e.g. age, sex, culture, intelligence, religion, attitudes, beliefs, likes/dislikes), brain functioning (e.g. processing speed and memory abilities), thinking and speech differences (e.g. speed of thought, hormonal and emotional states), daily life interferences (e.g. financial concerns, children, political events), differential word definitions (e.g. emotional abstractions, multiple meanings; Mahaffey 2010), and incompatible cultural, family, and personal rules (e.g. values, morals, opinions, power distances, privacy boundaries). Communication is an interactive negotiation to *bridge* these differential preconceptions and perceptions and establish a **common ground** which – as mentioned before – entails the sum of the knowledge, presuppositions, and beliefs that a person shares with another (Clark 1996) as a foundation for co-constructing a shared understanding.

Particularly in high-stakes contexts such as healthcare, people's failure to recognize this important principle of human interaction often leads to insufficient commu-

nication based on the assumed preconception that "others will understand," which can have detrimental effects on the safety and quality of care. This is exemplified on several occasions across the cases in Part II of this book, where assumptions that another care participant would interpret a message using the same perceptual lens as the sender (e.g. assumed familiarity with clinical terminology and equivalent understanding of a symbol) led to preventable patient harm (Table 2.1).

The 36 cases illustrate that dissimilar preconceptions and perceptions among communicators commonly contribute to misunderstandings, which – in the context of healthcare – can directly compromise patients' health outcomes. Recognition of this principle can enhance the safety and quality of care, because it is only *through* communication that people can recognize and bridge such differential preconceptions and perceptions to establish a common ground and shared understanding.

Principle 8: Redundancy in content and directness in channel enhance accuracy

Message redundancy (i.e. appropriate repetition of content) and channel richness (i.e. face-to-face rather than asynchronous, mediated communication) generally facilitate **accuracy**, because they advance an overlap of perspectives and provide a rich resource for successful transactional sense-making (i.e. both verbal and nonverbal messages, written and spoken, and reinforced by several persons). Thus, redundancy and directness together provide an opportunity to avoid and reduce misunderstandings, and to prevent or intervene with patient safety events.

This function is further enhanced if care participants take into account *appropriateness* (see Spitzberg 2000), by perhaps repeating their message in a slightly different tone, repeating it with appropriate patience, empathy, and skillful nonverbal manner. So in addition to "say again" or "repeat back" protocols that are frequently used in healthcare and aviation, which merely increase the *quantity* of communication and *structure* of information exchange, the *quality* of the communication is an important factor, because it either enhances or compromises the accuracy of understanding.

2.4 Principles in sequence and combination

The cases in Part II of this book demonstrate that the core principles (or "truths") of human communication are interlinked. For example, the redundancy principle for accuracy only works if the informational content that is being communicated is complete. Redundancy does not aid accuracy if the information that is being repeated is insufficient (case 12). Directness in channel facilitates the function of contextualized communication (case 23). And dissimilar preconceptions and perceptions can stimulate communication redundancy that, in turn, enhances the accuracy of communication. These interlinkages demonstrate that human interactions are a complex sequential process that requires careful consideration and an advanced understanding as a prerequisite for improved quality and safety of care.

Tab. 2.1: Principles of human communication across the cases in Part II of this book.

Principle of human communication	Cases	Applied examples
Principle 1: Communication varies between thought, symbol, and referent.	2, 3, 11, 18, 19	Nurses picked up the chart and admission papers of the wrong patient, failed to notice the discrepancy between a patient's name on his wristband vs. admission chart, were imprecise when asking patients about allergies (asking for "allergies to medications" rather than "allergies" in general), and stated incorrectly that a patient had sufficient "central line access" while referring to an external jugular vein. A pharmacist decoded illegible handwriting inaccurately and filled a sound-alike drug. A patient's daughter told the nurse a sound-alike label of her mother's home medication.
Principle 2: Communication is a nonsummative process.	1, 4, 5, 7, 9, 10, 11, 14, 15, 18, 19, 22, 23, 25, 27, 28, 31, 34, 35	Clinicians did not verify receipt and understanding of information they added to a patient's health records. Clinicians delegated inter-professional communication to health information technologies (e.g. electronic health records, image discs) without additional explanations or follow-up communication to ensure receipt and understanding. Clinicians did not access and read health records sufficiently (merely glanced over them), and relied on (non)verbal over documented communication (e.g. not cross-validating a nurse's assertion with health records, assuming "no call with bad news" means a negative test result, assuming but not verifying that others had been informed). Clinicians did not ask patients about allergies, did not clarify uncertainties with each other, conveyed insufficient information to other staff (e.g. a patient's pregnancy, that a pediatric patient's feeding had been discontinued at midnight), did not decode sufficient verbal and nonverbal information (e.g. nonverbal expressions in addition to verbal communication, such as assuming but not verifying that a patient's head shake in response to a nurse's question indeed meant "no"), and established insufficient shared understanding: – with each other (e.g. a patient's allergy being a safety threat to a planned diagnostic contrast (iodine), a patient's operative plan, a patient's decision-making incapacity, a patient already being en-route to a receiving hospital, multiple X-ray having been taken the same afternoon, which hip needs to be replaced, what parts of admission work still needs to be completed, that a block had already been performed, need for special precautions and an infection control alert) – with patients (e.g. that the patient's home medication bottles were in her bag, that a patient was blind and lived alone, the patient's complete symptomology)

Tab. 2.1: (continued)

Principle of human communication	Cases	Applied examples
		– with patients' care companions (e.g. mother's expressed concerns about a pediatric patient's jerking being unusual, a patient's allergy/medication intolerance, labeling of a patient's home medications, and patients' DNR status). Patients also did not convey sufficient information to their nurses to ensure safe care (e.g. changed medication dosage after hospital stay, lack of understanding regarding new medication regimens or discharge instructions, patient getting up after a nerve block had already been performed, etc.)
Principle 3: Communication is functional.	13	A nurse constrained her communication with a physician and patient under the perception that the patient's wife's care preferences must be prioritized over the patient's preferences, given that the wife is "very outspoken" in the community and might compromise the nurse's reputation.
Principle 4: Communication is more than words.	15, 21, 31, 32, 33	Nurses misinterpreted other care participants' behaviors by paying either insufficient or too much attention to their nonverbal cues. For example, they misinterpreted a resident being on the phone as an indication that the patient's surgeon and cardiologist were being informed about their patient's deteriorating condition. Clinicians also misjudged patients' health conditions due to insufficient attention to their patients' nonverbal communication, which would have indicated a lack of decision-making capacity, that a patient was blind, and that a patient's husband felt overwhelmed and unable to implement discharge instructions at home. Patients misinterpreted "nonbehavior" as messages in their own right (e.g. dinner not being delivered as part of a treatment regimen, no call-back as an indication of a test result being negative, etc.).
Principle 5: Communication entails factual and relational information.	3, 13, 20, 25, 26, 31, 34	Nurses did not engage in needed communication because they did not dare to question a hierarchically superior clinician's decision-making or treatment plan. Clinicians made care decisions *for* patients rather than *with* patients, and accommodated care companions' treatment preferences over those of the patient. Clinicians adapted insufficiently to patients' needs for clarification, a pediatric patient's discomfort, and care companions' alerts regarding a patient's behavior seeming "unusual." Clinicians also conveyed relational messages to patients by addressing them as "the patient" in front of other clinicians, and by adapting discharge instructions insufficiently to patients' special needs (e.g. a patient being blind, living alone, feeling overwhelmed by discharge instructions, and feeling unable to implement discharge instructions at home).

Tab. 2.1: (continued)

Principle of human communication	Cases	Applied examples
		Patients did not correct a nurse's use of a wrong name, and did not dare to convey an allergy in fear of the relational implications such a message might have caused (e.g. receiving lower quality care in response to the nurse's perceived criticism).
Principle 6: Communication is contextual.	All cases except 1, 6, 12, 15, 18, 21, 30	***Functional context***: A nurse did not tell the surgery team about a patient's insulin sensitivity, despite the importance of this information to an upcoming surgery. A nurse did not decode a patient's communication in the context of the patient's transfer-related exhaustion and the patient's confession about his recent nonadherence. A nurse assumed, but did not verify, that the previous nurse had already established a shared understanding with the patient regarding which hip would need to be replaced. A clinician discussed a patient's operative plan with the wrong person (i.e. a surgery fellow who would no longer be at the institution at the time of the scheduled surgery). Clinicians decoded illegible prescriptions inaccurately because they disregarded the medical context (e.g. the perceived medication being inadequate for a pregnant patient). A nurse did not compare the name on the patient's wristband with the name on the patient's chart to make sure she was seeing the correct patient. A physician did not discuss the fit of a medication within the context of the patient's pregnancy, and ordered a medication that was unsafe for the patient given that she was pregnant. A physician ordered treatment that was not proper or unindicated given the patient's condition. A nurse did not decode the patient's infusion rate properly, because she disregarded the context of the planned treatment objective (e.g. the dose being subtherapeutic for the intended purpose). A nurse justified a sudden "stop" intervention insufficiently in the context of the patient's previously established DNR order. Clinicians did not check patients' EHRs sufficiently to make proper treatment decisions (e.g. a bruise being pre-existing to surgery, DNR status, etc.). A physician framed his recommendation to transfer a patient insufficiently within the context of the patient's medical needs (e.g. the receiving hospital also needing to be capable of attending to the patient's PTSD). Clinicians did not frame their communication about an X-ray in the context of two X-rays having been taken that same day. Clinicians did not communicate about allergies in the context of the patient carrying an *Epi-pen* against allergies. Clinicians did not address a patient's DNR preferences (e.g. by reviewing health records or communicating with other clinicians/care companions) while getting ready to provide life support. Clinicians did not communicate sufficiently to ensure that all future care participants

Tab. 2.1: (continued)

Principle of human communication	Cases	Applied examples
		(not only the current ones) will have a shared understanding of a patient's DNR status. Family members handed the patient's DNR order to the wrong person (to a Chaplain instead of clinicians). ***Relational context***: Clinicians engaged in relationally biased care. For example, they assumed that a patient was hypoglycemic or that a patient displayed drug-seeking behaviors, based on prior ED visits (knowledge) of patient. A nurse decoded a patient's sons' nonverbal distress as an indication of needing to engage life support, disregarding the context of the sons' nonverbal distress being a natural correlate of their closeness to their Dad (vs. a resuscitation order). A nurse did not inform a physician about her previous knowledge of a patient and that the patient's behavior seemed to be different this time (compared to previous drug-seeking behavior). Clinicians did not dare to question hierarchically superior clinicians' diagnoses or treatment decisions (e.g. that a medication could be nephrotoxic to a patient given his history). A nurse overly adapted to a patient's wife's expectations because she was afraid of the consequences of disappointing her, given that she was known to be "very outspoken" in the community and might affect her reputation. A physician asserted inaccurately that a patient was feeling better, regardless of the context of never having met the patient before. A patient did not mention his allergy to a nurse, because he was afraid of the consequences (e.g. that he would receive lower quality care if the nurse felt criticized). Clinicians decoded care companions' alerting communication insufficiently in the context of their potential to facilitate safer care, given that they knew the patient well. ***Chronological context***: *Duration*: Nurses insufficiently clarified the timeframe within which a physician would come to see a pediatric patient with the patient's mother. *Time allotment*: A nurse did not take the time to ensure proper patient identification, to add a patient's DNR preferences to the health records, and to decode a patient's infusion rate properly. Clinicians did not communicate with each other sufficiently to make sure that an X-ray had been received and viewed, given a busy night shift. Clinicians did not take time to decode care companions' alerting communication properly (e.g. a patient's bruise being pre-existing, a patient's behavior being different from normal).

Tab. 2.1: (continued)

Principle of human communication	Cases	Applied examples
		Clinicians did not take enough time to establish a shared understanding of prescribed medications, infusion rates, and DNR status. Clinicians did not take the time to check patients' lab results and to communicate in the context of a busy ED. Clinicians did not take the time to follow up with patients and/or care companions *after* discharge to make sure that discharge instructions were implemented properly at home. *Timing:* A nurse did not check a patient's updated health records after her conversation with the physician, in which they decided to change the patient's medication. Lab staff did not call the nursing staff to inform them about critical blood results, in the context of no paper results being available on Sundays (i.e. activated communication insufficiently to bridge system gaps). A physician did not check for a patient's lab results under the assumption that they would not be available yet. Clinicians framed their communication with each other insufficiently in the context of a patient just having undergone heart surgery (i.e. too narrow focus on the patient's respiratory distress rather than also on postsurgical cardiac issues). A nurse did not communicate with a receiving nurse in the context of her handoff assessment of the patient not being up to date, given that her shift ended and she had to leave. Clinicians discussed a patient's DNR status only *after* initiating life support. *Timeliness:* A nurse intervened with a code team's unindicated activation too late. A nurse waited too long to contact a primary care physician to clarify a patient's medication regimen. A nurse waited too long to inform a patient's primary care physician of a patient's hospitalization. Clinicians failed to establish a shared understanding of the urgency of attending to a patient at bedside. Family members waited too long to tell clinicians that a patient wasn't doing well at home after discharge. Clinicians took too long to follow up with test results. Patients waited too long to contact clinicians for feeling worse. A mother and a patient mentioned a patient's allergy too late. Family members handed clinicians a patient's home medications too late. A Chaplain handed clinicians a patient's DNR order too late. Patients and care companions waited too long to contact clinicians for clarification of discharge instructions. ***Cultural context***: Clinicians communicated with each other insufficiently within the context of an anesthesiologist being new to the team and requiring information about different standard procedures at the new institution.

Tab. 2.1: (continued)

Principle of human communication	Cases	Applied examples
		A patient's daughter did not convey the correct label of her mother's home medications to the clinical staff – she confused medication labels because she was unfamiliar with medical terminology. *Environmental context*: A nurse did not question another nurse's diagnostic assertion because the patient's mother was present in the room. A nurse encoded insufficient discharge instructions, assuming that the patient's husband already knew how to conduct the procedures at home, given that he had been an observer at the patient's bedside most of the time.
Principle 7: Preconceptions and perceptions vary among communicators.	6, 8, 15, 16, 18, 21, 26, 28, 30, 32, 33, 35, 36	Clinicians assumed but failed to establish a shared understanding of a patient needing PTSD treatment. Clinicians conveyed an incomplete medication history during transfer. A nurse remained concerned instead of talking to a patient's wife to reduce her uncertainty about the wife's assertion regarding the patient's condition. A physician was unsure about an infusion rate and assumed (but did not verify) that the pharmacist would correct it if it was wrong. A nurse assumed but did not verify that a bed would be available at the receiving hospital by the time the patient would arrive. A patient assumed but did not verify that "no dinner" was part of his treatment plan. A patient assumed but did not verify that he was not supposed to be getting any medications overnight. Clinicians assumed but did not verify that a patient's family would understand the implications of the patient being transferred to a geriatric-psychiatry ward. A nurse assumed but did not verify that the physician and other nurses knew about an infection control alert. Nurses misinterpreted that a patient was receiving Vancomycin as indication of the physician having been notified about an infection alert. A nurse assumed but did not verify that the receiving institution knew about a patient's VRE infection and the inherent need for special precautions. A nurse assumed but did not verify a patient's husband's understanding of her discharge instructions (e.g. the j-tube needing to be flushed every 12 hours), given that the husband had observed the procedures at the patient's bedside several times. Clinicians and patients did not communicate with each other sufficiently to establish a shared understanding of discharge instructions and their correct implementation at home. Clinicians misinterpreted a physician being at the patient's bedside as him being there all night (unverified assumption). Clinicians assumed but did not verify that an

Tab. 2.1: (continued)

Principle of human communication	Cases	Applied examples
		incoming fellow was already familiar with their institution's standards and protocols. Clinicians assumed but did not verify that a patient and her family would inform her long-term facility nursing staff about changed medications. A patient and her family members assumed but did not verify that the nursing staff at the long-term facility had been informed about the patient's new medications by the sending clinical staff. Clinicians assumed but did not verify that patients would implement their discharge instructions correctly at home.
Principle 8: Redundancy in content and directness in channel enhance accuracy.	2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 19, 20, 22, 23, 24, 25, 29, 30, 32, 33, 35	A nurse did not validate the accuracy of a patient's identity (name) with the sending staff, the patient, and the patient's wristband. A nurse did not utilize her communication with a patient sufficiently to validate the accuracy of her perception that the patient had not eaten anything all day. Clinicians did not enable enough transactional communication to validate the accuracy of provided care – instead, they documented the wrong medications in admission assessments and on medication lists, and did not follow up with each other to validate successful receipt, understanding, and accuracy of ordered medications, lab results, and images. Clinicians ordered the wrong medication dosages, misread prescribed medication dosages, and did not discuss the accuracy of medication labels with each other sufficiently (e.g. no follow-up communication to validate illegible handwriting). Clinicians did not validate the accuracy of perceived medication labels with the patient, primary care physicians, care companions/family members, and the patient's health records. Clinicians did not engage in sufficient communication with each other to validate the accuracy of patients' health conditions and treatment regimens. Clinicians did not engage in sufficient follow-up communication, both with other care participants and by reviewing the patient's records, to validate the accuracy of perceived information. Care participants did not engage in sufficient transactional communication to validate the accuracy and adequacy of diagnostic decisions and treatment plans (e.g. prescribed medications, assessment/diagnosis that a patient was displaying drug-seeking behaviors or that a pediatric patient's jerking was merely "hiccups," shared understanding of general allergies, etc.). Care participants engaged in insufficient transactional communication with each other to reduce uncertainties related to their lack of understanding of discharge instructions, institutional standard procedures, and patients' home medications.

Tab. 2.1: (continued)

Principle of human communication	Cases	Applied examples
		On many occasions, care participants exchanged too little communication during handoffs (i.e. only once, with too little content, and via indirect means), which compromised their potential of establishing a shared understanding of a patient's complete medical needs (e.g. DNR status, special precautions, infection alerts). Clinicians too often relied on a single source of information (e.g. a nurse's speculative assertion, brief EHR documentation, observations of others' nonverbal behaviors such as a physician being on the phone as an indication of him "being informed") instead of utilizing transactional communication with each other via direct channels (e.g. both health records and face-to-face with other providers, the patient, family members, and care companions) to access additional information that could validate the accuracy of the information that was derived from that single source. Nurses and patients remained quiet instead of speaking up to prevent an adverse event (e.g. allergies, wrong-site surgery, unindicated treatments, advance directives). Care participants did not utilize their nonverbal communication sufficiently as an additional pathway to enhancing the accuracy and understanding of conveyed information (e.g. actual demonstration of a j-tube flushing prior to discharge). Clinicians did not engage in postdischarge follow-up communication with patients and/or care companions as a means to ensuring accurate understanding and implementation of discharge instructions. Clinicians engaged in insufficient transactional communication with each other to coordinate patient care (e.g. who is caring for the patient, a shared understanding of patients' decision-making incapacities or deteriorating conditions, a need for special precautions, timely scheduling of follow-up appointments).

Abbreviations: DNR, do not resuscitate; ED, emergency department; EHR, electronic health record: ER, emergency room; PTSD, posttraumatic stress disorder; VRE vancomycin-resistant enterococci.

3 Communication topics in healthcare quality and patient safety

Annegret F. Hannawa, Ph.D.

The cases in Part II of this book cover seven common topics related to healthcare quality and patient safety.

3.1 Topic 1: "Time"

The IOM's Chasm Report (2001) identifies *timeliness* as one of six domains of high-quality care. Three topics related to "time" emerge from the cases in Part II of this book. In addition to *timeliness*, the chronological care context in these cases also entails issues related to *time allotment*, *timing* and *duration* of communication, indicating that any use of time conveys meaning.

Timeliness

Timely communication is the most prominent chronological topic across the 36 cases. It was relevant to all care participants' behaviors (i.e. clinicians, patients, and care companions). For example, clinicians take too much time to send documentation (cases 14, 29), convey a patient's allergy too late (cases 1, 11), wait too long to talk to or see a patient (case 4), take too long to communicate lab results to other providers (cases 24, 28), review images, charts, and records too late (case 4), and take too much time to follow up with test results (case 24). Clinicians, patients, and family members do not inform each other about medications on time (case 5), wait too long to raise issues (case 17), and are too slow to engage in communication with each other (cases 17, 29), both for clarification (cases 11, 17, 36) and given the medical urgency of a patient's deteriorating health condition (cases 10, 34).

Time allotment

Time allotment reflects care participants' failure to devote the necessary amount of time to engage in successful communication. It emerges as the second most frequent topic within the chronological context of care from the cases in Part II of this book. Examples of time allotment problems include clinicians not taking the necessary time to review records (cases 1, 4, 8, 30) or test results (case 10), to communicate with other care participants (cases 16, 20, 25), to attend to patients' or families' alerting requests (case 20), and to decode treatment orders properly (case 16).

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Timing

Timing encompasses care participants' failure to recognize and frame their behaviors within the clinical context of a given care setting. Timing issues are common in incidents where care participants either communicate at the *wrong time*, or fail to understand their communication in respect to its timing. Examples of *timing* include clinicians' lacking recognition of the time of the day at which a mother brings a young patient to the ER (case 20), their failure to decode messages within the context of an impending or recent surgery (cases 22 and 33), their failure to recognize in a conversation that a team member will no longer be at the institution at the time of a planned surgery (case 35), and their failure to consider the pending availability of a bed during patient transfer (case 18). Timing also includes examples of behavior that is encoded "too early" (in contrast to the "timeliness" notion discussed before). For example, clinicians initiate a treatment despite pending lab results (case 7).

Duration

Duration also reflects an important notion of "time" within the chronological care context. Duration refers to the amount of time that patients wait for a conversation, the length of time patients wait to see a clinician, and the amount of time care participants allow for any given communicative episode. Duration emerges as an issue in only one case. In case 20, clinical staff inaccurately state the timeframe within which a physician will come to see the patient, which would have been important for the patient's mother to know in the context of her observation that the patient is about to faint.

3.2 Topic 2: "Patient-centered care"

The IOM Chasm Report (2001) also includes *patient-centeredness* as one of its six high-quality care dimensions. In theory, care is "patient-centered" if clinical decision-making and treatment are 'respectful of and responsive to patients' preferences, needs, and values" (IOM 2001). In practice, this means that clinicians and patients must engage in communication to establish a shared understanding of what the patient's needs and values are. Otherwise, clinicians may incorrectly *assume* that they are being patient-centered in their care for a patient when, in fact, they are not.

An important communicative challenge is the delineation between what a patient *needs* and *wants*. And then, it is often not clear whether, when, and under what circumstances clinicians need to prioritize what the patient *needs* (in terms of improved health outcomes) over what the patient *values* and *wants* (in terms of consenting to needed treatment). This challenge emerges from several cases in Part II of this book, evidencing that patients' *needs* versus *wants* often conflict (e.g. cases 17, 29), and that their delineation is not always clear to clinicians or even patients themselves.

In light of this conceptual challenge, three important points can be made regarding how to operationalize **patient-centered care**:

1. Patient-centered care is not about doing things *to* or *for* a patient, but doing things better *with* the patient.
2. Competent interpersonal communication, particularly communication that is spontaneously responsive and adaptive toward patients' explicitly (i.e. verbally) and implicitly (i.e. nonverbally) expressed needs and expectations, is the *vehicle* through which patient-centered care is attained.

A communication skill that is particularly relevant for patient-centered care is **interpersonal adaptability**. This skill enables all care participants to flexibly "converge" with (i.e. approach or embrace) their conversational counterparts in a way that attends to their explicitly or implicitly expressed ad-hoc needs and expectations. This skill is not only important for understanding a patient's needs and wants as a foundation of patient-centered care, but it also facilitates a shared understanding among *all* involved care participants. In other words, interpersonal adaptability is a skill that also facilitates "other-centered care" (beyond "patient-centered care") and constitutes a process that prioritizes quality and safety.

In summary, patient-centered care *does not* solely center on the patient. It is accomplished through appropriate and effective interpersonal sense-making *with* the patient. For example, it is perfectly clear for a physician to tell a patient that she will die in a month, but there are more and less appropriate ways of explaining this. Inattention to the *appropriateness* of that communication makes the rest of the care delivery process more complicated and, likely, more error-prone. Such appropriateness is facilitated by interpersonally adaptive communication among *all* care participants (also among clinicians), not by merely focusing on the perceived wants or needs of a patient, which – as evident across the cases in Part II of this book – too often represent providers' perceptions rather than a transactionally established shared understanding.

3.3 Topic 3: "Sound-alikes"

The cases in Part II of this book encompass several incidents where uncorrected misinterpretations at the most fundamental level of communication – the unclear use and attribution of a symbol – lead to medication misuse (i.e. use of the wrong medication) by both clinicians and patients (cases 2 and 19). In the medical literature, this issue is commonly blamed on system errors related to the "sound-alike" naming and "look-alike" packaging of distinct medications (e.g. Aspden et al. 2007; Institute for Safe Medication Practices 2015). While this is certainly a factor that can contribute to misunderstandings, the medication misuse in the cases result directly from care participants' failures to clarify perceived ambiguities and uncertainties regarding a given

medication through successful communication. In other words, medication misuse is commonly caused by care participants' failures to establish a shared understanding about a given prescription, not by the prescription label itself.

This again underlines the fundamental notion that communication lies *between* people, not *within* people. *Inadequate communication* of a prescription between care participants can cause misunderstandings and result in medication misuse. Of course, the degree of similarity in sound-alike and look-alike medications increases the probability that this kind of misunderstanding will occur. However, most often, communication sufficiency errors occur on a *transactional* dimension where care participants fail to establish a shared understanding because they do not use their communication skills *sufficiently* to clarify uncertainties and validate the accuracy of a presumed medication label and its proper use.

3.4 Topic 4: "Safety culture"

The term *safety culture* connotes an organizational culture within a healthcare institution that prioritizes structures and processes that optimize the safety of patient care. Key features of a "culture of safety" include acknowledgement of the high-risk nature of the industry and a determination to consistently deliver safe care to patients, a blame-free environment in which safety means to report errors, and a commitment to see and explore safety-enhancing solutions. Focal areas of *safety culture* include transparency and disclosure in both interstaff and provider-patient interactions, the concept of "just culture" (which balances "no-blame" with individual accountability), interdisciplinary training, and issues related to burnout.

The cases in Part II of this book demonstrate several challenges related to healthcare institutions' safety culture. The cases provide evidence that competent communication is a necessary element of a culture of safety. In other words, communication (as a *process* of care) is a prerequisite for safe patient care (as an *outcome* measure). All cases demonstrate how insufficient and/or inadequate communication can impose a severe threat to patient safety.

Interestingly, the time and efforts that are required to *respond to* a preventable adverse event is often much greater than the time that would have been required to establish sufficient communication to *prevent* the adverse event. Thus, from a managerial perspective, more *sufficient* (in quantity of content) and *better* (in quality) communication *at the beginning* of a patient's care episode can have measurable value at the end.

3.5 Topic 5: "Healthcare informatics and digitization of care"

Numerous cases in Part II of this book highlight challenges related to the use of healthcare informatics, which support the *digitization of care* with the objective to simplify care processes, but often *reduce* rather than enhance the quantity and quality of interpersonal communication. The cases predominantly reference electronic health records (EHRs). In several incidents, patient harm resulted from clinicians delegating important communication to an EHR or clinical chart, substituting face-to-face communication with an automated system that merely deposits (rather than communicates) information (e.g. cases 4 and 15). Clinicians commonly fail to recognize that a shared understanding cannot be "delivered" by such a system, but must be co-constructed *between* care participants through skillful and effortful communication (e.g. case 16). A technological system could, at best, be used to validate that a message was received, which it does not accomplish in any of the cases (see case 35). However, the co-creation of a **shared understanding** of the message contents remains a crucial interpersonal task (see case 22).

There are three reasons why EHRs often fail to facilitate or improve safety-promoting communication among care participants:

1. Even when a message contains pure informational contents, more than half of the meaning of such a message is derived from the sender's nonverbal behavior (Philpott 1983). In other words, the informational content itself comprises less than half of the meaning in a message, compared to *the way in which* that information is conveyed. EHRs do not store this important layer of nonverbal content, making it difficult to convey the same information that would be communicated in face-to-face interactions. Furthermore, they often lack sufficient resources for accurate message decoding.
2. Care providers commonly rely on patient notes in an EHR without questioning their completeness and accuracy. This constitutes a critical safety threat in healthcare. It rests on the assumption that the digitization of communication facilitates a *more complete* information exchange. In the case scenarios, the unquestioned reliance on EHRs as a solution to an endemic lack of information exchange *worsens* the problem and introduces *new risks*, because it distracts from the fact that it is not the *lack of information* as much as the *lack of a shared understanding* that triggers patient safety events. EHRs merely contain information, but they do not establish a shared understanding.
3. EHRs can *hinder* rather than aid the establishment of a shared understanding due to both structural challenges (e.g. complex or nonintuitive layouts causing decoding errors) and process elements (e.g. the records not always being as up-to-date as what is known to the clinician). In the cases, clinicians tend to assume that their colleagues will "get a hold of" information they deposited in an EHR (e.g. cases 22, and 35). In addition, the digitization of care forces clinicians to focus on computer screens and patients' verbal information, reducing their attention to patients' nonverbal expressions as a critical source of safety-relevant information

(see case 31). As a result, EHRs commonly provide *added* opportunities for information to fall through the cracks in a digital world that attempts but often seems to fail to connect human minds.

The core lesson taken from these examples is the recognition that **information does not equal communication**. If used properly, EHRs can work well as tools to *facilitate access* to patient information. All relevant information regarding a patient's care episode can be accurately and properly documented in EHRs. The meaning of this information, however, remains *within* people until a shared understanding of this information is established through transactional communication *between* all involved care participants. In other words, despite the fact that information "lies" in records and providers can access this information, the required common ground between providers and patients that is necessary for them to establish a **shared understanding** of this information is not automatically attained. The written documentation may be in place to *attempt* such communication, but that communication does not take place until care participants actively engage in communication about the content residing in the EHR.

In summary, health information technologies do not always help to facilitate information exchange as a way to promote a shared understanding for safer, higher quality care. EHRs (and simple handoff heuristics) may take care of some of the "low-hanging fruit" of communication errors, but they (a) cannot mitigate them all, and (b) inadvertently contribute their own errors (see also IOM 2011; Meeks et al. 2014). Clinicians can deposit data and information in EHRs, but doing so alone does not facilitate the communication process. In the future, EHRs may be best used to perform a "reminder function" that implies that communication *should* be taking place. But the quality and success of that communication remains in the hands of the care participants – it will depend on their ability to establish a shared understanding through effective and appropriate transactional communication.

3.6 Topic 6: "Patient/family engagement"

Another prevalent theme across the cases in Part II of this book is the need and benefit of engaging patients and family members as active partners for safe and high-quality care. The cases demonstrate how patients can prevent critical incidentsin-the-making by verifying, for example, that care providers received and properly understood their handwritten notes (case 1); by providing rich descriptions of how their body feels and to what extent their experiences are "different than usual" (case 34); and by validating the accuracy of medical practice and clinicians' medication prescriptions (cases 2, 19, 21). In other words, patients and family members can contribute crucial value to the transactional communication process with and between clinicians to build a common ground and shared understanding as a foundation for safe and high-quality care.

3.7 Topic 7: "Handoffs"

Handoff or care transitions pose a continual safety risk that also appears as a recurrent theme across the 36 cases in Part II of this book. A critical issue regarding the handoffs in these cases relates to clinicians' exclusive reliance on latent communication among several members of the healthcare team. Such **latent communication** – meaning communication that passes through several individuals – is commonly compromised by a "**game of telephone**" effect, in which information is lost in transition as it passes through multiple receivers (see case 4). Appropriate message redundancy, transactional follow-up, and communication *with* rather than *through* other providers can enhance the direct validation of message contents and facilitate communication accuracy (see case 4). Thus, similar to the topics discussed before, **"safe handoff" should be considered a direct outcome of competent interpersonal interaction**. In other words, message encoding, message decoding, and transactional communication that are adequate in both quantity and quality optimize the likelihood of coordinated and consistent care.

3.8 Summary

The seven topics discussed in this chapter illustrate that effective and appropriate interpersonal communication is the vehicle through which safe and high-quality patient care takes place. If the vehicle is functional and competently driven, it facilitates positive care outcomes. If parts of the driving vehicle are disconnected, it can severely compromise the safety and quality of care. In a "normal" interpersonal context, misunderstandings can result in interpersonal conflict and are eventually corrected and resolved. In the context of healthcare, however, that same type of misunderstanding can compromise a patient's well-being and safety. This implies that interpersonal communication skills must be considered a core standard for safe and high-quality care.

4 Interpersonal communication: Challenges, processes, and issues

Annegret F. Hannawa, Ph.D.

We spend 80%–90% of our waking hours communicating with others (Klemmer and Snyder 1972; Barker et al. 1981). In fact, we derive almost *everything* that matters to us from our interpersonal interactions. For example, we learn the rules and norms of our language and cultures, establish and negotiate relationships, organize collective activities, and find meaning in the things we do entirely through the process of communication.

Just because we communicate a lot, however, does not mean that we communicate well. A sizeable percentage of the average population lacks fundamental communication skills and experiences difficulties negotiating the necessities of everyday life through their interactions with others (Basset et al. 1978; Ilott 2001; National Center for Education Statistics 2003). As a result, we commonly encounter disruptive "dark side" experiences in our interpersonal encounters, such as expressions of anger, bullying, hurt feelings, social rejection, sexual harassment, shyness, social stress, threats, and troublesome relationships (see Spitzberg and Cupach 2007 for a review). At the same time, social support and competent communication can have positive health effects that are as substantial as almost anything that modern medicine can offer in terms of extending people's lifespans (e.g. Holt-Lunstad et al. 2015; Nyquist et al. 2014; Pinquart and Duberstein 2010; Shor et al. 2013).

In high-risk industries, poor communication has the potential to threaten and harm life. In the airline industry, 70% of accidents result from pilot errors (Jones 2003). In healthcare, the annual count of patients harmed by human error equates to the number of fatalities that would be incurred by at least three jumbo jets crashing every two days (Banja 2005; Kohn et al. 2000). Communication is the most frequently reported causative factor in both industries, implying that **incompetent communication commonly harms and threatens human life**.

The ubiquity with which people encounter communication challenges on a daily basis suggests that there is a pressing need for improved interpersonal skills, especially in today's society with its additional challenges to social interactions. The rapid evolution of information technology as a medium for communicating imposes both opportunities and barriers that require new communication skill sets (Hwang 2011; Kelly et al. 2010; Ledbetter 2009; Lee 2010; Spitzberg 2006).

Unfortunately, communication problems are often viewed as "aberrant behavior" that needs to be eliminated (Coupland et al. 1991). There is a proliferation of appeals to effectiveness, efficiency, appropriateness, and satisfaction to avoid such "destructive incidents" of communication failure. This tendency evolves logically from the common assumption that miscommunication is a risk-bearing phenomenon that needs to

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be avoided at all cost. However, the literature reveals that miscommunication – like human error – is inevitable for two reasons: (1) a "common ground fallacy," and (2) the difficulty of establishing a shared understanding. The next section discusses these two challenges in detail.

4.1 Two core challenges of interpersonal communication

Challenge 1: Establishing a common ground

Objectively, humans seem very similar to one another. In fact, on average only 0.1% of genes differ between two human beings (Beatty and Pascual-Ferrá 2015). However, even identical twins have different life experiences that influence their communication (Mustajoki 2012). As discussed in Chapter 2, people vary in respect to their personal traits, perceptions, brain functioning, speech patterns, word definitions, and cultural, family, and personal rules. In light of these common interpersonal discrepancies, a full correspondence between the "mental worlds" of two individuals is impossible – even if they are twins.

This issue is the inherent flaw behind the common assumption that the ideas we signify by our communication are the same as the ideas that others attribute to our communication (Mortensen 1997). Two persons' understandings of the same words and gestures can *never* be identical, because each of them holds a unique point of view based on their own personal life experiences, cognitive backgrounds, as well as their physical, social, and mental states (Verdonik 2010).

Communication, then, needs to be seen as an ongoing interactive negotiation between two or more people to **minimize interpersonal discrepancies and optimize the likelihood of establishing a "common ground."** Competent communication is the primary pathway to establish such a common ground as a necessary foundation for co-creating shared understanding. Particularly in healthcare, unresolved perceptual differences can reinforce biases that have the potential to cause disastrous results. One example of a common ground fallacy in this book includes a clinician's perceptual bias that the patient's daughter is using pharmaceutical language correctly (case 2). The clinician fails to recognize that the patient's daughter is not familiar with clinical terminology, and that her usage of such terms requires communicative validation.

Challenge 2: Co-creating a shared understanding

A general purpose of communication is the creation of mutual meaning or a **shared understanding** (Duck 1994; Weigand 1999) that transcends people's interpersonal differences and *builds on* a pre-established common ground. Communication is needed because such "meaning" lies *between* (not *within*) people and is generally different from the sum of its parts.

"Coming to an understanding" is a complex and difficult task for many reasons. Our lives are full of uncertainties, paradoxes, ambiguities, and contradictions that confound our individual efforts to achieve clear and complete communication (Mortensen 1997). Furthermore, what we are meaning to say is often merely a sketch of the full content we want to express. Every utterance a speaker encodes is only an approximation of the concrete thought the speaker has in mind (Clark 2003; Jucker et al. 2003). Finally, and importantly, people commonly communicate in pursuit of interpersonal goals that do not necessarily prioritize clarity and accuracy and thus hinder the establishment of a shared understanding. Miscommunication can be intentional, in service of strategic motivations to camouflage or conceal true intentions, wants, needs, or goals (Mafela 2013). For example, people often engage in deception (e.g. *demeanor bias*; see Bond et al. 1985), intergroup integration (e.g. *signal amplification bias*; see Vorauer 2005; Vorauer and Sakamoto 2006), politeness (e.g. use of ambiguous speech), and positive face maintenance (e.g. use of metaphors and figurative speech, see Mustajoki 2012) to appear competent or to achieve their conversational objectives. Therefore, people not only *cannot achieve* perfect shared understanding, but this is also not the main goal or function of many interactions.

Like other activities in life, the communication process is also inevitably tainted by human fallibility (Hannawa 2015). Despite dedicated efforts, people make mistakes with respect to communicating clearly, accurately, and sufficiently to contribute to a shared understanding.

In light of these facts, it is incorrect to conceptualize communication failures in terms of "breakdowns" that ought to be prevented. Instead, *miscommunication* (rather than successful communication) needs to be embraced as a *normative standard* that accompanies all human interactions. As Mortensen (1997) put it, we simply "cannot pretend to be able to understand other people completely – without flaw, error, mistake or miscalculation." Shared understanding is a necessary, high-quality standard that we can *only* attain through laborious joint efforts of competent interaction.

While human error and miscommunication cannot be completely avoided, their incidence and harmful effects can be *reduced*. Competent communication is the pathway through which people can effectively (1) establish a common ground and (2) co-create a shared understanding with one another. In other words, communication competence functions as the mechanism through which interpersonal gaps that cause miscommunication can be reduced and shared common ground can be expanded. Communication competence also constitutes the means through which human errors in communication (e.g. in encoding, decoding, and transactional sensemaking) can be minimized. Moreover, when errors do occur, as they will, communication competence is the means by which the harmful effects of such errors can be minimized.

In that sense, peoples' inability or unwillingness to make well-reasoned sense together constitutes a severe liability (Mortensen 1997). If we do not invest the necessary labor for attaining a mutual understanding, miscommunication will penetrate

and compromise everyday social interactions with the potential of causing harm. For this reason, this book introduces and conceptualizes the term **Safe Communication** to describe an evidence-based set of five **"Hannawa SACCIA" skills** (see Chapter 5) that ought to be considered **core competencies for safe, high-quality care**.

4.2 The processes of interpersonal communication

As discussed before, the two core challenges of interpersonal communication encompass the utilization of communication skills to (1) establish a common ground and (2) co-construct a shared understanding. "Mis-"communication is broadly characterized as communication that does not achieve this purpose (Weigand 1999). *Miscommunication* comprises an *incomplete* understanding that manifests itself as a *mismatch* between the speaker's and recipient's attributed intentions, feelings, thoughts, and meanings (Coupland et al. 1991). It is often used as an umbrella term to encompass various types of communication failures. The cases in Part II of this book, for example, include examples of misunderstanding, nonunderstanding, misinterpretation, misconception, mishearing, and misperception.

Interpersonal communication entails participants' individual **encoding**, **decoding**, and **transactional** (i.e. mutually negotiated) sense-making activities (Barnlund 2008; Berlo 1960; Shannon and Weaver 1949). As illustrated in the traditional model of human communication (Figure 4.1, all actors involved in a communication episode (1) abstract (i.e. encode) complex thoughts, intentions, meanings, or feelings they have in mind into written, oral, and nonverbal messages; (2) reassemble (i.e. decode) the written, oral, and nonverbal messages they "received" to match the sender's originally intended thoughts, intentions, meaning, or feelings; and (3) engage in mutual negotiation (i.e. transactional communication) of these expressed thoughts, intentions, meaning, or feelings to co-create a shared understanding.

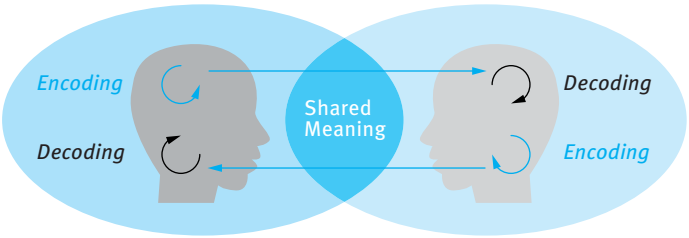

Fig. 4.1: Traditional model of human communication.

Across the 36 cases in Part II of this book, care participants commit 247 distinct communication errors. Within this total count, 102 are **encoding errors**, 63 are **de-**

coding errors, and 82 are **transactional communication errors**. Both **encoding and decoding errors** are most frequently related to the provision and extraction of information, and to participants' sense-making of that information. The second most frequent theme relates to the chronological context of communication; that is, its timeliness, timing, allocation, and duration. The third most frequent theme regards communication that encompasses patients and care companions. Tables 4.1 and 4.2 show the themes related to care participants' encoding and decoding errors in Part II of this book.

Care participants' **transactional communication errors** are most frequently related to the interactive *verification* of the receipt, completeness, and accuracy of information. Similar to the encoding and decoding errors, the second most frequent theme is related to the transactional sense-making of information for the purpose of establishing a shared understanding. The remaining errors encompass care participants'

Tab. 4.1: Themes related to care participants' **communication encoding errors** ($N = 102$).

Themes	Communication encoding errors
Information	Insufficient information provision Failure to include contextually relevant information Generic information provision Insufficient information extraction Insufficient instructions for information handoff
Time	Wrong timing of communication Failure to allocate time for communication Failure to indicate duration for communication Delayed communication
Medication	Ordering the wrong medication Ordering discontinuance of the correct medication
Clarity	Mislabeling Illegible handwriting Vague instructions
Approach	Communicating with the wrong person Wrong approach to communication given the context
Patient	Failure to integrate the patient Failure to be attentive to the patient Failure to be respectful of the patient
Treatment	Ordering unindicated treatment Not prescribing the indicated treatment
Contact	Failure to establish communication
Assessment/diagnosis	Expressing a wrong assessment/diagnosis
Speaking up	Failure to speak up

Tab. 4.2: Themes related to care participants' **communication decoding errors** ($N = 63$).

Themes	Communication decoding errors
Information	Failure to decode full information Failure to access/extract additional information
Sense-making	Drawing incorrect conclusions Misjudging Misinterpreting Misattributing Misreading
Time	Failure to decode on time Not taking the time to decode Failing to decode with the timing of the care setting in mind
Care companions	Failure to facilitate the role of care companions
Patient	Lack of perspective-taking
Bias	Decoding with relational bias Decoding with diagnostic bias
Difference	Failure to decode with respect to inter-institutional and inter-professional differences

Tab. 4.3: Themes related to care participants' **transactional communication errors** ($N = 82$).

Themes	Transactional communication errors
Verification	Failure to verify receipt Failure to verify accuracy of understanding Failure to verify completeness of EHRs Failure to verify accuracy of procedures Failure to verify treatment accuracy Failure to verify medication accuracy Failure to verify diagnostic accuracy
Sense-making	Failure to establish a shared understanding of full clinical details Failure to establish a shared understanding of full procedural details Failure to establish a shared understanding of treatment implications Failure to correct misunderstandings Failing to reduce uncertainty/ambiguity through communication Failure to overcome perceptual gaps through communication
Time	Failure to communicate awareness of the timing of the care encounter Failure to communicate with each other on time
Constraints	Failure to resolve contextual constraints through communication
Coordination	Failure to coordinate care effectively
Patient	Failure to flexibly adapt to the patient Failure to coordinate care within the context of a patient's needs and wants

neglect of the chronological context of their interaction and their failure to integrate the patient into the care process. Thus, all of the examples of communication errors – in encoding, decoding, and transactional communication – show a similar pattern of themes. The themes of the transactional communication errors in Part II of this book are summarized in Table 4.3.

4.3 Error-prone aspects of human communication

The way in which people communicate can be assessed in terms of the **quantity** and **quality** of their communication. The incidents of miscommunication in this book reflect care participants' efforts to achieve *comprehensive* communication (= *quantity* of communication), and also their efforts to communicate in a way that is clear, accurate, contextualized, and interpersonally adaptive (= *quality* of communication) – both in terms of their encoding, decoding, and transactional sense-making. The following paragraphs summarize and explain the core aspects of care participants' *communication quantity* (**sufficiency**) and *communication quality* (**clarity**, **accuracy**, **contextualization**, and **interpersonal adaptation**) across the 36 cases, as indicators of **safe communication**.

4.3.1 Quantity of communication

Communication sufficiency

Communication sufficiency refers to the extent to which care participants' communication is comprehensive in terms of the **quantity of content** that is encoded, decoded, and/or transactionally established. Regarding the *common ground* problem, the question is whether there is enough information coverage to establish sufficient common ground. In terms of the challenge of *co-creating a shared understanding*, sufficiency relates to the extent to which care participants communicate *enough* information to arrive at a shared understanding.

In concrete terms, communication sufficiency assesses the extent to which care participants *encode* information (i.e. none, partial, or too much), *decode* information (i.e. none, partial, or too much), and engage in *transactional communication* (i.e. sufficient mutual verification or acknowledgment of message receipt and completeness of message contents). In other words, communication sufficiency is the extent to which care participants communicate *enough* information (in quantity) to (1) establish a common ground and (2) co-create a shared understanding of each other's intents, thoughts, feelings, and meanings.

Communication sufficiency errors are the most frequent failures across the 36 cases (94 of 247 total errors). The cases illustrate incidents where information exchange is attempted but care participants never connect (case 4), where understand-

ing is assumed but never attained (cases 15, 21, 22), where insufficient information is provided while handing off a patient (cases 6, 12, 23, 24, 36), where information gets lost between care providers (cases 22 and 28), and where information passes unnoticed through several communication lines of defense (case 4). In all cases, care providers fail to establish a shared understanding, compromising the safety of a patient.

The cases illustrate that sufficiency is a *prerequisite* for communication to yield a shared understanding. Once a common ground is established, sufficient communication has to occur on such ground for care participants to generate a shared understanding of their intended meanings, intentions, thoughts, and feelings. Such sufficiency reaches beyond the individual care episode – it also applies to the communication *after* an event to exchange perspectives on how communication failures that contributed to an adverse event might be transformed into functional learning processes, coping, and future prevention (see case 5).

4.3.2 Quality of communication

Preventing sufficiency errors alone does not guarantee successful interactions. The extent to which communication succeeds also depends on the quality of all care participants' interactional contributions. Such *quality*, as mentioned before, entails the **accuracy**, **clarity**, **contextualization**, and **interpersonal adaptation** with which care participants establish a shared understanding via encoding, decoding, and transactional communication.

Communication accuracy

Communication accuracy refers to **the extent to which care participants encode and decode a message *correctly***. Accuracy encompasses not only the quality of the communicated content (i.e. whether the communicated message content is accurate or incorrect), but also the quality of the encoding (i.e. accurate symbolization), decoding (i.e. the extent to which the message is decoded and decoded accurately), and transactional communication (i.e. the extent to which care participants verify the receipt of the correct message, the accuracy of the message contents, and the accuracy of their shared understanding). The key question is whether care participants' communication is *accurate enough* to establish a (1) *common ground* and (2) *shared understanding*.

The case scenarios in this book exemplify situations where inaccurate communication contributes to *close calls* (cases 2, 3, 8, 9, 15, 17, 18, 20, 23, 35), *adverse events* (cases 5, 7, 11, 16, 19, 21, 28, 29, 32), and *sentinel events* (cases 10, 14, 25, 33). Accuracy errors are the third most frequent communication errors (50 out of 247 total errors) across the 36 cases.

Communication clarity

While communication accuracy refers to the *correctness* of communicated message contents (e.g. validity of information), *communication clarity* refers to **the extent to which interpersonal communication avoids strategical or inadvertent vagueness, ambiguity, and unclear language**. In other words, accuracy relates to *message contents*, whereas clarity captures the quality of *message delivery*. In particular, the question is whether care participants' communication is *clear enough* to establish a common ground and shared understanding of each other's intents, thoughts, feelings, and meanings. The cases in this book illustrate the catalytic effects that one initial *unclear* message can have on subsequent interactions and, ultimately, patient safety (see cases 11 and 19).

Clarity errors are the least frequent communication errors that emerged from the 36 cases. Only 6 of 247 total errors are clarity errors. These cases exemplify incidents where care participants encode messages unclearly (cases 11 and 19), decode messages in an unorderly manner (case 35), and fail to transactionally engage in a joint effort to correct perceived uncertainties or a lack of clarity in their understanding of a message (cases 11 and 17). All of these errors compromise the safety and quality of patient care.

Communication contextualization

As discussed in Chapter 2, people evaluate each other's communication competence based on the extent to which their behavior (i.e. verbal, written, or nonverbal communication) is both *effective* (i.e. in attaining desired *goals*) and *appropriate* (i.e. *fit-to-context*; see Spitzberg 2000). Any given healthcare communication is embedded within at least one of **five contextual layers** (i.e. functional, relational, chronological, environmental, and cultural; see Chapter 2) that influence people's perceptions of the appropriateness of the enacted behaviors during a given care episode, which in turn directly influences the effectiveness of the interaction.

Communication contextualization then refers to **the extent to which interpersonal communication is framed within the contextual layers in which a care episode is embedded**. Regarding the *common ground* challenge, the question is whether the communication is *contextualized enough* to establish a common ground between the care participants. In terms of the challenge of *co-creating a shared understanding*, the question is whether care participants contextualize their communication well enough to arrive at a shared understanding.

Communication contextualization applies to encoding (i.e. none, not enough, or too much contextualization), decoding (i.e. none, not enough, or too much contextualization), and also to the transactional process of interpersonal interaction (i.e. establishing communication that is jointly framed within or removed of any applicable contextual layers for the purpose of facilitating a shared understanding).

Communication contextualization errors are the second most frequent issues across the cases in Part II of this book (82 of 247 total errors). For example, the cases illustrate incidents where care participants communicate with the wrong target (*functional* context; see cases 3, 29, 35), where clinicians or staff do not allocate the needed time, within the care episode's chronological constraints, to properly communicate with each other or with the patient (*chronological* context; see cases 1, 3, 4, 8), where the timing or timeliness of a clinician's communication compromises the safety of a patient (*chronological* context; see cases 4, 18, 31), where care outcomes are compromised due to relational (*relational* context; see cases 7, 9, 13, 26) or diagnostic biases (*functional* context; case 7), where clinical staff's failure to contextualize a message cause a sentinel event (*functional* context; see case 10), and where hierarchical relational compositions (e.g. status or gender differences) among care participants either facilitate or constrain communication and, as a result, influence patients' care outcomes (*relational* context; see cases 10, 20, 21). A complete list of contextualization problems was provided in Chapter 2 (Table 2.1).

The 36 cases in Part II of this book demonstrate how the failure to contextualize communication in any care setting compromises the likelihood of participants (1) co-establishing a *common ground* and (2) co-creating a *shared understanding*. The cases furthermore illustrate how context can both **facilitate** and **constrain** the success of a care encounter. For example, in case 25, a patient interprets the relational context of her care episode (i.e. the nonverbally implied status and gender differences between the providers and the patient) as a constraint that prevents her from speaking up to avert a wrong-site surgery. Similarly, in case 23, the *relational* context of a hierarchical communication setting, the *functional* context of two x-rays taken during the same afternoon, the *chronological* context of the timeliness of care, and the *environmental* context of a resident's busy schedule due to a parallel emergency constitute barriers to care participants arriving at a shared understanding.

These examples show that it is critically important for providers to (1) recognize and (2) frame their communication within the contextual features of any given care episode. Providers, patients, and care companions need to learn how to utilize their communication skills to optimize the safety and quality of care by prioritizing communication that is "fit-to-context."

Interpersonal adaptation

Interpersonal adaptation refers to the extent to which a care participant spontaneously adapts to the needs and expectancies that are expressed ad-hoc (verbally or nonverbally) by another care participant during a care encounter. This communication skill closely resembles the clinical concept of *patient-centered care*, but stretches that concept to a skill set that also applies to interprovider communication. This skill set also differentiates itself from the notion of *patient-centered care* because it focuses on the space *between* people as the center of an interactive meaning-making process, rather

than on a patient's desires and expectations (see the "patient-centered care" discussion in Chapter 3).

Interpersonal communication is **interpersonally adaptive** if care participants (i.e. clinicians, patients, and care companions), in any given encounter, recognize and spontaneously accommodate each other's explicitly (verbally) or implicitly (nonverbally) expressed needs or expectations. Such a *need* or *expectation* can be evident in an emotional expression (e.g. tears expressing sadness, which could be adapted to either verbally by discussing support or nonverbally by handing a tissue), a cognitive discrepancy such as an informational void (e.g. an implicit expression of uncertainty or an explicit request to clarify information), or in the delivery style of a message (e.g. an implicit expression of misunderstanding, an explicit request to slow down the rate of speaking, or to repeat message contents for clarification).

With respect to the *common ground* challenge, the question is whether the communication is *interpersonally adaptive enough* to facilitate the establishment of a common ground between the care participants. In terms of the challenge of co-creating a *shared understanding*, the question is whether the care participants adapt their communication to each other enough to attain a shared understanding.

Interpersonal adaptation applies to encoding and decoding (i.e. none, not enough, or overdone adaptation to the other's verbally or nonverbally expressed ad-hoc needs), and also to the transactional process of interpersonal communication (i.e. establishing a shared understanding via interpersonally adaptive sense-making of message contents and their connotations/implications). For example, in cases 31 and 32, the challenge is to ensure that patients and caregivers fully understand their discharge instructions and know how to implement them at home.

Interpersonal adaptation errors are the fourth most frequent issue across the 36 cases in the book (15 of 247 total errors). The cases illustrate incidents where clinicians fail to (1) recognize that a patient is blind, (2) personalize generic discharge instructions to a patient's needs, and (3) decode and respond to other care participants' cognitive, emotional, informational, and professional needs. These incidents demonstrate the crucial importance of interpersonally adaptive communication to (1) co-establish a *common ground* and (2) co-create a *shared understanding*. The measure of *quality* here is the degree to which communication takes place *with* other care participants in a way that is flexibly adaptive and focused on the concrete purpose of generating a shared understanding. Particularly in communication with patients, interpersonal adaptation enables care providers to co-interpret meaning "together with" the patient (see cases 31 and 32; and discussion in Chapter 3), to "step into the decoding cycle" *with* the patient and jointly complete the sense-making process.

4.4 Summary

The communication challenges and issues summarized in this chapter demonstrate that each care participant's communicative contribution is highly relevant to establishing positive health outcomes as a direct consequence of the appropriateness and effectiveness of their interactions. It is important to note, however, that *shared understanding* does not imply *agreement*. It merely establishes a **foundation** on which successful communication can occur.

In healthcare, care participants have limited time to invest the effort required for establishing successful interactions. This task is facilitated if all care participants learn to see themselves and others as fallible human beings, and actively invest themselves into establishing a common ground with colleagues and patients. In other words, human error and miscommunication need to be rescued from their label as "deviant" behaviors, and understood as "normal" and "expected." Doing so allows for exploration of their potential to contribute to safer, higher quality care. Such a transformation will yield the opportunity for a genuine form of *safe sense-making practice*, where error management and interpersonal skills contribute to a greater and more accurate shared understanding. When this fundamental **"safe communication"** objective is established, it becomes easier to express oneself clearly and to interpret others accurately.

From an organizational point of view, "communicating safely" may take a little more time than communicating "as usual" in the moment. But, in the long run, communicating "as usual" will cost the individual, the patient, and the institution far more than if that little extra time is taken at the front end to communicate safely. In other words, safe communication may take marginally more time – but what it saves in inefficiency and ineffective care later is well worth the investment.

5 The Hannawa SACCIA typology: Five core competencies that constitute "safe communication"

Annegret F. Hannawa, Ph.D.

Across the 36 cases in Part II of this book, care participants commonly experience problems with respect to the **quantity** and **quality** of their communication. Particular error-prone aspects relate to the **sufficiency**, **accuracy**, **clarity**, **contextualization**, and **interpersonal adaptation** of their communication. These five communicative core competencies are defined as follows:

1. **Sufficiency**
   The extent to which an adequate amount of information is verbally and nonverbally provided, accessed, extracted, and/or transactionally exchanged.
2. **Accuracy**
   The extent to which message contents and behaviors are used, identified, interpreted, and judged correctly, and/or transactionally validated as accurate.
3. **Clarity**
   The extent to which verbal and nonverbal communication is concrete and precise, avoiding strategic or inadvertent vagueness, ambiguity, or sloppiness in encoding, decoding, and transactional sense-making.
4. **Contextualization**
   The extent to which communication is verbally and nonverbally framed (i.e. encoded, decoded, or transactionally negotiated) within the functional, relational, chronological, environmental, and cultural context that constrain or facilitate an interaction.
5. **Interpersonal adaptation**
   The extent to which care participants are spontaneously reactive to each other's explicitly or implicitly expressed needs and expectations during an interaction, both in their encoding, decoding, and transactional sense-making.

Chapter 2 introduced the conceptual dimensions of **communication competence**, postulating that competent communication involves interpersonal processes that are perceived as both *appropriate* and *effective* by all involved participants (Spitzberg 2000). Combining this model with the abovementioned error-prone aspects of healthcare interactions yields the following conceptualization of safe and high-quality communication:

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Safe and high-quality communication consists of all verbal and nonverbal behaviors that, through adequate *quantity* (i.e. sufficiency) and *quality* (i.e. clarity, accuracy, contextualization, and interpersonal adaptation), optimize the likelihood of achieving the most appropriate and effective care outcomes.

Chapter 4 highlighted that human interactions entail both individual and joint efforts during the encoding, decoding, and transactional sense-making of verbal and nonverbal message contents. Combining these communication processes with the five previously mentioned aspects of safe communication implies that care participants commonly commit **encoding**, **decoding**, and **transactional communication** errors of **sufficiency**, **accuracy**, **clarity**, **contextualization**, and **interpersonal adaptation**.

The fields of healthcare quality and patient safety have been accustomed to using different sets of measures to categorize error types. For example, Brook et al. (1990) published one of the first articles to evaluate quality of care in terms of *underuse*, *overuse*, and *misuse*. The patient safety discipline commonly dichotomizes root causes of critical incidents into errors of *omission* and *commission*. Given the objective of this book to develop a common ground for marrying the nomenclature of two different disciplines (i.e. healthcare and communication science), the existing concepts from healthcare quality and patient safety will be combined to describe the abovementioned communication processes.

In that sense, the communication errors in this book contain errors of **omission** (i.e. complete failure to engage in communication), **underuse** (i.e. too little use of communication), **misuse** (i.e. wrong or inadequate use of communication), **overuse** (i.e. too much use of communication), or **commission** (i.e. unindicated use of communication). In other words, care participants either omit, underuse, misuse, overuse, or commit nonindicated communication during the processes of encoding, decoding, and transactional sense-making. Such errors are related to their communication sufficiency, accuracy, clarity, contextualization, and interpersonal adaptation in the following ways:

Care participants **encode**, **decode**, and/or engage in **transactional communication**…

1. …*not at all* (**errors of omission**) – such as failing to convey relevant information (**sufficiency**), failing to validate the accuracy of communicated contents (**accuracy**), failing to clarify ambiguous message contents (**clarity**), failing to adjust communication to the context of a situation (**contextualization**), and failing to adapt to another person's expectancies or needs (**interpersonal adaptation**).
2. …*not enough* (**errors of underuse**) – such as not including enough content (**sufficiency**), not validating the correctness of communicated information enough (**accuracy**), being too vague in encoding, decoding, or transactional sense-making of a message (**clarity**), investing too little effort into framing an

interaction within its care context (**contextualization**), and not adapting enough to accommodate another care participant's expectations or needs (**interpersonal adaptation**).

3. …*too much* (**errors of overuse**) – such as conveying too much information (**sufficiency**), paying excessive attention to already validated and correctly communicated message contents (**accuracy**), being overly precise in verbal or written communication to an extent that it becomes a distraction (**clarity**), overusing context to an extent where it biases an interaction (e.g. hyperfocus on one aspect of the illness and judging a patient to be hypochondriacal based on a relational history; **contextualization**), and being overly adaptive and over-compensating for perceived needs and expectations of another person (e.g. talking too loudly to an elderly patient or reacting to another person's expressed emotion so that it is demeaning; **interpersonal adaptation**).
4. …*improperly* (**errors of misuse**) – such as including irrelevant contents in a message (**sufficiency**), misinterpreting, misreading, or misjudging a behavior or message (**accuracy**), sending a contradictory message or prescription with illegible handwriting or ambiguous meaning (**clarity**), addressing an inappropriate person in a conversation or communicating at an inadequate time (**contextualization**), and inadvertently addressing another person in an offensive or disrespectful way (**interpersonal adaptation**).
5. …*unindicated* (**errors of commission**) – such as communicating information that should not have been conveyed (**sufficiency**), providing or confirming incorrect information or ordering unindicated medication or treatment (**accuracy**), encoding a purposefully unclear or ambiguous message (**clarity**), abusing contextual constraints or facilitators for a strategic purpose (e.g. being disrespectful to someone to retaliate for a perceived offense; **contextualization**), and engaging in communication that is purposefully *not* meant to adapt to another person's needs and expectations (**interpersonal adaptation**).

A conceptual integration of these error categories yields the **Hannawa SACCIA typology of core competencies for "safe communication"** (**SACCIA S**ufficiency, **A**ccuracy, **C**larity, **C**ontextualization, **I**nterpersonal **A**daptation; Table 5.1). Grounded in a communication science perspective, this typology introduces the first evidence-based categorization scheme that aids a comprehensive understanding of "safe communication" in healthcare, informing five critical error-prone aspects of interpersonal sense-making in safety- and quality-compromised care situations.

Tab. 5.1: The Hannawa SACCIA typology: "Safe communication" core competencies and error categories.

"Safe communication" core competencies		Categories of communication error
S	**Sufficiency** **Definition:** The extent to which an adequate amount of information is verbally and nonverbally provided, accessed, extracted, and/or transactionally exchanged.	**Encoding** error of sufficiency ↓ **Decoding** error of sufficiency ↓ ↓ **Transactional communication** error of sufficiency ↓ ↓ ↓ □ □ □ Error of omission □ □ □ Error of underuse □ □ □ Error of overuse □ □ □ Error of misuse □ □ □ Error of commission
A	**Accuracy** **Definition:** The extent to which message contents and behaviors are used, identified, interpreted, and judged correctly, and/or transactionally validated as accurate.	**Encoding** error of accuracy ↓ **Decoding** error of accuracy ↓ ↓ **Transactional communication** error of accuracy ↓ ↓ ↓ □ □ □ Error of omission □ □ □ Error of underuse □ □ □ Error of overuse □ □ □ Error of misuse □ □ □ Error of commission
C	**Clarity** **Definition:** The extent to which verbal and nonverbal communication is concrete and precise, avoiding strategic or inadvertent vagueness, ambiguity, or sloppiness in encoding, decoding, and transactional sense-making.	**Encoding** error of clarity ↓ **Decoding** error of clarity ↓ ↓ **Transactional communication** error of clarity ↓ ↓ ↓ □ □ □ Error of omission □ □ □ Error of underuse □ □ □ Error of overuse □ □ □ Error of misuse □ □ □ Error of commission
C	**Contextualization** **Definition:** The extent to which communication is verbally and nonverbally framed (i.e. encoded, decoded, or transactionally negotiated) within the functional, relational, chronological, environmental, and cultural context that constrains or facilitates an interaction.	**Encoding** error of contextualization ↓ **Decoding** error of contextualization ↓ ↓ **Transactional communication** error of contextualization ↓ ↓ ↓ □ □ □ Error of omission □ □ □ Error of underuse □ □ □ Error of overuse □ □ □ Error of misuse □ □ □ Error of commission
IA	**Interpersonal adaptation** **Definition:** The extent to which care participants are spontaneously reactive to each other's explicitly or implicitly expressed needs and expectations during an interaction, both in their encoding, decoding, and transactional sense-making.	**Encoding** error of interpersonal adaptation ↓ **Decoding** error of interpersonal adaptation ↓ ↓ **Transactional communication** error of interpersonal adaptation ↓ ↓ ↓ □ □ □ Error of omission □ □ □ Error of underuse □ □ □ Error of overuse □ □ □ Error of misuse □ □ □ Error of commission

Abbreviations: SACCIA, **S**ufficiency, **A**ccuracy, **C**larity, **C**ontextualization, **I**nterpersonal **A**daptation.

5.1 Communication errors across the cases

Among the 247 communication errors in Part II of this book, the most common errors are errors of underuse (117), followed by errors of omission (84), errors of misuse (20), errors of commission (13), and errors of overuse (13).

Errors of underuse mainly encompass **contextualization** (53) and **sufficiency** errors (46), followed by errors of **interpersonal adaptation** (10), **accuracy** (4), and **clarity** (4). This suggests that the main problem across the cases is that care participants communicate too little *within the context* of their care episode, and they also do not communicate *enough* information.

Errors of omission mainly encompass communication **sufficiency** errors (47), followed by errors of **accuracy** (25), **contextualization** (9), and **interpersonal adaptation** (3). Again, this pattern suggests that care participants do not communicate enough, both in quantity and quality, to establish a (a) *common ground* and (b) *shared understanding* as a prerequisite for safe and high-quality care.

A different pattern emerges for **errors of misuse**. Care participants mainly *misuse* their communication with respect to their communication **accuracy** (8). For example, they convey incorrect information, misread prescription labels, misjudge other care participants' behaviors (e.g. the nurse assumes that a physician being on the phone means that the physician is "being informed"), and misinterpret inactions as treatment-relevant information (e.g. a patient assumes "no dinner being delivered" is part of their treatment regimen). Care participants also *misuse* their communication in terms of their **contextualization** (8). For instance, they order unindicated medication or medication that is inadequate for a particular patient (e.g. the patient being high risk), decode messages out-of-context (misinterpretation), and convey information to the wrong healthcare provider. In fewer instances, care participants *misuse* their communication with respect to their **clarity** (2 cases) (e.g. by failing to reduce ambiguity and skipping over EHR prompts); and **interpersonal adaptation** (4 cases) – for example, by referring to a patient inappropriately as "the patient," and not adapting their discharge instructions to patients' special needs (e.g. being blind, feeling overwhelmed, or living alone).

Errors of commission almost exclusively encompass communication **accuracy** errors (12). For example, clinicians document the wrong information in admission records, order the wrong prescriptions or infusion rates, and draw the wrong conclusions. They commit only two communication **contextualization** errors by ordering medication that was unsafe given a patient's pregnancy.

Finally, **errors of overuse** are almost exclusively communication **contextualization** errors (12) – care participants' overuse of context that *constrains* (mostly in the form of perceptual biases) their potential to establish a shared understanding. There is only one error of overuse, which relates to **interpersonal adaptation** (1). In this case, clinicians over-accommodate a patient's wife's wishes by prioritizing her treatment preferences for her husband over those of the patient.

Tables 5.2–5.6 summarize the frequencies of the different error types in the 36 cases in Part II of this book.

5.2 Errors within principles of human communication

The **Hannawa SACCIA typology of core competencies for "safe communication"** emerged from a communication science analysis of the 36 cases in Part II of this book. In the discussion following each of the cases in Part II, the Hannawa SACCIA communication errors will be summarized and discussed based on the corresponding principles of human communication introduced in Chapter 2. Table 5.7 shows the Hannawa SACCIA communication errors as they relate to the respective principles of human communication.

5.3 Summary

This chapter introduced the **Hannawa SACCIA typology** as an evidence-based categorization scheme of "safe communication" competencies in healthcare that informs five error-prone aspects of interpersonal sense-making in safety-compromised care episodes. Throughout this book, clear lines have been drawn between categories of themes, types of events, phases of care, and the SACCIA typology introduced here. It is important to note, however, that actual errors in practice are not necessarily so easily "boxed." Errors may emerge from accumulations of slight and subtle miscues, involving multiple parties and crossing multiple stages of care. The Hannawa SACCIA typology introduced in this chapter represents a significant improvement over existing conceptualizations. At the same time, great pedagogical value can be gained from examining cases to identify the ways in which additional factors can either add to, mitigate, or prevent the errors that are being categorized. In other words, much of the value provided in this chapter will arise from discussions that consider the *interplay* of factors, rather than merely attempting to fit a given case into a particular box.

Tab. 5.2: Frequencies of communication errors of **underuse** ($N = 117$).

Communication errors of underuse	Frequency
Contextualization	53
Sufficiency	46
Interpersonal adaptation	10
Accuracy	4
Clarity	4

Tab. 5.3: Frequencies of communication errors of **omission** ($N = 84$).

Communication errors of omission	Frequency
Sufficiency	47
Accuracy	25
Contextualization	9
Interpersonal adaptation	3

Tab. 5.4: Frequencies of communication errors of **misuse** ($N = 20$).

Communication errors of misuse	Frequency
Accuracy	8
Contextualization	8
Clarity	2
Interpersonal adaptation	2

Tab. 5.5: Frequencies of communication errors of **commission** ($N = 13$).

Communication errors of commission	Frequency
Accuracy	12
Contextualization	1

Tab. 5.6: Frequencies of communication errors of **overuse** ($N = 13$).

Communication errors of overuse	Frequency
Contextualization	12
Interpersonal adaptation	1

Tab. 5.7: Hannawa SACCIA communication errors within principles of human communication.

Principle of human communication	Communication errors	Select examples from the cases
Principle 1: Communication varies between thought, symbol, and referent.	Accuracy	*Inaccurate symbolization*: A patient's daughter assigned a sound-alike label to her mother's home medication. A nurse associated a medical chart and admission papers with the wrong patient. A nurse did not detect a name discrepancy between a patient's wristband and medical chart. A nurse stated inaccurately that a patient had sufficient "central line access" while referring to an external jugular vein. A pharmacist decoded a physician's illegible handwriting inaccurately and filled a sound-alike medication.
	Clarity	*Unclear symbolization*: A nurse was imprecise when asking a patient about allergies (i.e. inquiring about "medication allergies" instead of allergies in general). An advanced practice nurse notices a physician wrote a prescription with illegible handwriting and the wrong medicine was filled by the pharmacist.
Principle 2: Communication is a nonsummative process.	Sufficiency	*Insufficient effort to establish a shared understanding*: Clinicians did not ask patients about allergies, and did not retrieve important clinical information from consent forms or health records. Care participants did not verify receipt and understanding of information they had encoded on consent forms, in health records, or during face-to-face encounters (e.g. a patient being pregnant or blind, requiring special precautions, having allergies, desiring DNR, what medications patients had been taking at home, whether test results had been reviewed). Care participants engaged in insufficient encoding, decoding, and transactional follow-up to establish a shared understanding (e.g. of what inactions and nonverbal expressions meant; which hip needed to be replaced; that two X-rays had been taken the same day, a nerve block had been performed, admission work had to be continued, home medication bottles were in a patient's bag, medication regimens had been revised, a patient was already en-route to the receiving hospital, an infant's feeding had been discontinued, a patient's behavior was different than normal, a patient had an allergy to a planned test, a patient was incapable of making care decisions, and a patient had DNR status). Both clinicians and patients remained silent when their communication could have prevented an adverse event (e.g. insufficient assertiveness that could have extended critical perceptions *within* care participants to a shared understanding *between* care participants and facilitated safer care).
	Clarity	Care participants did not engage in communication with each other to clarify perceived uncertainties (e.g. an unclear question, illegible handwriting, unclear understanding of a family member's remarks about the patient's behavior being unusual, uncertainties related to discharge instructions, etc.).

Tab. 5.7: (continued)

Principle of human communication	Communication errors	Select examples from the cases
	Interpersonal adaptation	Clinicians did not adapt discharge instructions to patients' special needs (e.g. being blind, living alone, feeling overwhelmed, etc.).
Principle 3: Communication is functional.	Contextualization	A nurse overly constrained her communication with a patient due to the patient's wife being "very outspoken" in the community, fearing a loss of reputation if the wife were unsatisfied with the care provided to her husband. A patient did not dare to raise an issue with the nurse, fearful that she may perceive his remark as criticism and provide him with lower quality care.
Principle 4: Communication is more than words.	Sufficiency	Clinicians overly relied on verbal communication to draw inferences about patients' health conditions, paying insufficient attention to patients' nonverbal cues as bearers of meaning (e.g. not decoding that a patient was incapable of making care decisions, blind, or feeling overwhelmed).
	Accuracy	Clinicians misjudged patients' conditions because they decoded nonverbal displays inaccurately (e.g. misinterpreted no dinner being delivered as part of a treatment regimen, misinterpreted a resident being on the phone as an indication of the patient's surgeon and cardiologist being informed).
	Interpersonal adaptation	Clinicians did not adapt discharge instructions to patients' implicitly expressed needs (e.g. patients' nonverbally expressed concerns that they would be unable to implement discharge instructions at home).
Principle 5: Communication entails factual and relational information.	Accuracy	A patient did not correct a nurse's use of the wrong name so not to burden her limited available time.
	Contextualization	Nurses did not dare to question physicians' diagnostic and treatment decisions to avoid interpersonal conflict (i.e. hierarchical communication). Clinicians placed a patient into home hospice care in disregard of him not feeling ready for that. Clinicians yielded to a patient's wife's treatment preferences instead of accommodating the patient's needs.
	Interpersonal adaptation	A patient adapted overly to a nurse's implicitly expressed expectation not to occupy her limited time. A physician did not adapt a prescription order to a pharmacist's informational needs (e.g. did not clarify that he was unsure about the correct infusion rate). Clinicians adapted insufficiently to patients' and families' explicitly or implicitly expressed needs (e.g. did not respond to family alerts, greeted and addressed a patient improperly, did not adapt care instructions sufficiently to patients' and families' informational needs and expectations).

Tab. 5.7: (continued)

Principle of human communication	Communication errors	Select examples from the cases
Principle 6: Communication is contextual.	Sufficiency	A nurse did not justify her sudden "stop" order sufficiently during resuscitation to assert a patient's established DNR code. Clinicians did not add important medical information to patients' health records (e.g. DNR status, pregnancy, allergies). Clinicians consulted each other and health records insufficiently to establish a shared understanding within contextual frames (e.g. a bruise having been incurred prior to surgery, a family member's alerting communication needing to be taken seriously – given that family members, even if they have no medical expertise, can facilitate patient safety because they know the patient).
	Clarity	Clinicians were ineffective in communicating with each other to clarify the ambiguity of contradictory DNR/non-DNR messages being discussed in the room.
	Contextualization	*Functional context*: A physician ordered medications and treatments that were unsafe for patients (e.g. pregnancy, medical history, allergies, insulin intolerance). A nurse and physician did not establish a shared understanding of a medication dose being nephrotoxic to a particular patient. A nurse assumed that a patient's husband would understand discharge instructions for his wife, given that he had been an observer at the patient's bedside. Clinicians were ineffective in establishing a shared understanding with other care participants of patients' DNR codes. Care participants handed paperwork to the wrong persons (e.g. family handed DNR form to a Chaplain instead of clinicians). *Relational context*: Clinicians judged patients' conditions with bias, based on prior care episodes and assumed knowledge of the patient. Clinicians failed to activate patients' family members and care companions as partners who could facilitate safer patient care. Clinicians did not dare to question or challenge assertions of hierarchically superior clinicians. *Chronological context*: A nurse did not take the time to identify a patient properly. A physician waited too long to attend to a patient at the bedside. Clinicians and family members waited too long to retrieve and convey critical information (e.g. patients' home medications, DNR status, allergies, need for special precautions). Clinicians did not take the time or waited too long to check patients' lab results. Care participants took too long to establish a shared understanding (e.g. patients' DNR status, medication dosages, revised treatment plans, correct surgery site, etc.) and to coordinate follow-up appointments (e.g. "July syndrome").

Tab. 5.7: (continued)

Principle of human communication	Communication errors	Select examples from the cases
		Patients waited too long to convey problems with treatment plans and with implementing discharge instructions at home. Laboratory staff did not take the time to convey critical blood results directly to the nursing staff, given that no paper reports were available on Sundays. *Environmental context*: A nurse did not question a diagnostic assertion of another nurse because the patient's mother was present in the room. *Cultural context*: A patient's daughter inadvertently attributed a sound-alike label to her mother's home medications, given her lack of medical expertise. Clinicians decoded the daughter's sound-alike label verbatim, disregarding the context of the daughter being unfamiliar with medical terminology. Clinicians communicated with a new resident in disregard of the context of him not yet knowing their institution's standards and protocols.
Principle 7: Preconceptions and perceptions vary among communicators.	Sufficiency	Clinicians encoded and decoded incomplete information during patient handoff, assuming that information would be known to, retrieved, or conveyed by others (**common ground fallacy**; e.g. treatment regimens, revised medications, DNR codes, pregnancy, infection control alerts, need for special precautions). Clinicians did not establish a sufficient shared understanding of diagnoses and treatment plans (e.g. a patient also needing PTSD treatment). Clinicians, patients, and care companions engaged in insufficient communication with each other to clarify perceived uncertainties (e.g. DNR status, surgery site, discharge instructions, implications of a patient's admission into a geriatric-psychiatry ward).
	Accuracy	Clinicians assumed mistakenly (but did not verify) that a physician being at the patient's bedside meant that he was covering the patient all night. Nurses misinterpreted a patient receiving Vancomycin as an indication of the physician having been informed about an infection control alert. A patient failed to contact his nurse to verify that "no dinner" was supposed to be part of his treatment plan. A patient assumed but did not verify with his clinicians that he was not supposed to be getting medications overnight. Clinicians framed postoperative care orders insufficiently within the context of a surgery

Tab. 5.7: (continued)

Principle of human communication	Communication errors	Select examples from the cases
	Contextualization	fellow being new to the institution and unfamiliar with the new protocols and standards. Clinicians decoded a clinician's order in disregard of the context of him being new to the institution and not knowing the institution's protocols and standards (i.e. brief versus detailed orders).
	Interpersonal adaptation	A physician communicated nonadaptively with a pharmacist via a prescription order (unspoken assumption that the pharmacist would correct the physician's wrong infusion rate).
Principle 8: Redundancy in content and directness in channel enhance accuracy.	Sufficiency	A nurse was ineffective in conveying to a physician that a patient was high risk for VTE and thus needed prophylaxis. Clinicians established an insufficient shared understanding of patients' diagnoses, treatment plans, and postsurgical deteriorating health conditions. Clinicians engaged in insufficient inter-professional communication to coordinate patients' care episodes effectively (e.g. who is caring for a patient). Clinicians encoded and decoded too little information (i.e. insufficient content, no follow-up to verify receipt and understanding) through too indirect channels (e.g. written rather than face-to-face communication, "meaning-making" delegated to health information technologies) for establishing a shared understanding of patients' complete medical needs. Care participants remained quiet instead of speaking up to prevent an adverse-event-in-the-making (e.g. wrong-site surgery).
	Accuracy	Clinicians did not utilize communication as a pathway to validate the accuracy of their provided care with patients, family members, care companions, other clinical staff, and health records (e.g. correct patient identification, accuracy of decoded medication labels and dosages, detection of known versus unusual patient behaviors, issues related to allergies, diagnostic reasoning, availability of advance directives). Clinicians did not use follow-up communication to ensure that patients were implementing discharge instructions at home as instructed (i.e. accurate implementation).
	Clarity	An intern ignored her uncertainty about a patient needing VTE prophylaxis, and skipped over the EHR prompt (instead of relying on it as a safety check).
	Contextualization	Clinicians did not engage in enough communication to establish a shared understanding within the context of the various care episodes, such as a patient not feeling ready for home hospice care, a wife's attitude constraining her husband's safety, a patient's decision-making (in)capacity hindering safe care outcomes, and patients' complex conditions requiring special precautions.

6 Lessons from communication science

Annegret F. Hannawa, Ph.D.

There are a number of lessons that a communication science perspective can contribute to enhancing patient safety and the quality of care. These relate to *being communicative*, *initiating communication*, *achieving a shared understanding*, *being accurate*, *being digitally competent (e.g. with electronic tools and records)*, *being contextual*, *being patient-centered*, and *being efficient*.

6.1 On the challenge of being communicative

1. All behavior has the potential to communicate a message.
2. All communication has the potential to convey relationship-defining information.

6.2 On the challenge of initiating communication

3. Never assume that communication has taken place.
4. Never assume that communication, even if it has taken place, has resulted in shared understanding.
5. Never assume that information has been "sent," received, and processed by other people.

6.3 On the challenge of achieving a shared understanding

6. Communication lies *between* people, not *within* people.
7. Communication is a joint meaning-making process.
8. Communication does not equal information. It is the vehicle to establishing a *shared understanding* of information.
9. Always assume that communication starts at a point of "no common ground."
10. Always assume that a shared understanding has to be co-established through a sequence of interactions.
11. *Enough* communication is the foundation for attaining a shared understanding.
12. Safe communication does not end with the sending or depositing of information. It is a dynamic process that must be carried through to the end, where a shared understanding is accomplished among *all* care participants.
13. Redundancy in content generally facilitates a shared understanding, because it advances an overlap of perspectives.

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14. Redundancy in content can also work adversely; if it is *overused*, then it may be perceived as patronizing and *constrain* rather than facilitate the potential of attaining a shared understanding.
15. *Direct* communication is generally safer in terms of facilitating a shared understanding, because it provides *more*, and *more valid*, information to decode.
16. Direct follow-up to verify the completeness and accuracy of a perceived message is generally the safer way to establish a shared understanding – even if information has been exchanged, it does not mean that the information is understood as intended, and that this understanding is shared by all participants.

6.4 On the challenge of being accurate

17. Transactional communication is a process of validation.
18. Redundancy in content can reduce uncertainty and correct inaccuracy.
19. An initial communication inaccuracy can only be corrected through subsequent communication.
20. Both the quantity and quality of informational contents are compromised as a message passes through multiple receivers.
21. Communication among fewer individuals allows for a direct validation of message contents and thereby facilitates accuracy.
22. Communication among multiple individuals can provide multiple validation checkpoints that facilitate accuracy.
23. Communication among *too many* individuals can diminish the value of redundancy.

6.5 On the challenge of being digital

24. Shared understanding cannot be "delivered" by a system, but must be co-constructed between care participants through skillful and effortful interpersonal communication.
25. Health information technologies can help to ensure that a message has been received, but the co-creation of a shared understanding of that message remains between people.

6.6 On the challenge of being contextual

26. Relational structures (e.g. hierarchical differences due to status or gender) among care participants can either facilitate or constrain communication and directly influence patients' care outcomes.

27. Failing to frame any given care interaction within its functional, relational, chronological, environmental, and/or cultural context can directly compromise the safety and quality of care.
28. Contextual barriers to a shared understanding can only be overcome through contextualized communication.

6.7 On the challenge of being patient-centered

29. Interpersonally adaptive communication is the primary vehicle for attaining patient-centered care.

6.8 On the challenge of being efficient

30. Successful communication is cost efficient. It takes more time upfront, but saves both time and cost in the end.

Part II of this book covers real clinical cases to illustrate how communication processes can both compromise and facilitate the safety of patient care. Each case chapter contains a "diagnostic" section that (1) identifies (e.g. ❶, ❷, ❸), (2) labels (e.g. "communication encoding error of sufficiency"), and (3) analyzes the **Hannawa SACCIA communication errors** (from Chapter 5) that contributed to the respective close calls or adverse events. Subsequent brief discussion sections position these communication errors within applicable **principles of human communication** (from Chapter 2).

Each case in Part II of this book also contains a "communication lessons" activity. A number-coded box entitled "Communication lessons for safer, higher quality care" (see example below) is provided after each case discussion, encouraging readers to revisit the "Lessons from communication science" that were introduced in this chapter. Great pedagogical value can be gained from cross-referencing the applicable communication lessons to each case as illustrated below:

Communication lessons for safer, higher quality care

1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○	8 ○	9 ○	10 ○
11 ○	12 ○	13 ○	14 ○	15 ○	16 ○	17 ○	18 ✓	19 ○	20 ○
21 ○	22 ○	23 ○	24 ○	25 ✓	26 ○	27 ✓	28 ○	29 ○	30 ○

This graphical illustration shows how the 30 communication lessons that were introduced in this chapter will be revisited at the end of each case chapter in Part II of this book, and how this box can be used like a checklist to cross-reference applicable communication lessons from this chapter to each case scenario, as a fundament for pedagogical discussions.

Part II: **Case studies across six stages of nursing practice**

Stage 1: Data collection

Data collection is the process of obtaining information about a patient by asking specific questions, either to the patient or to other people who know the patient and can give useful information. Data are also obtained through physical examination, test results, and an analysis of multiple patient-related factors. The primary aim is to obtain information to support an assessment and recommend a plan of care. Almost all patient encounters involve data collection about patients. This process varies in degree of length, depth, and focus, based on the goals for the encounter. It includes the major health problem or concern, details about its time course and correlates, a review of different organ systems, the patient's past health history, family and social situation, health-related behaviors and use of medications. Interpersonal communication is the pathway to successful data collection.

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Case 1: "No consensus on consent"

Provider-patient interaction
Medication misuse, Adverse event

Clinical context: Acute inpatient admission for general surgery (appendicitis)
Communication context: Interaction between a certified registered nurse anesthetist (CRNA) and a patient
Incident: Communication error leading to medication misuse
Patient safety outcome: Adverse event

Case written by Annegret F. Hannawa, Ph.D., Wolfram Heipertz, M.D., Wolfgang Krüger, M.D., and Anne Wendt, Ph.D., M.S.N., R.N.

A 40-year-old male is experiencing acute pains in his right lower abdomen and running a fever. His primary care physician identifies rebound tenderness at the right lower quadrant of his abdomen. The physician diagnoses acute appendicitis and immediately refers the patient to the hospital for urgent surgery.

The patient is listed for emergency surgery the same day. In the hospital, he first completes an informed consent form in which he declares that he is allergic to penicillin. He returns the completed consent form to the certified registered nurse anesthetist (CRNA). The CRNA does not ❶ **confirm any potential allergies** by ❷ **reviewing the consent form** or ❸ **ask the patient about possible allergies**. After the anesthesia is induced and before the surgery begins, the CRNA gives the patient the usual antibiotic-prophylaxis (Ampicillin plus Sulbactam).

Within two hours after the surgery, the patient develops a total body skin rash (redness and itchiness). He is treated with medication for a H1–H2 blockade (blockade for histamine receptors 1 and 2) plus oral steroids. The patient does not suffer any respiratory or circulatory effects or any other impairments as a result of the allergic reaction. The skin rash causes him significant discomfort for two days. On the third day, the rash disappears and the patient is discharged from the hospital as planned.

Communication science principles

1. Communication is a nonsummative process

The CRNA committed a ❶ **communication decoding error of sufficiency** (error of omission) by not accessing and decoding the patient's chart or the patient's written

information on the consent form. This incident demonstrates an example of *attempted communication* in which information was encoded intentionally by the sender (patient) but not decoded by the receiver (CRNA).

The CRNA committed a ❷ **communication encoding error of sufficiency** (error of omission) by not directly asking the patient about potential allergies.

The CRNA and the patient committed a ❸ **transactional communication error of sufficiency** (error of omission) by not verifying the receipt and understanding of the information the patient had handwritten on the consent form.

As a result of these three sufficiency errors, communication was attempted but actually never took place. The necessary starting point for preventing this adverse event would have been the recognition that interpersonal communication is a **transactional process** that requires **sufficiency** as a foundation for a successful co-creation of shared understanding.

2. Communication is contextual

Interpersonal communication is nested within several contextual layers. One of these layers is the chronological context within which an interaction takes place. In this case, the emergent nature of the encounter shortened the available time frame for safe communication. In other words, the context of the patient's condition in this particular clinical scenario was a barrier to successful communication with the patient. Safe communication could have occurred if the CRNA had allocated the needed time, within these chronological constraints, to properly process the patient's handwritten notes on the consent form, and discussed its contents with the patient.

Discussion

This case demonstrates that communication is an interactive, collaborative meaning-making process that requires all care participants to contribute actively to co-creating a shared understanding. Furthermore, this case illustrates how communication is often constrained by contextual barriers.

In this particular case, **successful communication** – defined as accomplishing a shared understanding of the intended message contents – was never attained. Successful communication would have required, at a minimum, that the CRNA both (1) read and (2) fully comprehended (i.e. both decoded and interpreted accurately, as intended by the patient) the patient's handwritten notes on the consent form.

It is important to note that preventing sufficiency errors does not alone guarantee *successful* communication. The extent to which communication succeeds also depends on the *quality* of all participants' contributions. In this case, for example, such quality might have included the readability of the patient's handwriting, the patient's perceived appropriateness of the CRNA's tone of voice, and both of their interpretations of each other's messages. The mere fact that *sufficient* (i.e. "enough") informa-

tion exchange takes place does not mean that communication is going to be successful. *Quality* indicators, such as the richness of the communication channel (i.e. direct face-to-face rather than written communication), the clarity and accuracy of participants' contributions, and their spontaneous adaptability to each other's interpersonal needs directly enhance the likelihood of a successful communicative encounter.

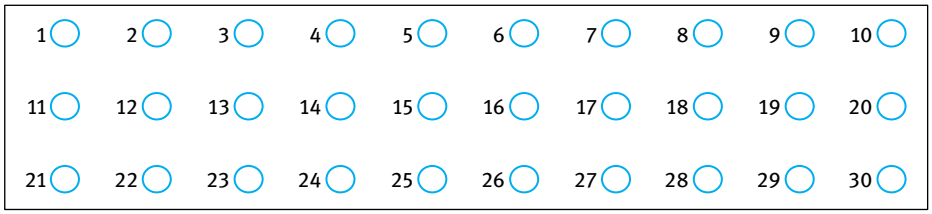
This case further demonstrates that *safe communication* is a necessary element of a *culture of safety*. From an economics perspective alone, the time that was lost in the aftermath of this adverse event was much greater than the time it would have taken to communicate sufficiently with the patient. This case also demonstrates the importance of *active patient involvement* for the quality and safety of care – the adverse event could have been prevented if the patient had followed up with the CRNA to verify that she had read and properly understood his handwritten notes.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The CRNA and the patient could have been mindful of the fact that successful communication is a process that requires their active participation.
- The CRNA could have read, processed, and reacted to the patient's handwritten note on the consent form indicating an allergy to penicillin.
- The CRNA could have personally checked the patient's health records and inquired whether the patient had any allergies before administering the prophylactic antibiotic.
- The patient, as an active care participant, could have verified with the CRNA that she had read and understood the patient's handwritten message on the consent form.

Communication lessons for safer, higher quality care



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others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

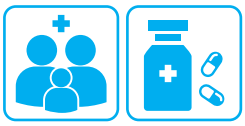
Discussion questions and exercises

1. What distinguishes *sufficient communication* from *successful communication*? What could the patient and CRNA have done in this situation to ensure *successful communication*?

2. Write out a script for the CRNA and the patient that demonstrates *successful communication.*

3. What environmental circumstances might have compromised the CRNA's ability to establish sufficient communication with the patient in this case?

4. What procedures could be implemented to prevent this patient safety event from being repeated in the future?



Case 2: "Sound-alike"

Provider-family interaction
Medication misuse, Harmless hit

Clinical context: Acute-on-chronic inpatient admission (depression)
Communication context: Interaction between a nurse and a patient's family
Incident: Communication error leading to medication misuse
Patient safety outcome: Harmless hit

Case written by Anne Wendt, Ph.D., M.S.N., R.N.

A 72-year-old female accompanied by her daughter is admitted to an acute geriatric psychiatric unit in a large regional teaching hospital for depression. The patient has a medical history of hypertension and chronic atrial fibrillation. She is slow to respond to questions and is withdrawn. Because she is not able to answer the admission questions coherently, her daughter provides her mother's medication information. ❶ **The daughter tells the nurse** that her mother is taking "Plaxil" and "Zestril" (lisinopril). ❷ **The nurse assumes that the daughter meant Paxil (paroxetine)**, an anti-depressant medication, and ❸ **documents Paxil** in the admission assessment. However, at home the patient is taking Plavix (clopidogrel) to prevent thrombi associated with chronic atrial fibrillation, not Paxil. ❹ **The admitting resident does not check with the primary care physician or family** regarding the patient's medications. Rather, ❺ **the resident writes admitting orders** to specify that the patient's home medications (noted as Paxil based on the nurse's admission assessment notes) be continued.

With continued treatment on Paxil, the nursing staff member notes that the patient develops confusion. The primary care physician reviews the patient's health record and notes that the patient is taking Paxil (paroxetine) but not Plavix (clopidogrel) as prescribed for the chronic atrial fibrillation. The patient's Paxil is discontinued, and Plavix is re-started. The primary care physician consults with the psychiatric physician regarding an anti-depressant medication that does not cause confusion in the patient. There are no long-term adverse effects for the patient.

Communication science principles

1. Redundancy in content and directness in channel enhance accuracy

The nurse committed a ❷ **transactional communication error of accuracy** (error of omission) by failing to validate with the daughter and the records that the patient is in fact using what she assumed was *Paxil*.

The nurse committed a ❸ **communication encoding error of accuracy** (error of commission) by documenting Paxil (instead of Plavix) in her admission assessment.

The admitting resident committed a ❹ **transactional communication error of accuracy** (error of omission) by failing to validate the accuracy of the medication label with the primary care physician and the family.

The admitting resident committed a ❺ **communication encoding error of accuracy** (error of commission) by specifying in the admitting orders that home medications (*Paxil*) be continued for this patient.

2. Communication varies between thought, symbol, and referent; Preconceptions and perceptions vary among communicators

The daughter committed a ❶ **communication encoding error of accuracy** (error of commission) by telling the nurse that her mother is taking "Plaxil" instead of "Plavix."

3. Communication is contextual

The daughter committed a ❶ **communication encoding error of contextualization** (error of underuse) by failing to qualify that given her nonmedical background (*cultural* context) and the fact that she is not the patient (*functional* context), she is not absolutely sure that *Plaxil* is the correct name of the medication label.

The nurse committed a ❷ **communication decoding error of contextualization** (error of overuse) by overly decoding the medication information within the context of the daughter not being a clinician, the nurse being familiar with the psychotropic medicine *Paxil* and, thus, assuming (rather than verifying) that the daughter is mistakenly using a sound-alike medication label (*cultural* context).

Discussion

This case demonstrates how transactional communication is the vehicle through which clinical accuracy is enhanced. The patient's daughter, the nurse, and the hospitalist in this case interacted under the mistaken assumption that communication merely constitutes a linear information transfer. Under this assumption, the patient's daughter encoded a message that contained an inaccurate medication label. Both the nurse and the resident assumed (rather than co-established) an understanding of that message, and failed to validate the accuracy of the provided medication label in

a context where the daughter was not the patient and also not cognizant of the threat of a potential medication confusion due to sound-alike medications.

The chain of accuracy errors in this case, which led to the medication misuse, is illuminated by the principles "Communication varies between thought, symbol, and referent" and "Preconceptions and perceptions vary among communicators." The daughter initially had a thought in mind (= the medication her mother is taking at home) that referenced a particular medication (referent, = Plavix), for which she used a nonrepresentative label (symbol, = "Plaxil"). The nurse associated a different label (symbol, = "Paxil") with that same thought in mind (= the medication the mother is taking at home). Thus, both the daughter and the nurse associated a wrong label (symbol) with the same referent they had in mind (i.e. the medication mother is taking at home).

Transactional communication would have been the pathway through which they could have corrected this communication inaccuracy. Transactional validation of their symbolizations, throughout the care interactions in this case, could have facilitated a common ground and a shared understanding of the accurate medication the mother was in fact taking at home, and prevented the medication misuse that reached the patient but, fortunately, did not cause the patient any severe harm.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this harmless hit:

- The nurse could not have *clarified* that the daughter is referring to a different medication than the one she labeled as *Paxil*.
- The nurse could have validated the accuracy of the label *Paxil* prior to documenting it in her admission assessment by
  - checking the patient's records.
  - establishing a shared understanding of the accuracy of that medication label through transactional communication with the daughter.
  - asking the daughter to bring in all of the patient's medications for a medication reconciliation.
- Prior to specifying in the admitting orders that home medications be continued, the resident could have validated the accuracy of the medication label with the primary care physician and the patient's family.
- When telling the nurse that her mother is taking *Plaxil*, the daughter could have conveyed to the nurse that given her nonmedical background and the fact that she is not the patient, her recollection of the medication label may not be accurate.

Communication lessons for safer, higher quality care

1 ◯	2 ◯	3 ◯	4 ◯	5 ◯	6 ◯	7 ◯	8 ◯	9 ◯	10 ◯
11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
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Discussion questions and exercises

1. What could the admitting nurse have said or done differently in this case to ensure that the correct home medications were recorded?

2. What factors might have led the nurse to assume the patient was on *Paxil* rather than *Plavix*?

3. How could the nurse have better involved the family in this case to ensure the accurate reporting and recording of medications?

4. Describe any strategies nurses could use to include family and caregivers in the patient's care to reduce these types of errors.

Case 3: "Checked twice"

Team interaction
Incorrect patient identification, Near miss

Clinical context: Acute inpatient admission for same-day surgery (cyst drainage)
Communication context: Interaction between a nurse, a certified registered nurse anesthetist (CRNA), and a patient
Incident: Communication error leading to delayed surgery
Patient safety outcome: Near Miss

Case written by Barbara Wojnowski, B.S., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 28-year-old female patient in the same-day surgical office is awaiting surgery for drainage of an abscessed bartholin cyst. The front office nursing staff member applies the identity wristband to the patient and notifies the admitting nurse that the patient's admission papers are completed.

The admitting nurse ❶ **picks up the admission papers and chart belonging to a different patient and calls the patient** by the name indicated on the chart. The patient sees that the nurse ❷ **seems to be rushed and does not dare to correct the nurse's use of the wrong name** (the name on the chart). The patient is anxious about the impending surgery, but only responds to the nurse's assessment questions with quick "yes" and "no" answers so as not to occupy the nurse's limited time. In her rush, the ❸ **admitting nurse does not notice the discrepancy** between the patient's name on the wristband and the name on the chart.

Upon completion of the assessment process, the patient is brought to the surgical suite by the admitting nurse to meet the certified registered nurse anesthetist (CRNA). The CRNA notices the discrepancy between the name on the admitting chart and the patient's wristband. The CRNA informs the admitting nurse of the error, and the patient is returned to the admitting room. The patient's surgery is delayed and the patient is even more anxious about the surgery than before.

Communication science principles

1. Communication varies between thought, symbol, and referent

The admitting nurse committed a ❶ **communication decoding error of accuracy** (error of omission) by picking up admission papers and a chart that belonged to another patient.

The admitting nurse committed a ❸ **communication decoding error of contextualization** (error of underuse, by failing to notice the discrepancy between the patient's name on the wristband and the name on the chart (*functional* context).

2. Redundancy in content and directness in channel enhance accuracy

The admitting nurse committed a ❶ **transactional communication error of accuracy** (error of omission) by failing to validate the accuracy of the name on the admission papers and chart with the front office nursing staff and the patient.

3. Communication is contextual

The nurse committed a ❸ **communication decoding error of contextualization** (error of underuse) by not taking the time, in her rush, to compare the patient's name on the wristband with the name on the chart (*chronological* context).

4. Communication entails factual and relational information

The patient committed a ❷ **transactional communication error of accuracy** (error of omission) by failing to correct the nurse's wrong use of her name.

The patient committed a ❷ **communication encoding error of interpersonal adaptation** (error of overuse) by overly adapting to the nurse's implicitly expressed need/expectation not to occupy her limited time.

Discussion

This case demonstrates the importance of recognizing contextual factors that can either constrain or facilitate safe communication and, as a direct result, trigger patient safety events. The admitting nurse, in her rush, did not allocate the necessary time to verify that she was assessing the correct patient. She also did not utilize available transactional communication with the patient and the front office nursing staff for such an accuracy check. Her inadequate decoding and transactional communication contributed to an inaccurate thought-symbol-referent association (i.e. thought = patient she had in mind, symbol = inaccurate patient name, referent = patient), which caused a critical patient mix-up with a near-miss outcome.

In addition, all care participants in this case lacked a proper understanding of communication as a *relational* meaning-making process. The nurse was unaware that

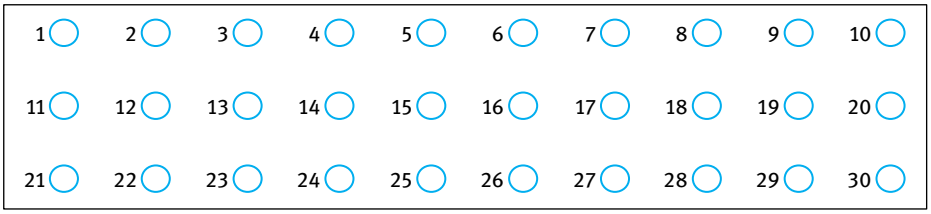
her nonverbal behavior implicitly expressed an expectation not to be bothered by the patient. The patient overly adapted her communication to that expressed need and did not dare to correct the nurse's misuse of her name, because she did not want to occupy her limited time. The nurse's and patient's limited conceptions of communication as constituting mere information transfer disabled their accomplishment of a shared understanding. As a direct result, the patient suffered a critical near miss that could have caused horrendous consequences.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this near miss:

- The admitting nurse could have made sure that she called the correct patient by cross-checking the patient's identity with the front office nursing staff, with the patient, and with the patient's wrist band.
- The admitting nurse could have recognized that her nonverbal behavior conveyed a sense of nonavailability to the patient that prevented the patient from speaking up.
- The patient could have recognized that the nurse's implicitly expressed need or expectation not to occupy her limited time prevented her from speaking up – she could have addressed this constraint and, cognizant of that context, corrected the nurse's wrong use of her name.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. Write a policy or procedure that could be implemented in same-day surgery to prevent these types of errors.

2. What environmental circumstances might have put the patient at risk for this near miss?

3. How could nurses help to monitor the patient care environment to reduce the risk for safety errors like the ones in this case?

4. What could nurses do to encourage patients to “speak up” when they perceive that something goes wrong in their care?

Case 4: "Sick and pregnant"

Inter-professional interaction
Medication misuse, Near miss

Clinical context: Acute-on-chronic outpatient ED visit (pregnancy and chronic asthma)
Communication context: Interaction between an ED nurse, admitting nurse, ED physician, and on-call internist
Incident: Communication error regarding the patient's medical history leading to clinicians' medication misuse
Patient safety outcome: Near miss

Case reprinted with permission of AHRQ WebM&M. El-Ibiary S. Sick and pregnant. AHRQ WebM&M [serial online]. November 2008. Available at: https://psnet.ahrq.gov/webmm/case/190

A 35-year-old woman with chronic asthma presented to the emergency department (ED) with difficulty breathing. The patient informed the staff that she was 17 weeks pregnant and had an obstetrician on staff at another hospital. A urine pregnancy test was ordered and was positive. ❶ **The result was documented in the electronic health record** by laboratory staff. The patient was treated with inhaled bronchodilators, but her respiratory distress persisted.

❷ **The ED physician contacted the on-call internist** to admit the patient for continued therapy. ❸ **The internist agreed to admit the patient**, but he was not told that the patient was pregnant. ❷ **The admitting nurse received a report from the ED nurse**, but again, the patient's pregnancy status was not mentioned. On admission, the ❹ **patient was ordered to receive** intravenous corticosteroids, nebulized bronchodilators, and intravenous levofloxacin (a pregnancy category C antibiotic).

❺ **In the morning**, the internist saw the patient. She informed him that she was pregnant. The internist reviewed the patient's medication administration record and determined that she received one dose of levofloxacin. He discontinued levofloxacin and ordered an alternate antibiotic that was pregnancy category B. A maternal-fetal specialist was consulted and reported that one dose of levofloxacin could have no adverse effects on the fetus.

Communication science principles

1. Communication is a nonsummative process

This case demonstrates how *insufficient* interstaff communication can compromise the safety of a patient and an unborn child. The information that the patient was pregnant passed unnoticed through several communication lines of defense. The admitting nurse and the on-call internist committed a ❶ **communication decoding error of sufficiency** (error of omission) by not accessing the electronic health record (EHR) of the patient. Although the laboratory staff encoded a message (positive pregnancy test) for the frontline clinicians, their intended communication actually never took place (= "attempted communication").

The ED physician did not inform the on-call internist and the ED nurse did not inform the admitting nurse that the patient was pregnant. Both of them committed ❷ **communication encoding errors of sufficiency** (error of underuse) by insufficiently encoding this safety-relevant information to their colleagues, hindering the establishment of a shared understanding regarding the patient's health condition.

2. Communication is contextual

Another reason for the near miss in this case was that several actors did not contextualize their communication. On the basis of insufficient information, the on-call internist committed a ❹ **communication encoding error of contextualization** (error of commission) by ordering a medication that was unsafe given the patient's pregnancy (*functional* context). He also committed a ❺ **communication encoding error of contextualization** (error of underuse) by waiting to talk to the patient until the next day (*chronological* context).

In addition, the on-call internist, the ED physician, the admitting nurse, and the pharmacist committed ❸❹ **transactional communication errors of contextualization** (errors of omission) by not discussing the fit of the intended medication order with the context of the patient's pregnancy (*functional* context). This transactional communication error was the last line of defense that could have prevented the near miss.

These communication errors demonstrate how missing (or neglecting) the notion of "context" in any given care interaction – in this case, the patient's pregnancy and the *timing* and *timeliness* of the clinicians' communication – can compromise patient safety.

Discussion

The main communication issue in this case was *incomplete information-sharing*. For example, the laboratory staff's attempted communication to convey the positive urine pregnancy test result was never received by any of the clinical staff members. More-

over, although the patient had already informed the ED front office staff that she is pregnant, those staff members never communicated that critical information to the on-call internist and admitting nurse. Furthermore, the on-call internist did not ask the admitting nurse, or the patient, about the patient being pregnant prior to ordering the antibiotic. The floor nurse did not check the EHR and did not ask the patient to confirm the patient's pregnancy prior to administering the medication.

A core problem that caused the insufficient information exchange in this case was the fact that the internist exclusively relied on latent communication among several involved care participants. He never actually saw or spoke to the patient himself prior to prescribing the antibiotic. The issue here is that **latent communication** – meaning communication that passes through several individuals – is typically compromised by a **"game of telephone" effect** whereby the quality and quantity of the conveyed information gets lost in transition. Conversely, communication among fewer individuals allows for a direct validation of the message contents and thereby facilitates communication accuracy.

A unique characteristic of this case is that the communication errors were preceded by other kinds of human errors. For example, the clinician's (i.e. nurses' and physician's) failure to access the EHRs could have been triggered by a lack of motivation, knowledge (e.g. not knowing that new content had been added to the records), skills (e.g. not knowing how to access the records), and/or time pressure. Thus, this case shows how a chain of intra- and interpersonal errors can interactively contribute to a near miss, with insufficient communication constituting the ultimate (failed) line of defense.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this near miss:

- The ED admission clerks could have communicated the patient's pregnancy directly to the ED clinical team.
- The laboratory staff could have verified with the ED clinical team that they received and accurately understood the newly added test results in the patient's EHR.
- The pharmacy could have consulted the EHR and checked with the clinician whether the patient is pregnant.
- The ED nurse and/or the admitting nurse could have checked the patient's EHR.
- The admitting nurse could have asked the patient if she was pregnant prior to administering the medication.
- The on-call internist could have allocated time to talk to the patient face-to-face right after the patient's arrival.
- The staff could have been mindful of the necessity to access the patient's EHR, and of their (lack of) knowledge, motivation, and/or skills related to this task.

– All actors could have assumed **no common ground** as a baseline for their interactions. They could have engaged in sufficient and contextualized communication to co-establish a common ground and a shared understanding.

Communication lessons for safer, higher quality care

1 ◯	2 ◯	3 ◯	4 ◯	5 ◯	6 ◯	7 ◯	8 ◯	9 ◯	10 ◯
11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
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Discussion questions and exercises

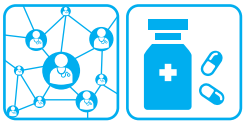
1. How could use of the EHR and other technologies have helped to avoid this error?

2. Describe a Hannawa SACCIA-based communication strategy that could empower the patient to be more involved in her care and to speak up and ask questions.

3. Write an institutional policy that could help healthcare providers to avoid the type of communication errors that occurred in this case.

4. For patient handoff situations involving multiple healthcare providers with varying levels of skill, what creative solution(s) could prevent the errors leading up to administering the medication?

5. Identify failure points in which nurses could have ensured message receipt and a mutual understanding. Describe what the nurse(s) could have said to establish a shared understanding.



Case 5: "Medication reconciliation pitfalls"

Cross-professional interaction
Medication overuse, Adverse event

Clinical context: Acute emergency department (ED) visit with subsequent inpatient admission for orthopedic surgery (hip fracture)
Communication context: Interaction between an ED triage nurse, orthopedic surgeon, consulting hospitalist, intensive care unit (ICU) nurse, and consulting cardiologist
Incident: Communication error leading to clinician's medication overuse
Patient safety outcome: Adverse event

Case reprinted with permission of AHRQ WebM&M. Weber R. Medication Reconciliation Pitfalls. AHRQ WebM&M [serial online]. February 2010. Available at: https://psnet.ahrq.gov/webmm/case/213

A 90-year-old woman who lived alone suffered a mechanical fall with subsequent hip fracture and was brought to the ED by her daughter. The patient had a past medical history of hypothyroidism, osteoarthritis, and hypertension.

The patient's medication bottles were given to the ED triage nurse and were used to generate a list of home medications. Among others, ❶ **the list included "Toprol-XL 75 mg po daily."**

An orthopedic surgeon admitted the patient to the hospital and wrote orders to continue all of her home medications at their prior dosages. The surgeon also ❷ **requested an internal medicine consultation** for "preoperative clearance." The patient denied any history of arrhythmia, syncope, presyncope, dementia, or prior falls. Her medications were placed in an opaque, plastic personal belongings bag along with her clothes, and she was moved to the orthopedic floor.

Several hours later, the consulting hospitalist performed an evaluation and ❸ **confirmed** the patient's home medications and their dosages. Other than her leg trauma and a mild hearing deficit, the patient's examination was normal. ❹ **She did not inform** the hospitalist that the medications were in her hospital bag; in fact, she may not have even realized that her daughter had left them there with her. The hospitalist noted a heart rate of 75 beats per minute with a systolic blood pressure (BP) of 170 mmHg. BP readings had been high since admission. ❺ **An order was written** to increase Toprol-XL from 75 to 100 mg daily.

While being prepped on the operating room table several hours later, the patient developed asystole, underwent successful resuscitation, and was transferred to the ICU.

Upon transfer, an ❻ **ICU nurse handed the plastic bag of medications** to the consulting cardiologist, who noted that the patient's home dosage of Toprol-XL was 25 mg daily. The error was reported to the hospital pharmacy. ❼ **Only by coincidence** did the hospitalist who had increased the Toprol-XL dosage learn of the error. The hospitalist apologized to the patient and her family, and assured them that the case would be carefully reviewed to ensure that a similar error would not happen again.

The patient made a full recovery and had no recurrent vital sign instability. Myocardial infarction was ruled out, and an echocardiogram was normal. After observation in the ICU for several days, she underwent repair of her hip fracture and was discharged to home without further complications.

Communication science principles

1. Redundancy in content and directness in channel enhance accuracy

The ED triage nurse committed a ❶ **communication decoding error of accuracy** (error of misuse) by misreading the dosage of Toprol-XL on the patient's medication.

The ED triage nurse committed a ❶ **communication encoding error of accuracy** (error of commission) by inaccurately writing on the home medications list that the patient was taking "Toprol-XL 75 mg po daily."

The internal medicine consultant committed a ❷ **transactional communication error of accuracy** (error of omission) by not discussing and validating, in direct conversation with the patient and her daughter, the accuracy of the medication labels and dosages that had been written on the list.

The internal medicine consultant committed a ❸ **communication encoding error of accuracy** (error of commission) by confirming the patient's home medications and their dosages.

The internal medicine consultant committed a ❺ **communication encoding error of accuracy** (error of commission) by submitting a written order to increase Toprol-XL from 75 to 100mg daily.

2. Communication is a nonsummative process

The patient's daughter committed a ❹ **transactional communication error of sufficiency** (error of omission) by not establishing a shared understanding with her mother and the internal medicine consultant that she had left the medication bottles in her mother's hospital bag.

The responsible staff committed a ❼ **communication encoding error of sufficiency** (error of omission) by not informing the hospitalist of the error.

3. Communication is contextual

The nursing staff member committed a ⑥ **communication encoding error of contextualization** (error of underuse) by handing the plastic bag of medications to the consulting cardiologist too late (chronological context) for him to determine for himself that the medication dosage had been documented inaccurately on the list. The admitting nurse could have performed a patient valuables check at the point of transfer – she would have noticed the bag of medications and could have notified the cardiologist on time.

Discussion

This case illustrates numerous incidents of inaccurate communication contributing to an adverse event. All care participants, including the patient and her daughter, contributed to the inaccurate communication in this episode. The case demonstrates the importance of communication as an interactive meaning-making **vehicle** that requires active skillful contributions from all care participants to optimize information accuracy as the basis for a **common ground** that can function as a foundation for establishing a **shared understanding**. In this case, because of too much inaccurate encoding, decoding, and transactional communication, critical information fell through the cracks, causing the patient harm.

The case also illustrates *sufficiency* as a prerequisite for communication to yield a shared understanding. Once a common ground is established, sufficient communication has to occur on common ground for care participants to reach a shared understanding of their intended meanings, intentions, thoughts, and feelings. Such sufficiency reaches beyond the individual care episode – it also applies to the communication *after* an event, both with the family and among the nurses and physicians and administrators, to exchange perspectives on how communication failures that contributed to the adverse event can be transformed into functional learning lessons, improved communication skills, and future prevention.

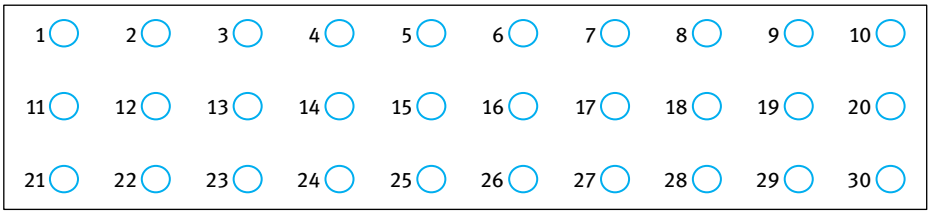
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The ED triage nurse could have engaged in accuracy-promoting redundancy by comparing the label and dosage that she had written on the list with the label and dosage on each prescription.
- The ED triage nurse could have verbally confirmed the accuracy of the medication and dosage the patient was actually taking with the patient and her daughter.
- The internal medicine consultant could have engaged in direct conversation with the patient and her daughter, and double-checked the contents of the plastic bag

to validate the accuracy of the medication labels and their prior dosages with the ones that had been written on the list.
- The internal medicine consultant could have made sure that a common ground had been established through direct communication with the other involved care participants before ordering the increased dosage.
- The patient’s daughter could have established a shared understanding with her mother and the internal medicine consultant that she had left the medications in her mother’s hospital bag.
- The clinical nursing staff could have made sure that the consulting cardiologist received the plastic bag on time (*chronological* context) for him to validate the medication dosage that had been documented on the list.
- The hospitalist could have been informed about the error in a timely manner to promote a learning experience that could prevent a similar error recurring in the future.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. What environmental factors might have put the nurse(s) in this case at risk for making the communication errors?

2. How could any of the providers have encouraged the patient and caregiver to share the bag of medications to avoid this patient safety event?

3. Write out what nurses could say to patients and caregivers to involve them as active members of the healthcare team and to accomplish a successful medication reconciliation.

4. What would you have done differently if you were the admitting nurse in this case?

5. How could you use the "lessons learned" activity in this case to help nurses, nursing students, and safety officers prevent the same communication errors from happening at their institution?

Case 6: "Omitted history of PTSD"

Inter-institutional interaction
Inadequate handoff, Sentinel event

Clinical context: Acute emergency department (ED) visit with subsequent patient transfer to a large regional hospital for specialized inpatient care (heroin overdose, aspiration pneumonia, PTSD)
Communication context: Interactions between an ED nurse and physician at the sending hospital, and an ICU nurse and medical staff at the receiving hospital
Incident: Communication error leading to inadequate handoff and patient suicide
Patient safety outcome: Sentinel event

Case written by Anne Fitzgerald, M.S.N., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 52-year-old male is brought to the emergency department (ED) of a small suburban hospital after the patient's family called an ambulance because the patient would not wake up in the morning. The ED triage nurse finds the patient unresponsive, with low blood pressure and track marks on his arms indicating a history of IV drug use. The ED physician diagnoses an opioid/heroin overdose and gives him naloxone. Intravenous fluids are started, and laboratory testing confirms a heroin overdose. The patient's blood urea nitrogen, creatinine, and creatine kinase are elevated indicating rhabdomyolysis. His chest X-ray shows a small right lower lobe infiltrate, and aspiration pneumonia.

The patient's family asks the ED nurse that the patient, who has spent the past eight years on active U.S. military duty, be transferred to a large regional hospital where he might have access to more advanced specialists and ❶ **treatment for his posttraumatic stress disorder** (PTSD) and opiate addiction. ❷ **The transferring ED nurse contacts the receiving hospital's intensive care unit** (ICU) nursing staff to determine if a bed is available for this patient diagnosed with heroin overdose and aspiration pneumonia. ❸ **The ICU nurse determines that a bed is available**, and ❹ **the ED physician completes the transfer papers**. ❷ **Neither the transferring nurse** ❹ **nor the transferring ED physician** mention to the receiving nursing and medical staff that the patient has a history of PTSD or addiction, and that the family wants him taken to a hospital and unit that has this specialized treatment.

The patient is admitted to the ICU at the receiving hospital where there is no psychological/emotional support for his PTSD or addiction. After 24 hours, the patient elopes (leaves without telling anyone) and takes a fatal overdose of heroin.

Communication science principles

1. Preconceptions and perceptions vary among communicators

The ED nurse, ED physician, and the patient's family committed a ❶ **transactional communication error of sufficiency** (error of underuse) by not utilizing their communication with each other sufficiently to establish a shared understanding of the importance that the receiving institution also treats the patient's PTSD.

The transferring ED nurse committed a ❷ **communication encoding error of sufficiency** (error of underuse) by merely reporting to the ICU nurse that the patient is diagnosed with heroin overdose and aspiration pneumonia, but not mentioning the patient's PTSD.

The ED physician committed a ❹ **communication encoding error of sufficiency** (error of underuse) by not reporting in his transfer papers to the receiving hospital ICU that the patient also needed to be treated for PTSD.

2. Redundancy in content and directness in channel enhance accuracy

The transferring ED nurse and the receiving ICU nurse committed a ❸ **transactional communication error of sufficiency** (error of underuse) by engaging in insufficient communication with each other to establish a shared understanding of the patient's complete medical needs (including his PTSD).

The ED nurse, ED physician, ICU nurse, and ICU medical staff committed a ❷❹ **transactional communication error of sufficiency** (error of underuse) by not engaging communication as a pathway to validate the sufficiency of their shared understanding of the patient's comprehensive medical needs (including his PTSD).

Discussion

This case illustrates the importance of sufficient (i.e. *enough*) communication to safe patient care. It demonstrates that care participants' failure to achieve the *mere minimum amount* of communication that would be required for a shared understanding can severely compromise the safety of a patient – in this case to an extent that contributed to the patient's death.

Two communication principles illuminate the communication failures that occurred in this case. The first principle is "Preconceptions and perceptions vary between communicators." The root communication error that led to further communication insufficiencies and, ultimately, contributed to the patient's death, was the failure of the ED team and patient's family to establish a shared understanding of the importance that the receiving clinic was equipped and informed to attend to the patient's PTSD. The care participants did not use their communication with each other successfully to establish a common ground (i.e. to bridge their differential perceptions of the importance of the patient's PTSD). As a result, the ED nurse and the ED physician did

not qualify the patient's PTSD as information that would be important to include in their transfer communication with the receiving ICU staff.

The second principle that further illuminates the communication errors in this case is "Redundancy in content and directness in channel enhance accuracy." The nurses and physicians at the sending ED and at the receiving ICU could have engaged and utilized *more* transactional communication (i.e. shared sense-making) with each other to establish a shared understanding of the patient's comprehensive medical needs. Such communication would have been the pathway to ensuring that the amount of information that was conveyed was *complete* and *accurate* enough for a safe and high-quality transfer and treatment of the patient. Unfortunately, this pathway was never engaged by the care participants. As a result, the patient's PTSD needs were "lost in transition." The receiving institution's lack of both attention and qualification to monitor and attend to the patient's PTSD allowed the patient to elope and commit suicide. More sufficient communication among all involved care participants would have been the only pathway to preventing this sentinel event.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this sentinel event:

- The ED nurse, the ED physician, and the patient's family could have utilized their transactional communication with each other to establish a sufficient shared understanding of the importance that the receiving institution also treats the patient's posttraumatic stress disorder (PTSD).
- The transferring ED nurse could have been more sufficient in her communication with the ICU nurse by reporting that the patient also needed to be treated for PTSD, in addition to his heroin overdose and aspiration pneumonia.
- The ED physician could have been more sufficient in his transfer report to the receiving hospital ICU by writing that the patient also needed to be treated for PTSD.
- The transferring ED nurse and the receiving ICU nurse could have engaged in more sufficient communication with each other to establish a shared understanding of the patient's complete medical needs (including his PTSD).
- The ED nurse, ED physician, ICU nurse, and ICU medical staff could have activated their transactional communication as a pathway to validating the sufficiency of their shared understanding of the patient's comprehensive medical needs (including his PTSD).

Communication lessons for safer, higher quality care

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Discussion questions and exercises

1. Discuss what environmental circumstances might have contributed to the communication errors in this case.

2. As a nurse, what could you have done to prevent this sentinel event?

3. Write policies or procedures that could be implemented to prevent the communication errors in this case.

Stage 2: Assessment/diagnosis

Assessment/diagnosis is the process of analyzing the gathered data to arrive at an explanation for a patient's condition. The information needed for an accurate assessment/diagnosis generally entails history-taking, a physical examination, test results, and an analysis of multiple patient-related factors. An assessment/diagnosis involves the consideration of several possible explanations. Interpersonal communication is the vehicle to gathering and validating the necessary information to arrive at an accurate assessment/diagnosis.

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Case 7: "Aspiration pneumonia"

Provider-patient interaction
Incorrect assessment/diagnosis, Adverse event

Clinical context: Acute emergency department (ED) visit for altered mental status and multiple chronic illnesses
Communication context: Interaction between a nurse and a patient
Incident: Communication error leading to an incorrect assessment/diagnosis and unindicated treatment
Patient safety outcome: Adverse event

Case written by Barbara Wojnowski, B.S., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 46-year-old male patient diagnosed with alcohol and IV drug use disorders, HIV infection, Pneumocystis jiroveci pneumonia, and insulin-dependent type 2 diabetes mellitus (IDDM, type 2) is brought to the emergency department for altered mental status and suspected drug overdose. The ED nursing staff is familiar with the patient as he is frequently seen in the ED for treatment of drug overdose and/or hypoglycemia.

The patient is awake but groggy with incomprehensible speech and normal vital signs (blood pressure of 90/60, pulse of 100, respirations of 22, temperature of 98 °F). One of the nurses knows the patient has diabetes because she has treated him many times in the ED for hyperglycemia and hypoglycemia. She asks the patient, "When was the last time you ate? Have you eaten anything today?" ❶ **The patient does not provide a verbal response and shakes his head to indicate "No."** The nurse interprets this to mean that the patient ❷ **has not eaten** and ❸ **immediately suspects that he is hypoglycemic**. ❹ **She does not wait for point of care testing or lab confirmation** of hypoglycemia and gives the patient 10 ml of glucose orally. The patient swallows some of the liquid, begins choking and aspirates some of the glucose. The nursing staff member immediately re-positions the patient to prevent further aspiration and continues the work-up for a diagnosis, including an EKG, labs, chest X-ray, CT of the head, and Neurology Consultation for a stroke evaluation.

The patient is admitted to a medical unit for altered mental status. The healthcare team determines that the patient did not have a stroke and the lab values are within normal limits. However, the patient does develop an aspiration pneumonia from the glucose several days after admission and has to remain in the hospital for treatment.

Communication science principles

1. Communication is a nonsummative process

The nurse committed a ❶ **communication decoding error of sufficiency** (error of underuse) by relying on insufficient information (i.e. only the patient's nonverbal expression) as an indication that the patient had not eaten anything.

2. Redundancy in content and directness in channel enhance accuracy

The nurse committed a ❷ **communication decoding error of accuracy** (error of commission) by assuming mistakenly, based on the patient's headshake, that the patient had not eaten anything.

The nurse committed a ❶ **transactional communication error of accuracy** (error of omission) by failing to verify with the patient that his headshake in fact indicated a "no" response to her question whether he had eaten anything.

The nurse committed a ❹ **transactional communication error of accuracy** (error of omission) by failing to seek any further interpersonal or clinical evidence (e.g. blood results) to validate her perception that the patient was hypoglycemic.

3. Communication is contextual

The nurse committed a ❸ **communication decoding error of contextualization** (error of overuse) by assuming, based on her experience with the patient during prior ED visits, that the patient was again hypoglycemic (*relational* context).

Discussion

This case demonstrates that bits and pieces of informational communication – here the nonverbal headshake of the patient – do not automatically sum up to a shared understanding. Communication is a complex interpersonal process that, if successful, establishes a shared meaning *between* people's minds. In this case, the nurse did not engage this intersubjective process sufficiently. Instead of utilizing interpersonal communication with the patient and other staff members, she merely considered a fragment of the patient's communication (i.e. the nonverbal headshake in response to her question) for her assessment of the patient's condition.

Two principles of human communication inform how the nurse could have prevented this diagnostic mistake. First, her perception of the patient's condition was contextually biased. Based on the patient's prior ED visits during which the patient had appeared hypoglycemic, she assumed that the patient was hypoglycemic again. The nurse failed to frame her interpretation of the patient's current condition within that contextual bias, which constrained the ability of the care participants to accomplish a shared understanding.

Second, the nurse did not utilize her communication skills for a transactional accuracy check to validate her assumed understanding of the patient's nonverbal communication. She did not seek any validating information – neither interpersonally nor clinically. More and better communication with the patient and other nursing staff could have prevented her incorrect diagnosis and the unindicated treatment that ended up compromising the safety of the patient and caused him preventable harm.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- Instead of assuming that the patient had not eaten anything, the nurse could have utilized transactional communication to validate the accuracy of her assumed understanding of the patient's headshake.
- Instead of assuming that the patient was hypoglycemic, the nurse could have accessed and decoded *more* and *different kinds of* (i.e. interpersonal and clinical) information to validate her initial perception that the patient was hypoglycemic.
- The nurse could have waited to administer the liquid glucose until she had accessed and understood additional interpersonal and clinical information.
- The nurse could have recognized that her perception of the patient's health condition was *biased*, based on her prior knowledge of the patient from previous ED visits. The nurse could have framed her decoding of the patient's nonverbal appearance within this relational context to utilize it as a *facilitator* rather than *constraint* for establishing a shared understanding of the patient's medical condition, through direct interaction with the patient and the other clinical staff.

Communication lessons for safer, higher quality care

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Discussion questions and exercises

1. What circumstances might have facilitated the nurse's communication errors in this case?

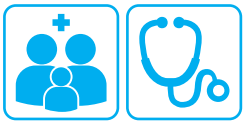
2. As a nurse, what would you have done differently to prevent the adverse event?

3. What positive actions did the nurse take to protect the safety of the patient in this case?

4. What environmental factors could be changed to reduce the risk of similar communication errors recurring in the future, and to create a culture of safety?

5. Draw an assumption flowchart identifying the underlying assumptions informing each participant's behavior and communication. How could the participants have utilized their communication with each other to verify the accuracy of their assumptions?

6. What could the nurse have done or said to optimize the safety and quality of care in this case?



Case 8: "Who makes the diagnosis?"

Provider-family interaction
Incorrect assessment/diagnosis, Near miss

Clinical context: Acute inpatient transfer to hospice care (cancer)
Communication context: Insufficient communication of preplanned care between family, nurse, and healthcare team
Incident: Communication error leading to an incorrect assessment/diagnosis
Patient safety outcome: Near miss

Case written by Rhonda Malone Wyskiel, M.S.N., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A postanesthesia care unit (PACU) nurse transfers a 55-year-old male patient to the intensive care unit (ICU) after the patient underwent a small bowel resection for palliative treatment of end-stage colon cancer. The PACU nurse reports to the ICU nurse that the operative course was routine, and that the patient's vital signs are within normal limits after surgery. The patient is on course for a routine ICU admission and discharge to hospice care.

Two hours after the patient's arrival in the ICU, the ICU nurse turns the patient. She notices a large area of bruising on the patient's back, and voices concerns of retroperitoneal bleeding to the surgeons. She is concerned because the patient's blood pressure is low and the patient is slightly tachycardic. ❶ **The ICU nurse does not check the patient's electronic health record or presurgery admission papers** to determine if bruising had been documented during admission. ❷ **The ICU nurse also does not contact the PACU nurse** to determine if the bruising was present in the operating room.

The patient's wife, who is at the patient's bedside, spontaneously tells the nurse that the bruising was there on admission, and reports that the patient fell prior to surgery and the bruising was from that incident. She also states that his low blood pressure is normal for him, and that he sometimes complains of feeling like his "heart is racing" when he is a bit anxious, which he is now from the surgery.

❸ **The nurse remains concerned** – ❹ **she does not pay close attention** to the wife's comments because she is busy attending to what she has determined is possible acute bleeding. The patient's wife raises concern that the nurse and surgeons are overreacting and not listening to her. Still, ❹ **the nurse does not listen to the wife**. ❺ **She does not check the patient's health record** to validate the information provided by the wife, nor does the nurse attempt to validate this information with the patient.

The other members of the healthcare team proceed to investigate the possibility of acute retroperitoneal bleeding ❻ **without checking the electronic health record**, in which preoperative bruises and the patient's fall prior to surgery had been documented during the admission assessment. ❻ **The team also does not contact the primary care physician** for an updated report about the patient's preoperative status.

The wife becomes increasingly frustrated by the lack of response from the nursing and medical staff, and feels like her "voice is not being heard." The healthcare team's physical exam and further noninvasive testing reveal the correct diagnosis that the patient's bruising is superficial and not of concern. The incident leaves the patient and wife feeling that they were not heard and that they were not integral to the correct assessment and care of the patient.

Communication science principles

1. Communication is contextual

The ICU nurse committed a ❶ **communication decoding error of sufficiency** (error of omission) by not checking the patient's electronic health record or admission papers to determine if any fall-induced bruising had been documented during admission.

The ICU nurse committed a ❷ **transactional communication error of sufficiency** (error of omission) by not contacting the PACU nurse to determine if the bruising was already present in the operating room.

The ICU nurse committed a ❹ **communication decoding error of contextualization** (error of underuse) by failing to allocate time, while being busy caring for the patient, to properly decode (i.e. notice and understand) the wife's alerting communication that the patient had fallen and incurred the bruising before his surgery (*chronological* context).

2. Preconceptions and perceptions vary among communicators

The ICU nurse committed a ❸ **transactional communication error of sufficiency** (error of omission) by remaining concerned instead of engaging in communication with the patient's wife to establish a shared understanding of the wife's assertion that the patient had incurred the bruising by a fall that happened prior to surgery.

3. Redundancy in content and directness in channel enhance accuracy

The ICU nurse committed a ❺ **transactional communication error of accuracy** (error of omission) by failing to follow up with the patient and accessing the patient's health records to validate the accuracy of the wife's provided information that the patient had fallen and incurred the bruising prior to surgery.

The other members of the healthcare team committed a ⑥ **transactional communication error of sufficiency** (error of omission) by failing to establish a shared understanding of the patient's status by (1) reviewing the patient's electronic health records and (2) directly contacting the patient's primary care physician before working up the patient for surgical intervention for the retroperitoneal bleed.

Discussion

This case demonstrates the importance of engaging patients and care companions (here, the patient's wife) as active partners for safe and high-quality care. The ICU nurse's failure to decode the wife's alerting communication properly almost caused an unindicated surgical intervention for an assumed "retroperitoneal bleeding." Fortunately, the healthcare team arrived at a correct assessment/diagnosis before the patient incurred any harm. However, the processes that led to this fortunate care outcome caused detrimental effects that could have been prevented if the ICU nurse and healthcare team had engaged in sufficient and better communication with each other and with the patient and/or his wife: first, the diagnosis was delayed; second, the patient and his wife left this care experience with frustration and an impression that they were not integral to the safety and quality of the patient's healthcare. This experience might discourage them from engaging themselves as active partners in future care episodes. This, in itself, is a dangerous care outcome. It is not a measurable "hard outcome" of this particular care encounter, but it may become a hard outcome in future cases when the patient's and his wife's active intervention could have prevented a severe patient safety event, had it not been discouraged by the ICU nurse's and healthcare team's inappropriate communication this time.

The near miss in this case resulted from a general lack of decoding activity on behalf of the ICU nurse and the healthcare team. Neither of them retrieved sufficient information about the patient's status from either the health record, the patient's primary care physician, or directly from the patient and/or his wife. They did not allocate the needed time for this important co-establishment of a shared understanding that would have been required for a timely and accurate assessment/diagnosis of the patient's bruising. This communication insufficiency did not cause the patient any harm, but it almost led to an unindicated medical intervention for what the ICU nurse and healthcare team mistakenly considered a "retroperitoneal bleed."

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this near miss:

- The ICU nurse could have accessed the patient's electronic health record or presurgery admission papers and contacted the PACU nurse to determine if the patient's bruising had already been there prior to surgery.
- The ICU nurse could have taken the needed time to properly decode and understand the patient's wife's alerting communication that the patient had fallen and incurred the bruising before his surgery.
- The other members of the healthcare team could have established a shared understanding of the patient's condition by (1) reviewing the patient's electronic health records, (2) engaging in validating communication with the patient and his wife, and (3) directly contacting the patient's primary care physician before working up the patient for a retroperitoneal bleed.

Communication lessons for safer, higher quality care

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Discussion questions and exercises

1. What environmental factors could have contributed to the communication errors in this case?

2. How can nurses empower patients and families to be active participants of the healthcare team?

3. How can nurses ensure that patient and family concerns are heard?

4. What concerns you about the communication errors in this case?

5. What characteristics of the nurse could have influenced the errors in this case?

6. What can be done to prevent similar kinds of communication errors in the future?

7. What positive actions did the nurse take to protect the safety of the patient in this case?

Case 9: "Diagnosis pain or pretense"

Team interaction
Incorrect assessment/diagnosis, Medication overuse, Harmless hit

Clinical context: Acute emergency department (ED) visit for intractable abdominal pain
Communication context: Interaction between a nurse, ED physician, and patient
Incident: Communication errors leading to incorrect assessment/diagnosis and over-medication
Patient safety outcome: Harmless hit

Case written by Barbara Wojnowski, B.S., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 48-year-old male is brought to the Emergency Department (ED) by paramedics for abdominal and flank pain. The patient has a history of IV substance and alcohol use disorders, type 2 diabetes, hypertension, and renal cell cancer. The patient had a nephrectomy 5 years ago. He is well known to the ED nursing staff making frequent visits for pain management.

This time, the patient is crying and writhing, and he reports intractable abdominal pain. The ED nurse examines the patient and notes that his behavior is different from previous ED visits when she assessed his behavior to be motivated by his addiction rather than pain. This time, the nurse concludes that the patient is visiting the ED for relief of physical pain. ❶ **The nurse does not inform the ED physician** about her impression that the patient is *in pain*; she initiates standard protocols for the patient: routine labs, vital signs, and intravenous access. She is unable to get IV access due to the poor quality of the patient's veins.

A physician, new to the ED, ❷ **examines the patient and diagnoses** addiction and drug-seeking behavior. ❸ **He tells the nurse** to administer 60 mg ketorolac (Toradol) intramuscular (IM). The nurse is concerned that Toradol in such a high dose would be nephrotoxic for a patient with only one kidney and renal cell cancer. But ❹ **she does not feel comfortable questioning the doctor's order** as his demeanor clearly conveys to her that he is impatient and expects his order to be followed. So the nurse gathers two 30-mg vials (60 mg IM) of Toradol to administer to the patient.

The physician writes the order. Upon re-entering the room and observing the patient's extreme pain, the nurse again attempts and achieves IV access. The nurse asks the physician if the medication can be administered IV rather than IM, because it is the quicker route and the patient would not have to receive two "painful" injections.

The physician agrees to the IV route and rewrites the order for 30 mg Toradol IV. ❺ **The physician does not tell the nurse** about the changed dosage. The nurse ❻ **relies on the physician's verbal agreement** to the IV route, and ❼ **does not check the health record** for new orders. She administers 60 mg Toradol IV.

When the nurse returns to the desk, ❽ **she notices that the physician had written the IV order for 30 mg Toradol** (adjusted from 60 mg IM). Fortunately, the overdose of Toradol did not diminish the functioning of the patient's remaining kidney.

Communication science principles

1. Redundancy in content and directness in channel enhance accuracy

The ED physician committed a ❷ **communication decoding error of accuracy** (error of underuse) by mistakenly decoding the patient's appearance as being indicative of drug-seeking behavior instead of intractable pain.

The ED physician and the nurse committed a ❷❹ **transactional communication error of accuracy** (error of omission) by failing to engage their communication with each other as a means to validating the accuracy of the assessment/diagnosis.

The ED physician committed a ❸ **communication encoding error of accuracy** (error of commission) by telling the nurse to administer 60 mg ketorolac (Toradol) rather than opioids, which would have been indicated to treat the patient's intractable pain.

2. Communication is contextual

The nurse committed a ❶ **communication encoding error of contextualization** (error of underuse) by not informing the ED physician about her previous knowledge of the patient, based on which she derived that the patient's behavior was different from previous ED visits (*relational* context) and that the patient was not visiting the ED for drug-seeking behavior this time (*functional* context).

The nurse committed a ❹ **transactional communication error of contextualization** (error of omission) by failing to raise her concern to the physician that such a high dose of Toradol could be nephrotoxic for this particular patient who had only one kidney and a history of renal cell cancer (*functional* context).

The nurse committed a ❹ **communication encoding error of contextualization** (error of overuse) by not daring to question the physician's Toradol order from her hierarchically inferior professional position (*relational* context).

The nurse committed a ❼❽ **communication decoding error of contextualization** (error of underuse) by failing to check the patient's health records for new or revised medication orders immediately after the ED physician agreed to the IV route and she had seen him write notes into the records. The nurse accessed the health records

too late (*chronological* context) to realize that the physician had reduced the medication dosage for the IV (rather than IM) infusion (*functional* context).

3. Communication is a nonsummative process

The physician committed a ❺ **communication encoding error of sufficiency** (error of omission) by not directly telling the nurse about the changed medication dosage in addition to noting it in the records.

The nurse committed a ❻ **transactional communication error of sufficiency** (error of underuse) by engaging in insufficient communication with the physician to establish a shared understanding of the revised medication procedures.

Discussion

This case illustrates how communication that remains detached from its context can severely compromise the safety of patient care. The nurse's failure to raise her concern that the patient's behavior looked different this time and that the physician's diagnosis may be inaccurate, and her failure to address the risk of the physician's medication order given the patient's history, caused a critical incident that nearly compromised the patient's health for the rest of his life.

Another contextual constraint that delimited, rather than facilitated, the care participants' accomplishment of a shared understanding in this case was their relational composition. The hierarchical professional barrier between the ED physician and the nurse was not dissolved with the means of direct communication, and thus kept the nurse from raising her diagnostic concern to the physician. The physician's nonverbal demeanor intimidated the nurse to an extent that she did not dare to question his order. The ED physician and the nurse could have mutually dissolved this hierarchical barrier through safe communication – first, by establishing a shared understanding that the physician's nonverbal demeanor, whether intended or not, conveyed a hierarchical superiority that discouraged the nurse from encoding critical safety-relevant information to the physician; then by transforming that relational *constraint* into a *facilitator* of transactional communication that prioritizes the safety of the patient.

An additional contextual constraint that contributed to this harmless hit was the chronological context: Given her conversation with the ED physician regarding the changed medication plans, the nurse could have accessed the health records immediately to check for an adjusted medication dosage. Given the nurse's and the ED physician's failure to establish a shared understanding of this revised medication in direct communication with one another, the nurse accessed and decoded that important information too late – only *after* the patient had already received a double dose of the unindicated medication.

Another principle of human communication that illuminates the communication errors that contributed to this harmless hit is entitled "Preconceptions and perceptions vary among communicators." The physician and the nurse in this case assumed (rather than verified) that the other person would understand what they intended to convey with their nonverbal and verbal communication. They never *verified* that a shared understanding of their intentions was actually established. In other words, the care participants did not utilize their interpersonal communication as a process to bridge their perceptual gaps and to verify a shared understanding. Instead, they acted within the **common ground fallacy**, assuming that the other would figure out what they had in mind (e.g. that changing the medication route would halve the medication dosage). Unfortunately, this assumption was mistaken – sufficient interpersonal communication would have been the pathway to establishing this shared understanding, and to preventing both the overdose and the unindicated medication.

In summary, this case demonstrates how sufficient transactional communication can prevent inaccurate assessments/diagnoses and intervene with unindicated treatment and medication overuse. In other words, it evidences that **safe communication** is a crucial process through which care participants either improve or compromise the patient's care outcomes, depending on the extent to which they either enable or disable that process.

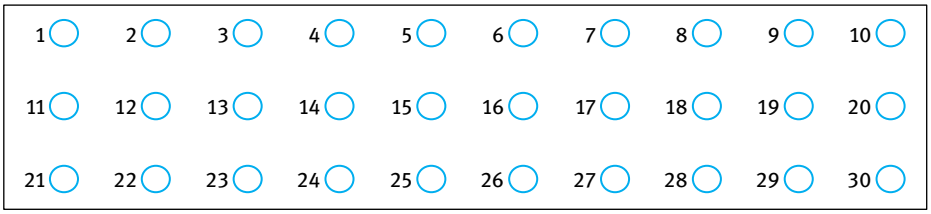
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this harmless hit:

- The nurse could have contextualized her communication with the ED physician by mentioning her previous knowledge of the patient and explaining why she perceived that the patient's behavior was different from drug-seeking behavior.
- The nurse and the ED physician could have mutually resolved the hierarchical barrier that constrained their communication. The nurse could have framed her communication within that barrier to convey her concern that the ED physician's diagnosis may be inaccurate, and that the prescribed dose of Toradol could be nephrotoxic given this particular patient's medical profile.
- The ED physician could have engaged in more communication with the nurse to utilize her prior knowledge of the patient as a *resource* for facilitating safer care for the patient. He could have engaged this communication *prior to* ordering the medication to make sure that his diagnosis and treatment suggestion were accurate and optimal for this particular patient.
- The nurse could have accessed and decoded all available information (both in direct conversation with the physician and by reading the health records) immediately after her conversation with the ED physician in which they agreed to the IV route, prior to administering the medication.

- The physician could have explicitly informed the nurse about the changed medication dosage, in addition to writing it into the records. This added channel of communication (verbal in addition to written communication) could have facilitated a better shared understanding and at least prevented the over-medication.
- The nurse and the physician could have engaged in direct communication as a safety-relevant process to jointly validate the accuracy of the physician's assessment of the patient, and they could have engaged in sufficient communication to establish a shared understanding of the revised medication procedures.

Communication lessons for safer, higher quality care



Select the communication lessons from Chapter 6 that best apply to this case and mark the respective circle(s) in this graph. Explain your choices and discuss how the lessons you selected inform this particular case. Compare your choices with the responses others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

Discussion questions and exercises

1. What are the strengths and limitations of each care participant's contributions in this case?

2. How can the authority gradients of the different members of a healthcare team influence teamwork and patient safety?

3. What factors in this case put the safety of the patient at risk?

4. Draw a timeline of the events that occurred in the case and discuss how all of the participants could have communicated better.

Case 10: "Not hiccups"

Inter-professional interaction
Incorrect assessment/diagnosis, Delayed treatment, Sentinel event

Clinical context: Acute inpatient admission of a premature infant (g-tube and central line placement)
Communication context: Interaction between two nurses across units, physicians, and the patient's family
Incident: Communication errors leading to an incorrect assessment/diagnosis resulting in anoxic brain injury and long-term developmental delays for the infant
Patient safety outcome: Sentinel event

Case written by Rachel Ridgeway M.S.N., R.N., C.N.L., C.P.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 3-month-old female infant who was born premature at 32 weeks is admitted to the pediatric surgery floor after surgical placement of a g-tube and central line. After her early morning surgery, the postanesthesia care unit (PACU) nurse transfers the patient to the floor in the afternoon and provides a handoff report to the floor nurse stating that the patient's vital signs are stable, central line is clean/dry/intact, IV rate is to-keep-open with ringer's lactate running, and the g-tube site dressing is clean/dry and intact with the tube draining to gravity. The ❶ **PACU nurse does not report** that the patient's nasogastric feeding was discontinued at midnight and that the patient had received only ringer's lactate during the surgery.

The patient's mother is at the bedside. The floor nurse places the patient on cardiac and pulse oximetry monitors and finds the patient's condition to be quite different to the PACU nurse's report: the patient is tachycardic (220 beats per minute), respirations are 20 and irregular on room air, and blood pressure is low. The nurse does not find this alarming because the patient recently had anesthesia. During the initial exam, the floor nurse notices the patient's capillary refill is within normal limits and she has bilateral upper and lower extremity jerking every 10–20 seconds. The floor nurse asks mom if this is common for the infant and mom says "no." ❷ **The transferring PACU nurse ignores** the mom's assertion and ❸ **states "It's just hiccups."** The mom becomes quite anxious after her statement is ignored. ❹ **The floor nurse**, who is only recently off orientation, feels uncomfortable questioning the more experienced PACU nurse in front of the mom and ❺ **remains silent**.

The floor nurse's exam reveals that the patient's pupils are constricted (1 mm) and fixed, and the nurse notifies the surgeon of this and of the "repetitive hiccups and jerk-

ing that may indicate seizures." The ❻ **floor nurse believes the situation is critical** and does not feel there is time to check the patient's health record for lab results. The lab results would have shown critically low blood glucose. ❼ **Relying on the floor nurse's communication** and assessment, ❽ **the physician orders** a bolus of normal saline without first seeing the patient or reviewing the lab results. The floor nurse calls back to request that the surgeon come to see the patient as the patient continues to have "seizures/hiccups," and the mom is becoming increasingly upset. Because of an issue with another patient, the surgeon is unable to respond immediately. The floor nurse calls the Rapid Response Team (RRT) to have "another set of eyes" on the patient.

The RRT and surgeon arrive at the bedside at the same time. After examining the patient and receiving a report from the floor nurse, ❾ **the RRT physician orders** one dose of lorazepam (Ativan) IV push to stop the seizures. Within minutes of receiving the Ativan, the patient shows no signs of spontaneous breathing. The patient is administered breaths using an Ambu Bag (bag-valve-mask). Simultaneously, the RRT physician orders labs stat, blood cultures, chest and abdominal X-rays, and a point of care glucose test, which shows glucose level is "undetectable low." A repeat point-of-care test produces the same result. The RRT physician orders a bolus of dextrose 50%, which is not a stocked item on the floor or in the crash cart. The patient is transferred to the pediatric intensive care unit (PICU) where appropriate supplies and staffing are available. The patient experiences an anoxic brain injury, resulting in long-term developmental delays.

Communication science principles

1. Communication is a nonsummative process

The PACU nurse committed a ❶ **communication encoding error of sufficiency** (error of underuse) by failing to convey in her transfer report to the floor nurse that the patient's nasogastric feeding was discontinued at midnight and that the patient had received only ringer's lactate during the surgery.

The PACU nurse committed a ❷ **communication decoding error of sufficiency** (error of underuse) by ignoring the mom's response to the floor nurse's question that her daughter's bilateral upper and lower extremity jerking was not common.

The floor nurse committed a ❺ **communication encoding error of sufficiency** (error of omission) by choosing to remain silent.

The physician committed a ❼ **communication decoding error of sufficiency** (error of underuse) by merely relying on the floor nurse's communication instead of seeing the patient and checking the health records of the patient prior to ordering treatment.

2. Redundancy in content and directness in channel enhance accuracy

The PACU nurse committed a ❸ **communication encoding error of accuracy** (error of commission) by incorrectly stating that the child's jerking was "just hiccups" (based on her insufficient assessment).

The floor nurse committed a ❹ **transactional communication error of accuracy** (error of omission) by not engaging in follow-up communication with the PACU nurse to validate the accuracy of her assertion that the child's jerking was "just hiccups."

3. Communication is contextual

The floor nurse committed a ❹ **communication encoding error of contextualization** (error of omission) by not questioning the PACU nurse's assertion that the child's jerking was "just hiccups," because of her perceived hierarchical inferiority to the PACU nurse (*relational* context) and the presence of the mom in the room (*environmental* context).

The floor nurse committed a ❻ **communication decoding error of contextualization** (error of overuse) by not taking the time (*chronological* context), given the patient's critical condition (*functional* context), to check the patient's health records for lab results.

The physician committed a ❽ **communication encoding error of contextualization** (error of misuse) by ordering a bolus of normal saline instead of dextrose (*functional* context), which would have been indicated to restore the glucose of the hypoglycemic pediatric patient.

The RRT physician committed a ❾ **communication encoding error of contextualization** (error of misuse) by ordering lorazepam – a medication that was (1) unindicated for the patient, given that the seizures had been caused by hypoglycemia and not by neurological causes, and (2) unsafe for the patient, given that she was a pediatric and high-risk patient (*functional* context).

Discussion

This case demonstrates the importance of safe communication for the provision of safe and accurate care. The patient's condition in this case was never accurately decoded by the nurses and the physician, mostly due to (1) a lack of communication on behalf of the PACU nurse who did not convey the feeding issue in her initial transfer report, and (2) the care participants' failure to engage in sufficient communication with each other to establish a shared understanding of the patient's health condition during the patient's transfer to the floor. This initial communication insufficiency resulted in an insufficient shared understanding and triggered a chain of additional communication events, including hierarchical silencing and unindicated treatment orders that severely harmed the high-risk pediatric patient. More and better communication

among all involved care participants would have been the pathway to establishing a sufficient understanding of the patient's complete health condition and facilitated a proper treatment. It would also have been the only pathway to preventing the sentinel event. The nurses did not communicate with each other and the patient's mother enough to attain this objective. They did not exhaust the potential of their communication to optimize the safety and accuracy of the child's healthcare. The physician did not even see the patient, but relied on flawed communication from the nurse to make treatment decisions. This chain of communication deficiencies illustrates the principle "Communication is a nonsummative process" – communication is more than the mere sum of its parts. It must be sufficiently established to attain a shared understanding that optimizes the safety of a patient.

The care participants in this case also never activated transactional communication as a validation process to optimize the accuracy of the provided patient care. The floor nurse should have immediately engaged communication with the PACU nurse as the necessary safety procedure to validate the accuracy of the PACU nurse's assertion that the child was merely having "hiccups" – particularly given the mom's response, which conveyed that her daughter was *not* experiencing hiccups, but that the infant may be experiencing seizures that need urgent medical intervention. This process illustrates the principle "Redundancy in content and directness in channel enhance accuracy" – demonstrating that communication is a crucial process that care participants must engage to ensure accurate care and, as a result, prioritize the safety of the patient.

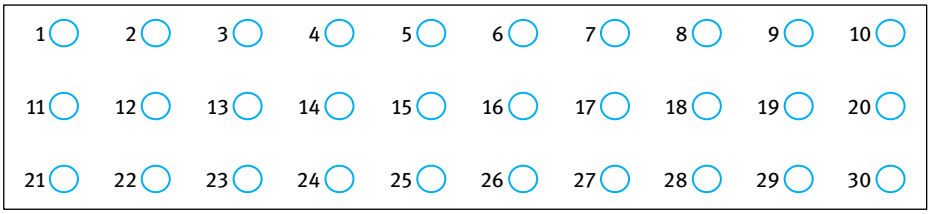
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this sentinel event:

- The PACU nurse could have prevented the sentinel event by delivering an exhaustive transfer report – she could have conveyed that the patient's nasogastric feeding had been discontinued at midnight and that the patient had received only Ringer's lactate during the surgery.
- The PACU nurse could have heeded the mom's response to the floor nurse's question that her daughter's bilateral upper and lower extremity jerking was not common. The PACU nurse could have retrieved and decoded more information prior to stating that the child's jerking was "just hiccups."
- Instead of remaining silent, the floor nurse could have arranged a private space to speak with the PACU nurse, where they could have overcome the hierarchical barrier and validated the accuracy of the PACU nurse's assertion that the patient was experiencing hiccups.
- The PACU nurse and the floor nurse could have included the mother as part of the healthcare team.

- The physician could have accessed the health records and seen the patient prior to making treatment decisions for the patient, instead of merely relying on the floor nurse's communication.
- The floor nurse could have recognized the context of the patient's critical condition as a constraining factor for the safety of the patient, and taken the time to check the patient's health records for lab results.
- The physician could have engaged in more sufficient decoding of the patient's history and health condition, and subsequently ordered dextrose instead of normal saline for the patient.
- The RRT physician could have recognized that lorazepam was not a safe medication in the context of the patient being an infant and at high risk, and the issue being hypoglycemia rather than neurologically induced seizures.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. As you reflect on this case, summarize the errors that the nurses made and discuss any changes that could be made in the environment and within the healthcare team to prevent the errors from being repeated in the future.

2. What could the nurses have done to include the mother as an active member of the healthcare team?

3. What institutional policies might be implemented to prevent these types of errors recurring in the future?

4. How could this case be used to teach graduate nurses safe patient care?

5. What positive actions did the nurse take to protect the safety of the patient in this case?

Case 11: "Allergy assessment"

Cross-professional interaction
Delayed diagnosis, Adverse event

Clinical context: Acute inpatient admission to a surgical unit (unknown rectal/colon disorder)
Communication context: Interactions between nurses, a surgeon, and a patient
Incident: Communication errors leading to delayed diagnosis
Patient safety outcome: Harmless hit

Case written by Anne Wendt, Ph.D., M.S.N., R.N.

A 38-year-old male is admitted to the surgical floor of a small local hospital by his new primary care physician for a diagnostic work-up for possible colon/rectal surgery by the gastro-intestinal (GI) service. The patient has had a fever and gastro-intestinal pain for several weeks.

❶ **The patient's EHR does not contain any information** about allergies. Upon admission, ❷ **the admitting nurse asks the patient** if he is allergic to any medications. ❸ **The patient states "no,"** and ❹ **the nurse records no known allergies** (NKA) in the EHR. However, ❷ **the nurse did not ask "Do you have *any* known allergies,"** but only about *medication* allergies. The patient is allergic to shellfish and iodine, ❺ **for which he carries an Epi-pen** (Epinephrine autoinjector).

The GI team orders an abdominal CT scan with iodine-based IV contrast for diagnostic purposes. The floor nurse is preparing to transport the patient to the GI laboratory for testing, ❻ **when the patient's mother mentions** that the patient has a severe shellfish/iodine allergy. ❼ **The floor nurse**, who is not completely proficient in English, does not understand the mother and ❽ **does not react to the mother's expressed concern.** The nurse transports the patient to the lab.

❾ **The patient does not say anything** to the nurse because he does not want the nurse to perceive him as criticizing her and risk making her angry. The patient does tell the lab technician about his allergy. The technician immediately cancels the test and informs the GI service. The GI service is concerned that they need the test results to make an accurate diagnosis, and they do not have the resources for diagnostic testing at their small hospital. They refer the patient to a large regional hospital for further testing causing a delay in diagnosis and leaving the patient in both mental and physical pain until a firm diagnosis can be made.

Communication science principles

1. Communication is a nonsummative process

The previous clinical staff and the patient committed a ❶ **transactional communication error of sufficiency** (error of underuse) by engaging in insufficient communication with each other to establish a shared understanding of the patient's shellfish/iodine allergy via the patient's electronic health record.

The admitting nurse and patient committed a ❸ **transactional communication error of clarity** (error of underuse) by not engaging in enough communication with each other to clarify the nurse's question and the patient's response and, as a result, establishing a shared understanding of the patient's shellfish/iodine allergy.

2. Communication varies between thought, symbol, and referent

The admitting nurse committed a ❷ **communication encoding error of clarity** (error of underuse) by not being precise enough in her question whether the patient is "allergic to any medications." She should have asked the patient whether the patient has "any known allergies."

3. Redundancy in content and directness in channel enhance accuracy

The admitting nurse committed a ❹ **communication encoding error of accuracy** (error of commission) by recording "no known allergies" (NKA) for the patient.

The unit nurse committed a ❽ **communication decoding error of sufficiency** (error of omission) by neglecting the mother's expressed concern.

The unit nurse committed a ❼ **transactional communication error of clarity** (error of underuse) by failing to engage in direct follow-up communication with the patient's mother to reduce her uncertainty about her lack of understanding of the mother's expressed allergy alert.

4. Communication is contextual

The nurse and the patient committed a ❺ **transactional communication error of contextualization** (error of omission) by failing to communicate with each other about "allergies" in disregard of the context that the patient was carrying an Epi-pen (Epinephrine autoinjector) against a shellfish/iodine allergy (*functional* context).

The patient's mother committed a ❻ **communication encoding error of contextualization** (error of underuse) by mentioning the patient's shellfish/iodine allergy too late (*chronological* context), and by conveying it only once and only to a nurse who was not proficient in English and evidently did not understand her concern (*functional* context). The mother could have also conveyed the patient's allergy to another care provider and made sure that it was followed up on.

The patient committed a ⑨ **communication encoding error of contextualization** (error of overuse) by failing to raise his allergy with the nurse in the context of his presumed assumption that him raising this concern could offend the nurse (*relational* context) and, as a result, compromise the quality of the care he will receive (*functional* context). His over-contextualization constrained rather than facilitated "safe communication" with the nurse.

Discussion

This case demonstrates that communication is a nonsummative process, and how care participants' misperception of communication as a linear information-transfer process can severely compromise the safety of patient care. Communication contains more than an assembly of informational pieces. The meaning of such informational pieces must be established through a complex interactive sense-making practice, the outcome of which will be different from its individual parts because it is established *between* all involved (i.e. current and future) care participants. In the context of healthcare, which involves many different and changing care participants across many connected care encounters over time, it is particularly important to understand communication as a holistic meaning-making activity where a common ground is the functional prerequisite to enabling a shared understanding. In this context, electronic health records must be approached as more than a mere informational resource – but as a tool for establishing a shared understanding among all current and future care participants (i.e. among providers but also with the patient and potentially involved care companions). Such shared meaning involves more than a mere information exchange.

This case also illustrates the importance of recognizing that "Communication varies between thought, symbol, and referent." The admitting nurse assigned a nonrepresentative symbol (i.e. "Do you have any medication allergies?") to her thought and referent of "no known allergies." That symbol was accurately decoded by the patient, but not reassembled as intended by the admitting nurse, because the symbol rather than the entire associated triangle (i.e. "medication allergies – no known allergies") was insufficiently conveyed by the nurse in her communication with the patient. In other words, the nurse's insufficient communication that merely conveyed the symbol but not the referent and the thought she had in mind, and her failure to assign a representative symbol to that thought and referent she had in mind, disabled the accomplishment of a shared understanding.

The principle "Redundancy in content and directness in channel enhance accuracy" illustrates what the admitting nurse and the patient could have done to exhaust the potential of their interpersonal communication to optimize patient safety and prevent a harmless hit: The nurse and the patient could have engaged in direct and redundant transactional communication with one another to make sure that they had accurately understood each other's conveyed intentions and attained a sufficient

shared understanding. In addition, the floor nurse could have engaged in direct and redundant communication with the patient's mother until she properly understood the mother's alert regarding the patient's allergy. Finally, the patient's mother could have activated direct and redundant communication with other clinical staff to ensure that the allergy alert was heard and acted upon. Such redundancy through direct channels would have been the only pathway to preventing this harmless hit.

Last but not least, this case demonstrates how care participants' failure to contextualize their decoding, encoding, and transactional communication can severely compromise the safety of patient care. In this case, the nurse and the patient could have communicated with each other about "allergies" in the context of the patient carrying an Epi-pen (Epinephrine autoinjector). In the same vein, the patient's mother could have considered the importance of conveying the patient's iodine allergy in a timely manner given the upcoming diagnostic tests. Furthermore, the patient could have recognized his perception that the nurse may compromise the quality of his care if he raised his concern as a contextual constraint to a safe care episode, and transformed that constraint into a facilitator of safe communication. In summary, a more adequate contextualization of the care participants' communication with each other could have prevented the harmless hit.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this harmless hit:

- The previous clinical staff and the patient could have engaged in sufficient communication to establish a shared understanding with each other and with future care participants of the patient's shellfish/iodine allergy via the patient's electronic health record.
- The admitting nurse and the patient could have engaged in more sufficient communication with one another to clarify the nurse's question and the patient's response to her question regarding the patient's shellfish/iodine allergy.
- The admitting nurse could have been more precise in her question whether the patient is "allergic to any medications." She could have asked the patient whether the patient has "any known allergies."
- The admitting nurse could have validated the accuracy of her conclusion that the patient had „no known allergies" (NKA) in direct communication with the patient prior to recording it in the EHR.
- The floor nurse could have engaged in direct communication with the patient's mother to establish a shared understanding of the patient's shellfish/iodine allergy and its implications for the patient's upcoming diagnostic test.
- The nurse and the patient could have communicated with one another about allergies in the context of the patient carrying an Epi-pen (Epinephrine autoinjector).

- The patient's mother could have raised the patient's shellfish/iodine allergy sooner and to someone else in addition to the nurse who evidently did not understand what she said, and she could have made sure that her allergy report was followed up on by some provider.
- The patient could have expressed his allergy to the nurse, framing his communication within the context of his concern that him raising it might compromise the quality of the care he receives.

Communication lessons for safer, higher quality care

1 ◯	2 ◯	3 ◯	4 ◯	5 ◯	6 ◯	7 ◯	8 ◯	9 ◯	10 ◯
11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
21 ◯	22 ◯	23 ◯	24 ◯	25 ◯	26 ◯	27 ◯	28 ◯	29 ◯	30 ◯

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Discussion questions and exercises

1. What could the nurses have said or done in this case to engage the family and patient as active members of the healthcare team?

2. What personal characteristics of the nurses might have increased the risk for errors in this case?

3. What would you have done or said differently in this case to prevent the harmless hit?

4. What environmental factors might have contributed to this harmless hit?

5. Write a policy or procedure that could be implemented to prevent the types of errors that occurred in this case.

Case 12: “Disc unread”

Inter-institutional interaction
Inadequate handoff, Delayed diagnosis, Harmless hit

Clinical context: Acute inpatient transfer between institutions (fracture)
Communication context: Incomplete inter-institutional patient handoff
Incident: Communication error leading to delayed diagnosis and prolonged hospital stay
Patient safety outcome: Harmless hit

Case written by Barbara Wojnowski, B.S., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 78-year-old male patient is transferred from a community hospital Emergency Department (ED) to a large regional hospital. The receiving hospital ED nurse ❶ **receives a verbal report** on the patient from the paramedics and a ❷ **phone report from the transferring ED nurse**, both stating that the patient had a right hip fracture. The ❸ **transfer papers indicate** that the patient has sustained a right hip fracture after a fall, and a disc containing digital copies of the X-rays is included.

The receiving hospital does not have equipment capable of reading the disc with the X-rays. The ED nurse follows protocol and requests labs, EKG, and X-rays of the right hip (posterior, anterior and lateral hip and frontal pelvis). The patient is admitted to orthopedic services for presurgical work-up and for definitive orthopedic treatment.

The orthopedic surgeon reviews the new X-rays and discovers a pelvic facture that had not been reported by the transferring hospital to the accepting hospital nurse in addition to the hip fracture. This incomplete information in the transfer handoff and the receiving hospital’s lack of equipment to read the disc from the community hospital delayed the diagnosis of the pelvic fracture at the receiving hospital and caused a prolonged hospital stay. There were no long-term adverse effects for the patient, but the patient lost confidence in the healthcare system.

Communication science principles

Redundancy in content and directness in channel enhance accuracy

❶ The paramedics, ❷ the transferring ED nurse, and ❸ the clinicians who wrote the transfer papers committed **communication encoding errors of sufficiency** (errors of underuse) by communicating incomplete information during patient transfer – they

failed to convey that the patient had a pelvic fracture in addition to a fracture of the right hip.

Discussion

This case illustrates the importance of sufficient informational content as a fundamental prerequisite for successful communication. The paramedics, the transferring ED nurse, and the report papers communicated the same exact content to the receiving clinicians, conveying a sense of certainty to the staff that the "issue" was a fracture of the patient's right hip. One of them provided additional information linking the fracture to a fall. No further information was conveyed.

This transfer communication was insufficient because it lacked a critical piece of information: the fact that the patient also had a pelvic fracture. It is unclear from this case description why this important piece of information was not conveyed in any of the transfer reports. Possibly, the senders assumed that the receiving clinical staff would decode this additional fracture from the disc, or maybe all three of them (unlikely) had a cognitive lapse and forgot to mention the pelvic fracture. This illustrates the human communication principle "Redundancy in content and directness in channel enhance accuracy" from another angle. The sending clinicians optimized this principle. The hip fracture was mentioned *three times* (i.e. redundancy) via different communication channels (i.e. face-to-face by the paramedics, on the phone by the transferring ED nurse, and written in the transfer report). Despite this fact, all three of them committed a severe communication error that caused a harmless hit for the patient: They failed to include in their transfer communication that the patient also had a pelvic fracture. This scenario shows how the principles of human communication are sometimes interlinked: "Redundancy in content and directness in channel enhances accuracy" only works if the communicated informational contents are *sufficient*. In other words, redundancy *does not* aid accuracy if the information that is being repeated is incomplete.

This case also highlights the danger of relying on health information technologies for "improved communication." In this case, a critical informational piece was included *only* on a digital disc, under the assumption that it will be accessed, decoded, and understood as intended. In other words, the decoding process, its accuracy, and the resulting "shared understanding" was delegated to a technological tool and assumed to take place, rather than co-established among the care participants through the process of sufficient interpersonal communication. This misconception of communication resulted in a "common ground fallacy": The sending clinicians assumed that a shared understanding of the disc contents would be established, merely by sending the disc. They disregarded the fact that the decoding process cannot be "left alone" after sending off a message to a recipient, but that transactional sense-making is required to ensure the establishment of a shared understanding.

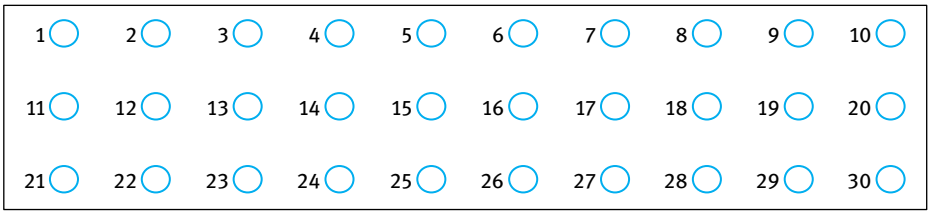
In summary, many things can happen between sending off a message and the ultimate goal of a shared understanding. This process is complex and error-prone, and if delegated to digital pathways, it is exposed to many kinds of distractions that commonly cause messages not to arrive or not to be understood as intended. In this case, a structural system insufficiency compromised the "assumed" sense-making process and left the disc (and the inherent intended communication) unread, causing a delayed diagnosis and a prolonged hospital stay for the patient. This evidences that communication success is not sustainable if the sense-making process is replaced by technological equipment and that **interpersonal communication** – which is commonly considered a mere "soft skill" in clinical practice – must be repositioned as an **essential hardware for safer patient care**.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this harmless hit:

- The paramedics, the transferring ED nurse, and the clinicians who wrote the transfer papers could have been more complete in their information coverage during their transfer communication with the receiving clinicians.
- The paramedics, the transferring ED nurse, and the clinicians need not have delegated essential informational contents to health information technology. They could have assumed **no common ground** and **no disc** during their transfer communication with the receiving clinicians to ensure a safe care episode.

Communication lessons for safer, higher quality care



Select the communication lessons from Chapter 6 that best apply to this case and mark the respective circle(s) in this graph. Explain your choices and discuss how the lessons you selected inform this particular case. Compare your choices with the responses others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

Discussion questions and exercises

1. What are the benefits and limitations of information technology in reducing the risk of harm to the patient?

2. What recommendations could you make to prevent this type of error in the future?

3. As you reflect on this case, think about how you could create a *culture of safety* within the organization in which this case occurred.

4. What positive actions did the nurse take to protect the safety of the patient in this case?

Stage 3: Planning

Planning is the process in which clinicians, patients, and other involved individuals discuss and determine a strategy for the attempted remediation of an assessed problem or to achieve a goal. The planning of care can be classified by goals, methods, and location, among others. The care can be acute or ongoing, and goals can be to cure disorders, to improve or maintain health and functioning, to prevent problems, or to ameliorate symptoms. Methods of care include medication, devices, procedures, therapies, and counseling. Care may be based within hospitals, in an outpatient/ambulatory setting, skilled nursing facility, the setting of residential care for the elderly, or in the patient's home. All these care options need to be discussed and decided upon jointly with the patient and his/her care companions, making successful communication an essential prerequisite for competent care planning.

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Case 13: "Who decides?"

Provider-patient interaction
Inadequate care plan, Patient fall, Adverse event

Clinical context: Primary care visit for care planning
Communication context: Inadequate communication between a nurse, a physician, the patient's wife, and the patient
Incident: Communication errors leading to an inadequate care plan and preventable patient fall
Patient safety outcome: Adverse event

Case written by Anne Wendt, Ph.D., M.S.N., R.N.

A 92-year-old male patient diagnosed with end-stage heart failure and early stages of dementia is discussing his end-of-life care plans with an advanced practice nurse (APN) working in his primary care physician's office. ❶ **The patient reports to the APN** that he would rather go to an inpatient hospice unit than have hospice care at home. He does not want to be a burden to his wife and does not believe she will be able to provide for his needs adequately. ❷ **The APN knows that the patient's wife**, who is a member of the hospital board, has already convinced the primary care physician to transfer the patient to home hospice.

The nurse's initial assessment is that the patient is able to make decisions about his own care, but ❸ **the nurse does not want to challenge the physician's decision** to place the patient into hospice care at home. Additionally, ❹ **the nurse does not feel comfortable contradicting the patient's wife**, who is very outspoken and influential in the residential community where the patient lives and in the hospital where the nurse works.

❺ **The primary care physician places the patient into home hospice care**, where he becomes increasingly confused and unsteady on his feet and begins to wander at night. ❻ **Two weeks later**, the patient falls and hits his head, requiring admission to a skilled nursing facility for a minor head and shoulder injury. This adverse event might have been prevented if the patient had been admitted to a dementia care unit at a skilled nursing facility with hospice services, where the patient would have received closer supervision than in home hospice care.

Communication science principles

1. Redundancy in content and directness in channel enhance accuracy

The patient committed a ❶ **transactional communication error of contextualization** (error of underuse) by not contextualizing his conversations with the nurse and the physician enough to establish a shared understanding that he (1) does not feel ready for hospice care at home (*functional* context) and (2) does not want to be a burden to his wife (*relational* context).

The nurse committed a ❸ **transactional communication error of contextualization** (error of underuse) by failing to engage in follow-up communication with the physician in the context of his decision for home hospice care to establish a shared understanding of her assessment that the patient is able to make decisions about his own care (*functional* context).

2. Communication is contextual

The nurse committed a ❷ **communication decoding error of contextualization** (error of overuse) by overly decoding the patient's communication in the context of her knowledge of the patient's wife having already convinced the physician to transfer the patient to home hospice care (*functional* context).

The patient and the patient's wife committed a ❻ **communication encoding error of contextualization** (error of underuse) by waiting too long (two weeks until an accident happened; *chronological* context) to inform the clinicians that the patient was not doing well in home hospice care (*functional* context).

3. Communication entails factual and relational information

The nurse committed a ❸ **communication encoding error of contextualization** (error of overuse) by overly framing her communication with the physician in the context of her hierarchically inferior position (*relational* context) and her not daring to question the physician's decisions about the patient's care (*functional* context).

The primary care physician committed a ❺ **communication encoding error of contextualization** (error of underuse) by placing the patient into home hospice care in disregard of the context of the patient having expressed that he does not want home hospice care (*relational* context: disregard of the patient's treatment preferences; *functional* context: no shared goal alignment).

The nurse and the primary care physician committed a ❺ **communication encoding error of contextualization** (error of misuse) by yielding to the patient's wife's treatment plan preferences instead of accommodating the patient's preferred treatment plans (*relational* context).

The nurse and the primary care physician committed a ❺ **transactional communication error of interpersonal adaptation** (error of underuse) by not engaging in enough communication together with the patient and his wife to co-establish a shared

understanding of an optimal treatment plan that accommodates and coordinates both of their needs and expectations.

4. Communication is functional

The nurse committed a ❹ **communication encoding error of contextualization** (error of overuse) by overly constraining her communication with the physician and patient in the context of the wife being very outspoken in the residential community where the patient lives and where the nurse works (*relational* context).

Discussion

This case illustrates how care participants' inadequate contextualization of their communication with each other – particularly in care episodes where complex relational structures dominate interactions – can disable the accomplishment of a shared understanding and severely compromise patient safety. The communication errors in this case are illuminated by various principles of human communication. One of the key issues was the patient's insufficiency in asserting his treatment plan preferences to the nurse and the physician, and the nurse's insufficiency to convey to the physician that the patient is perfectly able to make decisions for his own treatment. These two issues were contextually embedded in complex relational structures. Appropriate redundancy in direct communication with each other could have helped the nurse, the physician, and the patient to co-establish a more accurate understanding of the optimal treatment plan for the patient.

An interesting facet of this case was the wife's constraining role. Often times, care companions can play a *facilitating* role in ensuring safer care episodes when engaged as active care partners. In this case, however, the opposite occurred – the wife's presence induced another layer to the relational and functional complexity of the care episode that *constrained* the nurse and the physician from acting in the best interest of the patient. Their over-used interpersonal adaptation toward the wife (rather than the patient) to accommodate her (rather than his) treatment preferences resulted from a perceived professional threat. This communication dilemma is informed by the principle "Communication is functional": People do not always strive for clear communication and a shared understanding. Communication is often used for other purposes as well. In this case, the clinicians did not prioritize communication as a process to establish a shared understanding with the patient. The clinicians in this case used their communication with one another and the patient for relational maintenance purposes with the patient's wife. They prioritized keeping the patient's wife satisfied to prevent reputational damage that might have occurred if she had not been satisfied with her husband's care. The result of this prioritization was an adverse event that could have been prevented if they had prioritized patient safety (by taking the patient's expressed concerns seriously) over accommodating the wife's expectations.

Ideally, the nurse and the clinicians could have activated sufficient transactional communication in a conversation with the patient and his wife to coordinate their expectations regarding the optimal care plan for the patient's advancing dementia. In that conversation, they could have used their communication with each other as a pathway for transforming the contextual *constraints* (e.g. the threat of the wife "badmouthing" their care in the community; the danger of disregarding the patient's care preferences against his decision-making capabilities; and the imposition of presumed hierarchical status differences) into *facilitators* of "safe communication" that prioritizes the safety of the patient and, at the same time, disables the contextual constraints that dominated this care episode and caused a preventable adverse event.

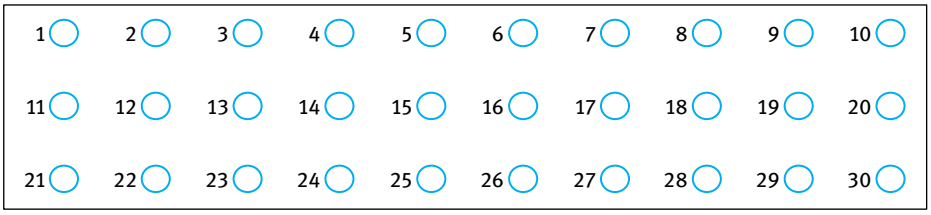
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The patient could have been more assertive (i.e. appropriately redundant) in his conversations with the nurse and the physician to establish a shared understanding of his expectation that he does not want to be in hospice care at home.
- The nurse could have engaged in follow-up communication with the physician to establish a shared understanding that the patient is able to make decisions about his own care.
- The nurse could have recognized that the context of the patient's wife having already convinced the physician to transfer the patient to home hospice care *constrained* rather than *facilitated* the safety of the care episode, and she could have framed her communication with the physician, the patient, and the wife in that context to transform this constraint into a *facilitator* of safe patient care.
- The patient and the patient's wife could have contacted the clinicians more quickly to inform them that the patient was not doing well in home hospice care.
- The nurse could have recognized that the context of her hierarchically inferior position constrained rather than facilitated safe communication with the physician; she could have framed her communication with the physician within that context to transform the constraint into a *facilitator* of safer care.
- The nurse could have recognized that the context of the wife being very outspoken in the residential community where the patient lives and where the nurse works *constrained* rather than *facilitated* her communication with the physician and the patient. She could have framed her communication within that context to transform that constraint into a *facilitator* of safe patient care.
- The primary care physician could not have placed the patient into home hospice care, given the context of the patient having expressed that he does not want home hospice care.

- The nurse and the primary care physician could have prioritized the patient's over the wife's treatment preferences, given that the patient was assessed as being perfectly capable of making decisions regarding his own care.
- The nurse and the primary care physician could have engaged sufficient communication with the patient and his wife to co-establish a shared understanding of an optimal treatment plan that meets both of their needs and expectations.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. What would you have done differently if you were the nurse in this case to ensure a safe care episode?

2. What concerns you most about this case?

3. What could the nurse have done to help the patient speak up more assertively about his care preferences?

4. What interpersonal factors may have facilitated the occurrence of communication errors in this case?

5. Identify points in the case when the nurse and patient could have been more assertive about the patient's care preferences. Write a script for what they could have done and/or said.

Case 14: "Family frustration"

Provider-family interaction
Undocumented DNR status, Adverse event

Clinical context: Acute patient transfer to hospice care (cancer)
Communication context: Insufficient communication between the patient's family, a nurse, and a transport team
Incident: Communication errors leading to unindicated resuscitation and preventable pain
Patient safety outcome: Adverse event

Case written by Rhonda Malone Wyskiel, M.S.N., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 75-year-old female patient diagnosed with terminal pancreatic cancer is being transferred from an acute care setting to a hospice facility. ❶ **The patient and family discuss and establish "do not resuscitate" (DNR) status while in the hospital.** When it is time to transfer the patient, ❷ **the transferring nurse does not document the DNR status** in the transport team's paperwork, ❸ **nor does the nurse communicate this to the transport medical team verbally**. While the patient is being placed into the ambulance for transport, she becomes apneic and unresponsive. ❹ **The transport team begins resuscitation** and takes the patient back into the hospital via the emergency department (ED).

The family who is waiting at the hospice facility is notified of the event and quickly drives to the hospital ED where they find the patient intubated and sedated. They are angry and frustrated with the lack of communication about the DNR status, and that their plan for treatment had not been followed. Because of the intubation and sedation the family cannot communicate with the patient, which causes them further distress. The patient is readmitted to the hospital. Support is withdrawn 12 hours later, and the patient dies without regaining consciousness.

Communication science principles

1. Communication is contextual

The nurse and the patient's family committed a ❶ **transactional communication error of contextualization** (error of underuse) by not ensuring at the hospital that

all current and future care participants have a shared understanding of the patient's DNR status (*functional* context).

2. Redundancy in content and directness in channel enhance accuracy

The transferring nurse committed a ❷ **communication encoding error of sufficiency** (error of omission) by not documenting the patient's DNR status in the transport team's paperwork.

The transferring nurse committed a ❸ **communication encoding error of sufficiency** (error of underuse) by failing to communicate the patient's DNR status verbally to the transport clinical team during handoff.

The transport team committed a ❹ **transactional communication error of accuracy** (error of omission) by failing to validate the accuracy of their assumed DNR status of the patient, either by accessing the patient's health records or by directly contacting the nurse or the patient's family prior to initiating resuscitation.

3. Communication is a nonsummative process

The transferring nurse and the transport team committed a ❸ **transactional communication error of sufficiency** (error of omission) by failing to establish a shared understanding of the patient's DNR status during handoff.

Discussion

This case illustrates that interpersonal communication is the only available process to eliminate safety-compromising perceptual discrepancies between individual care participants' assumptions. Communication is the process to establish a **common ground** on which care participants can construct a **shared understanding** – to ensure that their encoded and decoded message contents are accurate and understood as intended.

In this case, the involved care participants engaged in insufficient communication with each other. For the most part, they interacted on the mere level of assumption. They failed to utilize interpersonal communication to establish a shared understanding *between* them. For example, the transferring nurse *assumed* the transport clinical team would access the patient's records in the unlikely event of a DNR-relevant incident happening during transportation. At the same time, the transport team *assumed* the nurse would have informed them if the patient's status had been "DNR," and thus did not see a need to waste critical time by consulting the records or contacting anyone to validate the patient's DNR status prior to initiating resuscitation.

This line-up of events demonstrates why and how communication is a critical aspect of patient safety. Sufficient and high-quality communication is the vehicle through which care participants can co-generate safer care processes. If used com-

petently, communication links all involved care participants into a strong, resilient team in which individuals coordinate the patient's care with each other and perform safety-relevant "alert functions" to validate the accuracy of their performed tasks and functions – more eyes catch more errors and promote higher accuracy.

In this case, the patient's family was a crucial safety resource to prevent the adverse event. While the nurse was stressed and attending to multiple patients, the family was at the patient's bedside. The family could have helped the nurse ensure that the DNR documentation was complete and that it had been conveyed to all current and future care participants. This illustrates the importance of including patients and care companions as active partners for safe and high-quality care. If communication is engaged sufficiently and competently, it can equip all care participants with the ability to co-generate safer, better care episodes – because it links them together into a stronger, more resilient healthcare team.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The nurse and the patient's family could have engaged in more sufficient communication with each other at the hospital to ensure that all current (and future) care participants have a shared understanding of the patient's DNR status.
- The transferring nurse could have documented the patient's DNR status in the transport team's paperwork.
- The transferring nurse and the transport team could have used their communication with each other to establish a shared understanding of the patient's DNR status during handoff.
- The transferring nurse could have communicated the patient's DNR status *verbally* to the transport team during handoff.
- The transport team could have validated the accuracy of their assumed DNR status of the patient, either by accessing the patient's health records or by directly contacting the nurse or the patient's family prior to initiating resuscitation.

Communication lessons for safer, higher quality care

1 ◯	2 ◯	3 ◯	4 ◯	5 ◯	6 ◯	7 ◯	8 ◯	9 ◯	10 ◯
11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
21 ◯	22 ◯	23 ◯	24 ◯	25 ◯	26 ◯	27 ◯	28 ◯	29 ◯	30 ◯

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Discussion questions and exercises

1. As you reflect on this case, what would you have done to decrease the safety risks and increase the quality of care for the patient and his family?

2. How could the communication errors in this case have been prevented?

3. What policies could be implemented to prevent the type of communication errors that occurred in this case?

4. What have you learned from this case, and how could you use this case to educate others?

Case 15: “Discharge against medical advice”

Team interaction
Inadvertent discharge, Harmless hit

Clinical context: Acute-on-chronic inpatient admission (chronic dementia and acute delirium)
Communication context: Interaction between a primary clinical team and a night float resident
Incident: Communication error leading to inadvertent discharge
Patient safety outcome: Harmless hit

Case reprinted with permission of AHRQ WebM&M. Hwang SW. Discharge against medical advice. AHRQ WebM&M [serial online]. May 2005. Available at: https://psnet.ahrq.gov/webmm/case/96.

A 50-year-old man with a history of alcohol dependency and alcohol-induced dementia was admitted to the medical service with mild alcohol withdrawal. He was also found to have a proximal humeral fracture, and the orthopedic consult recommended surgical repair. The patient was treated with benzodiazepines for his alcohol withdrawal and remained medically stable. After hearing the risks and benefits of surgery from the physicians, the patient refused.

In light of the patient’s chronic dementia and acute delirium due to alcohol withdrawal, formal mental status testing was performed, which indicated that the patient lacked the capacity to make medical decisions. A psychiatry consultation supported this determination.

On hospital day 4, at approximately midnight, the patient stated to his nurse that he wished to leave the hospital. ❶ **Neither the floor nurse nor the charge nurse was aware** that the patient had been found to lack decision-making capacity. They contacted the night float covering resident and informed her that the patient wished to leave.

❷ **The resident glanced at the chart**, ❸ **asked the patient a few questions**, and ❹ **allowed him to leave** against medical advice.

The primary medical team was informed the following morning about the discharge. They ❺ **had no contact information** for the patient and he could not be located. What happened to him is unknown.

Communication science principles

1. Communication is a nonsummative process

The night shift team (nurses and resident) committed a ❶ **communication decoding error of sufficiency** (error of omission) by not accessing and decoding the information about the patient's decision-making capacity in the health records. In the same vein, the primary clinical team committed a ❶ **transactional communication error of sufficiency** (error of omission) by not verifying the night shift nurses' receipt and understanding of this important information about the patient's decision-making capacity that had been documented in the patient's records. Thus, communication was assumed, but never attained.

The resident committed a ❷ **communication decoding error of sufficiency** (error of underuse) by merely glancing over the patient's medical chart. Reviewing the chart more thoroughly could have facilitated a shared understanding that would have been necessary for her to make the correct decision. Instead, with her perception of the patient that she formed based on an insufficient reading of the medical chart, the resident inappropriately allowed the patient to be discharged against medical advice. This decision placed his safety at significant risk.

Sufficient information exchange was also not attained in direct interaction with the patient. The primary clinical team (physicians and nurses) committed a ❺ **communication encoding error of sufficiency** (error of underuse) by not obtaining contact information for the patient. In the end, this additional error put the patient at risk because the team was unable to locate and treat the patient after the inadvertent discharge.

2. Communication is more than words

The resident made a ❹ **communication decoding error of sufficiency** (error of underuse) by relying on verbal communication alone (i.e. asking the patient a few questions) to determine his condition. She then committed a ❹ **communication decoding error of accuracy** (error of misuse) by misjudging the patient's health condition – likely because she did not attend sufficiently to the patient's nonverbal communication.

Discussion

This case demonstrates that interpersonal communication in healthcare interactions is a complex process that occurs *between* rather than *within* people. The resident quickly pulled bits of information that she deemed relevant from the medical chart and asked the patient a few questions to confirm the impression she had already formed from skimming the chart. The primary clinical team (nurses and physicians) also relied solely on the chart as the only source of information. None of the clini-

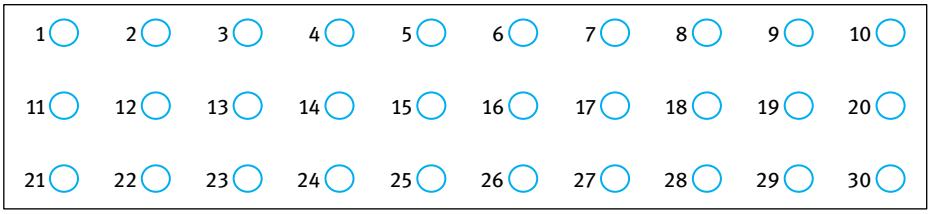
cians in this case understood communication as a mutual meaning-making process. Because of this, communication with the patient never took place.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this harmless hit:

- The night shift nurses could have reviewed the primary clinical team's notes more closely.
- The primary clinical team, ideally in a face-to-face handoff, could have conveyed the patient's decision-making incapacity to the night shift resident.
- The resident could have assessed the patient's condition more holistically – she could have reviewed the records more closely and attended to the patient's nonverbal behavior that might have conveyed his decision-making incapacity.
- The health record could have highlighted the patient's decision-making incapacity more clearly.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. When a patient is found to lack decision-making capacity, should clinicians continue to "co-create a shared meaning?" If yes, how might this be accomplished?

2. In this case, what nonverbal cues might you expect to see in the patient that could have conveyed his decision-making incapacity?

3. Draw an assumptions flowchart, outlining the key interactions in this case and the underlying assumptions that informed each actor's behavior.

4. What positive action(s) did the nurse(s) take in this case to facilitate safe patient care?

5. What have you learned from this case?

Case 16: "Eptifibatide epilogue"

Inter-professional interaction
Medication underuse, Adverse event

Clinical context: Acute inpatient admission (coronary syndrome)
Communication context: Interaction between three nurses, an intern, and a pharmacist
Incident: Communication error leading to medication underuse
Patient safety outcome: Adverse event

Case reprinted with permission of AHRQ WebM&M. Churchill WW, Fiumara K. Eptifibatide epilogue. AHRQ WebM&M [serial online]. April 2009. Available at: https://psnet.ahrq.gov/webmm/case/198.

A 62-year-old man was admitted at 11:00 PM on a Saturday night with the provisional diagnosis of acute coronary syndrome. Serial testing for markers of cardiac injury was begun, and he was treated with a beta-blocker, enoxaparin, and a statin.

At 6:00 AM on Sunday, the patient's troponin was elevated, and the diagnosis was upgraded to non-ST segment elevation myocardial infarction. The intern entered an order for intravenous eptifibatide (a powerful anticlotting agent given by intravenous drip) into the computerized order entry system in anticipation of expedited coronary intervention on Monday morning.

The intern entered the correct weight-based dosage of eptifibatide (a loading dose, followed by a maintenance infusion of 2 μg/kg/min) into the order template. Because of a forcing function in the template, he also had to enter a maintenance infusion rate in milliliters per hour (mL/h). He was unsure of the proper infusion rate, so ❶ **he arbitrarily chose 0.5 mL/h**. ❷ **He expected the pharmacist on duty to make adjustments** to the order as needed. [Note: The correct infusion rate for this patient would have been 20 mL/h.]

The eptifibatide order was electronically transferred to the pharmacy for processing. The ❸ **pharmacist processed the order as entered**, and eptifibatide was sent to the floor for administration.

The ❹ **nurse on duty was harried** because he was caring for six patients instead of the usual four. He correctly administered the loading dose and ran the maintenance infusion at 0.5 mL/h, under-dosing the patient by a factor of 40. The night shift nurse continued the infusion at this rate, as did the nurse on the following day shift.

The day shift nurse ❺ **was curious about the low dose and queried the intern**, but the nurse was distracted by her additional charge nurse duties.

The patient was taken to the percutaneous cardiac intervention (PCI) lab at 2:00 PM on Monday, by which time his troponin values had peaked and were trending down. In the PCI lab, the eptifibatide infusion error was immediately noted. The patient subsequently underwent coronary angioplasty with stenting. It is impossible to say whether the underdose of the blood thinner led to more cardiac damage.

Communication science principles

1. Redundancy in content and richness in channel enhance accuracy

The intern deliberately committed a ❶ **communication encoding error of accuracy** (error of commission) by ordering the wrong infusion rate, hoping that it would serve as a placeholder and be corrected by the pharmacist. The intern and the pharmacist made a ❸ **transactional communication error of accuracy** (error of omission) by not engaging in communication to validate and correct the infusion rate with each other. These two errors illustrate how redundancy (in this case, the *missing* repetition of the fact that the correct infusion rate was uncertain) and richness in channel (i.e. direct communication rather than electronic information transfer) could have facilitated a more accurate communication and, ultimately, prioritized the safety of the patient.

2. Preconceptions and perceptions vary among communicators

The intern committed a ❷ **communication encoding error of interpersonal adaptation** (error of underuse) by communicating insufficiently with the pharmacist via his medication order, accompanied by his unspoken assumption that the pharmacist would catch and fix it. To the contrary, the pharmacist assumed the ordered dose was what was intended. This error demonstrates the importance of recognizing that peoples' individual perceptions vary and that interpersonally adaptive communication skills are needed to bridge such perceptual gaps in order to establish a shared understanding.

3. Communication is contextual

The nurse on duty and the night shift nurse committed a ❹ **communication decoding error of contextualization** (error of underuse) by not allotting sufficient time within their unusually busy schedules to decode the infusion rate indicated by the pharmacist correctly (chronological context), particularly with respect to the treatment objective (functional context). Instead, they ran the maintenance infusion as ordered and the patient received a subtherapeutic dose.

The second day shift nurse committed a ❺ **communication encoding error of contextualization** (error of underuse) by not allotting enough time (chronological context) to establish a shared understanding (functional context) of the medication

dosage with the intern. Instead, her communication with the intern remained at the level of a query rather than a more assertive interaction.

These two errors illustrate the importance of framing one's communication within the context of a given care scenario to optimize a shared understanding and promote patient safety.

Discussion

The key patient safety theme highlighted in this case is the *accuracy* of communication. The case demonstrates how the involvement of multiple staff members (nurses, pharmacist, and physician) caring for one patient can complicate communication processes and thereby decrease the likelihood of a shared understanding, which in turn can compromise patient safety. At the same time, if staff members communicate well, their participation can perform a validating function that enhances the accuracy of care. In this case, this kind of interstaff communication could have led to recovery and averted the adverse event.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- Because the intern did not know the correct calculation, he could have consulted others to determine the correct infusion rate.
- The intern could have supported his communication with the pharmacy with a follow-up phone call to indicate that he did not know how to calculate the infusion rate and that the value he entered was arbitrary.
- The nurses could have communicated with each other to validate the accuracy of the infusion rate.
- The day shift nurse could have followed up in a more timely and assertive manner to query the intern about the infusion rate.
- The intern could have reacted immediately to the day shift nurse's query about the low infusion rate.

Communication lessons for safer, higher quality care

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11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
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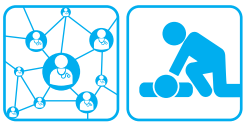
Discussion questions and exercises

1. How could the clinical nursing staff in this case have allocated time to ensure message receipt and a shared understanding?

2. Describe three ways in which the clinical nursing staff members could have validated the accuracy of the communicated content in this case.

3. What system errors occurred in this case, and what policies/procedures could be implemented to prevent this from happening again in the future?

4. How can you use what you have learned from this case to teach others?



Case 17: “Code blue – Where to?”

Cross-professional interaction
Inadvertent resuscitation, Near miss

Clinical context: Acute inpatient admission (hallucinations and anxiety)
Communication context: Interaction between a critical care nurse, inpatient psychiatry nurses, a senior medical resident, a medical intern, an anesthesia resident, and an anesthesia attending
Incident: Communication error leading to near inadvertent intubation
Patient safety outcome: Near miss

Case reprinted with permission of AHRQ WebM&M. Adams BD. Code blue – Where to? AHRQ WebM&M [serial online]. October 2007. Available at: https://psnet.ahrq.gov/webmm/case/162.

An 80-year-old man with a history of coronary artery disease, hypertension, and schizophrenia was admitted to an inpatient psychiatry service for hallucinations and anxiety. On hospital day 2, he had a sudden onset of confusion, bradycardia, and hypotension. He lost consciousness, and a “code blue” was called.

The inpatient psychiatry facility was adjacent to a major academic medical center. The “code team” (comprised of a senior medical resident, medical intern, anesthesia resident, anesthesia attending, and critical care nurse) within the main hospital ❶ **was activated**. The message blared through the overhead speaker system, “Code blue, fourth floor psychiatry. Code blue, fourth floor psychiatry.”

The senior resident and intern had never been to the psychiatry facility. “How do we get to psych?” the senior resident asked a few other residents in a panic. “I don’t know how to get there except to go outside and through the front door,” a colleague answered. So the senior resident and intern ran down numerous flights of stairs, outside the front of the hospital, down the block, into the psychiatry facility, and up four flights of stairs (the two buildings are actually connected on the fourth floor). Upon arrival, the team found the patient apneic and pulseless. The nurses on the inpatient psychiatry ward had placed an oxygen mask on the patient, but the patient was not receiving ventilatory support or chest compressions.

The resident and intern ❷ **began basic life support** (CPR with chest compressions) with the bag-valve-mask. When the critical care nurse and the rest of the code team arrived, they attempted to hook the patient up to their portable monitor. Unfortunately, the leads on the monitor were incompatible with the stickers on the patient, which were from the psychiatry floor (the stickers were more than 10 years old). The

team did not have appropriate leads to connect the monitor and sent a nurse back to the main hospital to obtain compatible stickers. In the meantime, the patient remained pulseless with an uncertain rhythm. Moreover, despite ventilation with the bag-valve-mask, the patient's oxygen saturation remained < 80%. After minutes of trying to determine the cause, it was discovered that the mask had been attached to the oxygen nozzle on the wall, but the oxygen had not initially been turned on by the nursing staff. The oxygen was turned on, the patient's oxygen saturation started to rise, and the anesthesiologist ❷ **prepared to intubate the patient**. Chest compressions continued.

At this point, a staff nurse on the psychiatry floor came into the room, recognized the patient, and shouted, ❸ **"Stop! Stop! He's a no code!"** Confusion ensued – ❹ **some team members stopped** while others continued the resuscitation. A review of the chart showed ❺ **no documentation** of a "Do Not Resuscitate" order, so the resuscitation continued. The intern on the team called the patient's son, who confirmed the patient's desire to not be resuscitated. The efforts were stopped, and the patient died moments later.

Communication science principles

1. Redundancy in content and directness in channel enhance accuracy

The inpatient psychiatry ward staff committed a ❶ **communication encoding error of accuracy** (error of commission) by inappropriately activating the code team.

2. Communication is contextual

The resident, the intern, and the anesthesiologist committed a ❷ **transactional communication error of accuracy** (error of omission) by not addressing the patient's DNR/DNI preferences while getting ready to initiate life support.

The staff nurse on the psychiatry floor committed a ❺ **communication encoding error of sufficiency** (error of omission) by having neglected to add the DNR order to the patient's records.

The staff nurse also committed a ❸ **communication encoding error of sufficiency** (error of underuse) by insufficiently justifying her sudden "stop" order.

The code team clinicians committed a ❹ **transactional communication error of clarity** (error of misuse) by being ineffective in their communication with one another and the staff nurse to clarify the ambiguity of the contradictory DNR/no-DNR messages in the room.

The staff nurse on the psychiatry floor committed a ❸ **communication encoding error of contextualization** (error of underuse) by not intervening with the code team's activation in a more timely manner (*chronological* context).

The clinicians committed a ❺ **communication decoding error of contextualization** (error of underuse) by reviewing the chart and facing the DNR-question only *after* preparing the patient for intubation (*chronological* context).

Discussion

This case demonstrates the importance of communication as a vehicle to attain coordinated care. In this incident, all clinicians relied on an initial call for a code and assumed that everything needed to be done to keep the patient alive. The cause of this inaccuracy was a lack of communication on several levels – for example, the patient's DNR preference had not been documented in the records, the code was not interrupted by the staff nurse *before* the clinicians prepared to intubate, and the team was confused about the patient's DNR preference until the intern finally called the patient's son to confirm the DNR status. This inaccuracy was not only *caused* by poor communication, but it could have also been *repaired* through accuracy-promoting communication processes. Content redundancy could have clarified ambiguities, reduced uncertainty, and corrected accuracy with respect to the patient's DNR status. For example, the inpatient psychiatry ward nursing staff could have verified the patient's DNR preference in various ways before activating the code team, the clinicians could have engaged in direct communication with one another to clarify their uncertainty regarding the patient's DNR preference, and the staff nurse could have reinforced her sudden call to "stop" with a more detailed explanation. Of course, this case was framed within a tight timeline that did not allow much flexibility for ad-hoc discussions. It was also complicated by numerous system deficiencies, such as the staff's lack of training regarding psychiatry building access via the fourth floor, and the incompatibility of the leads on the monitor with the patient's stickers on the psychiatry floor. It is important to recognize, however, that it was an initial communication error that induced this time constraint. Safe communication in the first place could have averted this communication-induced near miss event.

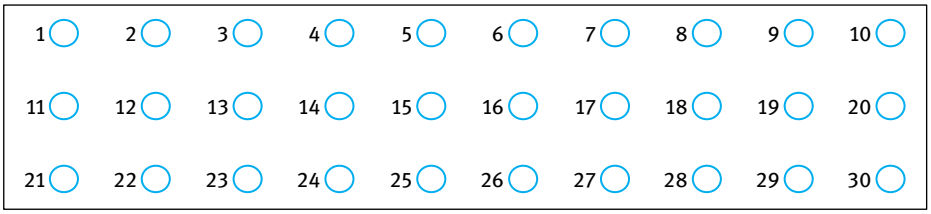
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this near miss:

- The inpatient psychiatry ward nursing staff could have made sure that the patient had not expressed a DNR preference prior to activating the code team, or it could have checked immediately after activating the call.
- The staff nurse on the psychiatry floor could have added a DNR order to the patient's records at the time of admission.

- The staff nurse on the psychiatry floor could have either intervened with the code team activation right away, or been present at the code team's arrival to correct the error-in-the-making.
- The staff nurse on the psychiatry floor could have accompanied her sudden call to "stop" with a succinct and clear explanation.
- The code team clinicians could have communicated with one another and with the staff nurse to clarify the ambiguity of the contradictory DNR/no-DNR messages in the room.
- The hospital administration could invest in more sufficient training of code teams and staff to enhance the timeliness and efficiency of care in emergency situations (e.g. by informing staff of the quickest connecting routes between buildings, by assuring equipment compatibility across buildings).

Communication lessons for safer, higher quality care



Select the communication lessons from Chapter 6 that best apply to this case and mark the respective circle(s) in this graph. Explain your choices and discuss how the lessons you selected inform this particular case. Compare your choices with the responses others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

Discussion questions and exercises

1. What steps could the hospital take to reduce confusion among staff when a code is called?

2. What environmental factors might have increased the risk for communication errors in this case?

3. What personal characteristics of the nurses in this case could have compromised patient safety? Make recommendations for the nurses that could reduce their risk for making communication errors of such kind.

4. Reflect on the case and identify failure points at which the care participants could have ensured message receipt and a shared understanding. For each point, describe one action that could have helped them accomplish this goal.

5. Describe an institution-wide policy or system that could help clinicians maintain clarity about the status of advance directives and DNR/DNI orders for the entire duration of a patient’s care, across multiple care locations and staff.

Case 18: "Inadequate handoff"

Inter-institutional interaction
Inadequate handoff, Harmless hit

Clinical context: Acute inpatient transfer to a higher level care facility (complex GI surgery)
Communication context: Inadequate inter-institutional handoff communication
Incident: Communication errors leading to treatment delay
Patient safety outcome: Harmless hit

Case written by Rhonda Malone Wyskiel, M.S.N., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 46-year-old female requiring complex gastrointestinal (GI) surgery needs to be transferred to a nearby academic medical center for specialty treatment. The community hospital where she is currently receiving care is not equipped to meet her complex and deteriorating condition. The nurse sending the patient to the receiving hospital's intensive care unit (ICU) verbally reports to the ICU nurse that the patient is alert and oriented to person, place and time, and that the patient is hemodynamically labile but responsive to fluids and does not require vasopressor medications. ❶ **The sending nurse also reports that the patient has central venous line access** in case it is needed during transport and upon arrival at the new facility.

The ICU nurse at the receiving hospital tells the sending nurse that there will be a bed available for the incoming patient in 1–2 hours, after another patient is transferred. The sending nurse anticipates that by the time the patient is transported and actually arrives at the receiving hospital, 2 hours will have passed and a bed will be available. Therefore, ❷ **the sending nurse does not see a need to tell the receiving ICU nurse that the patient is already en-route**. The sending nurse also ❸ **does not inform the charge nurse** on her own unit about the receiving nurse's information regarding the availability of a bed, given that the patient is already en-route and nothing can be done anyway. Therefore, the transport company dispatcher is never informed that the receiving hospital's ICU will not be ready for the patient for another 1–2 hours.

Thirty minutes later, the transport team arrives at the receiving hospital's ICU with the patient, who is now hemodynamically unstable. The receiving ICU nurse is not prepared for the patient and does not have a bed available. The patient continues to decompensate with mean arterial blood pressures in the low 60 s and receives fluid resuscitation in the hallway while awaiting a bed. ❶ **Contrary to what had been stated by the sending nurse**, the patient has only an external jugular IV line and not a cen-

tral line. Staff administer multiple fluid boluses through the single lumen 16 gauge external jugular vein catheter but are unable to provide sufficient fluid resuscitation. Once a room is available and the patient has a central venous catheter placed, the ICU staff are able to stabilize the patient. The patient does not incur any lasting harm from this incident.

Communication science principles

1. Communication varies between thought, symbol, and referent

The sending nurse committed a ❶ **communication encoding error of accuracy** (error of misuse) by stating during transfer that the patient had "sufficient central line access." In saying so, she mistakenly referred to an external jugular vein.

2. Preconceptions and perceptions vary among communicators

The sending nurse committed a ❷ **communication decoding error of contextualization** (error of misuse) by interpreting the ICU nurse's message that "a bed is going to be available in 1–2 hours" within the misassumed context that by the time the patient's transport would be completed, the 1–2 hours would have passed and a bed would be available for the patient upon arrival (*chronological* context).

The sending nurse committed a ❷ **communication decoding error of contextualization** (error of misuse) by decoding the ICU nurse's message that "a bed is going to be available in 1–2 hours" within the misassumed context that nothing can be done about this anyway because the patient was already en-route (*functional* context).

3. Communication is a nonsummative process

The sending nurse committed a ❷ **communication encoding error of sufficiency** (error of omission) by not informing the receiving ICU nurse that the patient was already en-route.

The sending nurse committed a ❸ **communication encoding error of sufficiency** (error of omission) by not informing the charge nurse at the sending hospital that the receiving hospital unit was not ready for the patient, and that the transport company dispatcher needed to be informed.

Discussion

This case demonstrates how imprecise communication can lead to potentially fatal consequences for the patient. The nurse's inaccurate reference to the patient's "sufficient central line access," which merely indicated external jugular vein access, required the receiving clinical team to spontaneously adjust the anticipated treatment

plan from rapid fluid replacement via a central line to multiple fluid boluses that had to be administered through a single lumen 16 gauge external jugular vein catheter, causing insufficient fluid replacement. The team could have been better prepared and quicker to respond if it would have anticipated this problem, which could have been established through more accurate communication by the sending nurse. The nurse's accuracy error is informed by the principle "Communication varies between thought, symbol, and referent." The nurse attributed a referent (= the external jugular vein she was looking at) to a thought she had in mind (= central line access) and used an inaccurate symbolic representation (= "central line access"). More sufficient transactional communication between the sending and receiving nursing staff during this communication episode could have been the pathway to detecting and correcting this inaccuracy, and the means to establishing a shared understanding.

This case also demonstrates the importance of contextualizing communication, not only while encoding messages, but also while *decoding* messages. In this case, the nurse decoded the ICU nurse's communication within two misassumed contextual frames. First, she assumed that the transport would effectively take 1–2 hours anyway and thus did not see a need to inform the receiving ICU nurse about the patient already being en-route. Second, she falsely assumed that nothing could be done to stop the patient's transport at this point in time since she was already en-route, and thus did not convey the ICU nurse's communication that the bed was not going to be ready for another 1–2 hours to her charge nurse and the transportation company dispatcher. These two miscontextualized decoding processes caused a critical waiting time for the patient during which she could not receive proper medical attention and could have died. More sufficient transactional communication with the other care participants would have been the pathway to overcoming the perceptual discrepancies and ensuring a safer care episode for the patient.

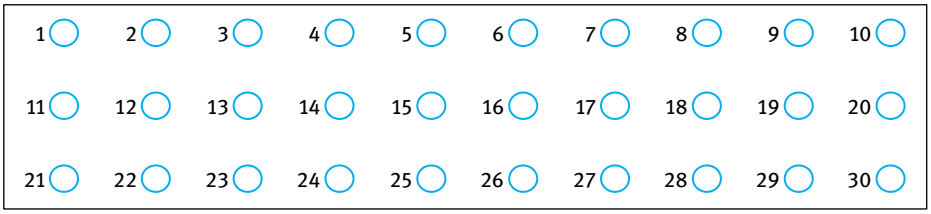
Finally, this case demonstrates the principle "Communication is a nonsummative process." The sending nurse decoded pieces of information within her perceptual frames. She kept them to herself and never assembled them into a larger interpersonal picture. Had she connected the pieces through transactional communication with the other care participants, a shared understanding among all care participants could have been established, and the accuracy of the communicated information could have been enhanced. In other words, *more* and *better* communication could have been the pathway to more timely and better care outcomes for the patient. However, such "safe communication" was never established, and as a direct result, the patient was (fortunately only mildly) harmed.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this harmless hit:

- The sending nurse could have been more accurate in her transfer communication by referring to an *external jugular vein*, not a *central line*.
- The sending and receiving nurses could have detected the inaccuracy of the nurse's statement indicating a "sufficient central line" through transactional communication, and used sufficient communication with each other to establish a shared understanding of the available central line versus external jugular vein access.
- The sending nurse could have informed the ICU nurse at the receiving hospital that the patient was already en-route.
- The sending nurse could have informed her charge nurse that the receiving hospital unit was not ready for the patient for another 1–2 hours, and that the transport company dispatcher needed to be informed.
- The sending nurse could have validated, rather than assumed, through transactional communication with her charge nurse and the transport company dispatcher whether the patient's transport would in fact take 1–2 hours.
- The sending nurse could have validated, rather than assumed, through transactional communication with her charge nurse and the transport company whether it was in fact too late to keep the patient at the current facility for 1–2 more hours until a bed would become available at the receiving institution.

Communication lessons for safer, higher quality care



Select the communication lessons from Chapter 6 that best apply to this case and mark the respective circle(s) in this graph. Explain your choices and discuss how the lessons you selected inform this particular case. Compare your choices with the responses others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

Discussion questions and exercises

1. Write a set of recommendations that could prevent the communication errors in this case in the future.

2. What would you do differently if you had been the transferring nurse in this case to optimize the safety and quality of care?

3. What policies and procedures could be implemented to prevent the type of communication errors that occurred in this case?

4. How could you use this case to teach other nurses about patient safety and quality of care?

Stage 4: Active waiting

Active Waiting is a new term that is introduced in this book to describe the stage of nursing practice that encompasses all processes that occur between the formulation and the execution of a patient's care plan. *Active waiting* represents an error-prone time period in which transitions, handoffs, timeliness, and many other issues can compromise the safety of patient care. Therefore, this "waiting" period is not a passive downtime – it is "active" because all participants interact with each other in preparing for the execution of the planned care. Patients and their family members, for example, may discuss the care plans at home and possibly revisit their preferences. This phase also includes interactions between clinicians and patients, among different clinicians, and between care teams, both within and across hospitals, ambulatory care clinics, pharmacies, and other healthcare institutions. Therefore, this care stage constitutes a communication-prone period of time that connects two critical care stages (i.e. planning and implementation) and requires active contributions from all care participants for the attainment of a shared understanding as a prerequisite for safe and high-quality care.

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Case 19: "Illegible handwriting"

Provider-patient interaction
Inadvertent medication use, Adverse event

Clinical context: Acute outpatient visit (pregnancy)
Communication context: Interaction between an advanced practice nurse and a pregnant patient
Incident: Communication error leading to patient's inadvertent medication use
Patient safety outcome: Adverse event

Case written by Anne Wendt, Ph.D., M.S.N., R.N.

A 34-year-old female who is pregnant for the first time (ten weeks) is being seen by an advanced practice nurse (APN) at a large obstetrics office for worsening nausea, dry mouth, and dizziness. The patient had been seen two weeks prior by one of the obstetricians working in the practice for nausea and intermittent vomiting. ❶ **The obstetrician had given the patient a handwritten prescription for Diclectin** (pyridoxine/doxylamine) to treat her nausea and vomiting. However, ❷ **due to illegible handwriting**, ❸ **the pharmacist filled a prescription for *Dicetel*** (pinaverium bromide).

❹ **The patient tells the nurse that she has been taking one tablet twice a day for two weeks and is feeling worse** than prior to taking the medicine. The nurse's initial assessment reveals that the patient is slightly dehydrated and has low blood pressure. After additional questioning regarding changes in the patient's diet, exercise, and lifestyle to rule out possible causes, the nurse asks the patient to describe the new medication, Diclectin. Through this conversation, the nurse and the patient determine that the patient had been taking *Dicetel*, a medication used to treat irritable bowel syndrome with side effects of nausea, vomiting, dry mouth, and dizziness. The nurse checks with the pharmacist at the large discount pharmacy where the prescription was filled, and the pharmacist agrees that unclear handwriting caused the prescription error.

The advanced practice nurse writes a new prescription for Diclectin that includes the generic name of the medicine. The patient is scheduled to be seen by her obstetrician. Fortunately, the medication misuse did not cause any long-term negative effects to the patient or fetus.

Communication science principles

1. Redundancy in content and directness in channel enhance accuracy

The obstetrician committed a ❶ **communication encoding error of sufficiency** (error of underuse) by merely handing the patient a handwritten prescription, instead of also explaining the name of the prescription and its purpose to the patient verbally.

The pharmacist committed a ❸ **transactional communication error of accuracy** (error of omission) by not contacting the obstetrician to validate the accuracy of his reading of the illegibly handwritten prescription label.

2. Communication is a nonsummative process

The obstetrician and the patient committed a ❶ **transactional communication error of sufficiency** (error of underuse) by failing to establish a sufficient shared understanding of the name of the medication during the first visit.

3. Communication varies between thought, symbol, and referent

The obstetrician committed a ❷ **communication encoding error of clarity** (error of underuse) by ordering the patient's prescription via illegible handwriting.

The pharmacist committed a ❸ **communication decoding error of accuracy** (error of omission) by decoding the label of the handwritten prescription inaccurately.

4. Communication is contextual

The pharmacist committed a ❸ **communication decoding error of contextualization** (error of omission) by failing to decode the obstetrician's handwritten prescription in the context of the patient being pregnant – he should have considered that the prescription label he could hardly decipher from the illegible handwriting could be dangerous to the fetus (*functional* context).

The patient committed a ❹ **communication encoding error of contextualization** (error of underuse) by waiting too long (*chronological* context) to visit the clinic for feeling worse, given that she was pregnant (*functional* context).

Discussion

This case illustrates how redundant and direct interpersonal communication enhances the accuracy of care, and – as a direct result – patient safety. The obstetrician could have engaged in more sufficient and direct communication with the patient to engage her as an active partner for safer care. Instead of using the prescription order as a mere information handoff tool to the pharmacy, the obstetrician could have involved the patient as an active resource in that process to enhance her care outcomes – for example, by explaining the intended effects of the medication to her, so that the

patient could have responded more timely to the medication's unintended effects at home; and, by utilizing the patient to activate an accuracy-validation process to ensure that the correct medication was getting filled at the pharmacy. By not activating the patient as an active care participant, the obstetrician and the pharmacist lost the opportunity to engage communication as a safety process in this care episode.

This case also demonstrates the severe impact that unclear communication at the most basic level (illegible handwriting) can have on the safety of a patient and her unborn child. This process is illuminated by the communication principle "communication varies between thought, symbol, and referent": The obstetrician had a clear thought and referent in mind to treat the patient's nausea and vomiting (Diclectin). He wrote the accurate representative symbol for this medication on the prescription order. However, his handwriting was difficult to decipher. The pharmacist failed in reassembling this thought-symbol-referent chain like it had been encoded by the obstetrician. The pharmacist attributed a different thought and referent to the illegible symbol. Transactional communication between the obstetrician and the pharmacist, and between the pharmacist and the patient (being an active partner for patient safety) would have been the only pathway to correcting the inaccuracy of this attributional reassembling. In addition, better contextualized communication in the pharmacist's decoding of the prescription order (i.e. making sense of the prescription order in the context of the patient being pregnant) could have prevented the adverse event.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The obstetrician could have pronounced and explained the prescribed medication to the patient instead of merely handing her a handwritten prescription.
- The obstetrician and the patient could have engaged in direct communication with one another to establish a sufficient shared understanding of the name of the medication during the first visit.
- The obstetrician could have written the prescription with legible handwriting.
- The pharmacist could have contacted the obstetrician to validate the accuracy of his reading of the illegible handwriting.
- The pharmacist could have decoded the handwritten prescription in the context of the patient being pregnant, to notice that the assumed meaning of the handwriting indicated a medication that could be dangerous to the fetus.
- The patient could have visited the clinic much sooner (rather than waiting two weeks), given that she was pregnant.

Communication lessons for safer, higher quality care

1 ◯	2 ◯	3 ◯	4 ◯	5 ◯	6 ◯	7 ◯	8 ◯	9 ◯	10 ◯
11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
21 ◯	22 ◯	23 ◯	24 ◯	25 ◯	26 ◯	27 ◯	28 ◯	29 ◯	30 ◯

Select the communication lessons from Chapter 6 that best apply to this case and mark the respective circle(s) in this graph. Explain your choices and discuss how the lessons you selected inform this particular case. Compare your choices with the responses others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

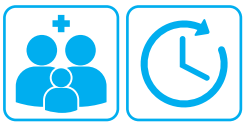
Discussion questions and exercises

1. What characteristics of the healthcare system contributed to this adverse event?

2. As you reflect on this case, describe what the nurse could have done to reduce the patient safety risk?

3. Describe what the nurse might have said to the patient when she found out about the prescription error?

4. What could be done to prevent these types of errors recurring in the future?



Case 20: "Nothing-by-mouth (NPO) for possible fracture"

Provider-family interaction
Delayed treatment, Harmless hit

Clinical context: Acute emergency department (ED) visit (leg fracture)
Communication context: Interaction between ED nursing staff and the patient's mother
Incident: Communication error leading to delayed treatment and fainting
Patient safety outcome: Harmless hit

Case written by Annegret F. Hannawa, Ph.D., Sandra W. Hwang, M.S.P.H., and Anne Wendt, Ph.D., M.S.N., R.N.

A 6-year-old boy is brought to the emergency department (ED) at 11:30 AM by his mother for a sharp pain in his right leg and inability to walk after an accident on the playground. The patient appeared to be in pain, but the leg showed no swelling. ❶ **After a two-hour wait**, an X-ray was taken. While waiting for the results, the patient's mother noticed that her son looked pale, then appeared to lose awareness and faint. She stepped into the hallway to request politely that the nurse provide water or juice, as her son had not eaten lunch or drank water, and the mother suspected his blood sugar had dropped. ❷ **The nurse refused**, stating that if the patient's leg were fractured, he would need to avoid food and drink prior to potential surgery.

❶ **About an hour later**, the ED team returned with the X-ray results, which indicated a fractured lower tibia. The team decided against surgery and elected for a cast. As the ❸ **patient remained without water**, the patient reported feeling "dizzy and sleepy." The mother noticed his eyes drifting and he was difficult to arouse at times. She stepped into the hallway again to request water or juice. With an ❹ **onslaught of new cases in the ED**, the ED nursing staff ❺ **dismissed her request** and ❻ **told her to remain in the room**, stating that ❼ **someone would be with her son to put the cast on**.

About 20 minutes later, after being without food or fluids for almost 4 hours, the patient fainted. The mother called out for help, and the clinical team overseeing the case rushed to assist. The child regained consciousness within several minutes and was given fruit juice. The cast was applied, and the patient was discharged with pain medications.

Communication science principles

1. Communication is contextual

The ED nursing staff committed a ❶ **communication decoding error of contextualization** (error of underuse) by not decoding the patient's appearance enough within the chronological and functional context of the care episode – with the patient presenting to the ED at lunchtime (i.e. not having had anything to eat or drink in hours; chronological context/"timing") and that extensive delays in his treatment (chronological context/"duration") may cause his blood sugar to drop (functional context).

The ED nurse committed a ❷ **communication decoding error of contextualization** (error of underuse) by insufficiently decoding the mother's alerting communication in the context of the mother being close to the patient (*relational* context) and thus being a valuable resource for detecting unusual signs or symptoms in the patient (*functional* context).

The ED nursing staff committed a ❹ **communication decoding error of contextualization** (error of underuse) by taking insufficient time within the context of a busy ED (*environmental* context) to attend to the mother's alerting request (*functional* context).

The ED nursing staff committed a ❼ **communication encoding error of contextualization** (error of underuse) by insufficiently stating what anticipated timeframe (*chronological* context) the mother could expect to see a clinician for the cast, given her son's faintness (*functional* context).

2. Communication entails factual and relational information

The ED nursing staff committed a ❶❸ **communication decoding error of interpersonal adaptation** (error of underuse) by insufficiently embracing the patient's need to be treated quickly because further delays in his treatment (with added time implications of a potential surgery that may be needed to align his fracture) would cause him discomfort.

The ED nursing staff committed a ❸ **communication encoding error of interpersonal adaptation** (error of underuse) by insufficiently adapting to the patient's needs once the ED team had decided that surgery was not required.

The ED nursing staff committed a ❻ **communication encoding error of interpersonal adaptation** (error of underuse) by insufficiently communicating with the mother in a way that adapted to her attempts to draw attention to her child's care needs.

3. Redundancy in content and directness in channel enhance accuracy

The ED nursing staff committed a ❺ **communication decoding error of accuracy** (error of misuse) by misinterpreting the mother's behavior as nagging rather than an informed warning that could have prevented the patient from fainting.

Discussion

This case illustrates three principles of human communication and their importance to the provision of safe and high quality patient care.

First, the care episode demonstrates the importance of communication as a process that is *contextual* on multiple levels. Particularly, it shows how the *chronological* dimensions of any given healthcare interaction (i.e. timing, duration, timeliness, and allocating time) can compromise the effectiveness and appropriateness of any care episode. In addition, the case illustrates how the *relational* composition (e.g. hierarchical differences due to status or gender) among the care participants can either facilitate or constrain their communication and directly influence the patient's care outcomes.

Second, this case highlights that communication includes factual and relationship-defining information, both of which may not necessarily be conveyed verbally. In fact, relational messages tend to be perceived more strongly from nonverbal than verbal communication. In this episode, relational messages were communicated, for example, by the nurses' insufficient adaptation to the needs and expectations of the young patient and his mother. The episode demonstrates how such interpersonal adaptation is not only relevant to "soft" care outcomes (e.g. patient satisfaction), but how it can directly contribute to a better understanding of the well-being of the patient and – as shown in this case – prevent an adverse event. In other words, the skill of flexibly adapting to the expressed needs and expectations of other involved care participants can greatly contribute to successful communication and thereby directly facilitate positive care outcomes.

Third, this case illustrates the *redundancy principle* as a recurring theme throughout this book. Different in this case, however, is the *negative* implication of redundancy if it is *over*-used, evidencing that redundancy is a two-edged sword: If repetitions are perceived as *too much*, they can severely *constrain* the potential of communication leading to a shared understanding. This case furthermore demonstrates how the negative function of *over-redundancy* on competence perceptions is moderated by hierarchical status differences among care participants. Here, the "lay" mother's redundancy was perceived as *annoying* by the "expert" ED nursing staff who trusted in their own clinical competency rather than the mother's lay judgments of the patient's condition.

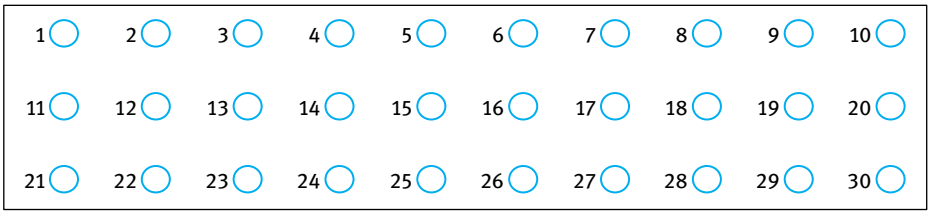
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this harmless hit:

– The ED nursing staff could have recognized that the patient presented to the ED at lunchtime and treated him more promptly to avoid the extensive delays that could cause him to faint.

- The ED nurse could have recognized the value of the mother's communication in facilitating timely pain management and treatment of the patient's fracture.
- The ED nursing staff could have provided pain medication and a snack/water to the patient shortly after the ED team decided that surgery was not required.
- The nursing staff could have taken more time despite the onslaught of new cases in the ED to properly decode the mother's alerting request.
- The ED nursing staff could have adapted their communication with the mother to her needs and expectancies regarding the care of her child – for example, by taking her concerns seriously and responding to (rather than dismissing) her request with verbal and nonverbal attentiveness to convey that they understood and will act upon her concern promptly to decrease the discomfort of her child.
- The ED nursing staff could have been clearer in their communication with the patient's mother about the anticipated timeframe within which the clinician would come to see her child for the cast.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. What were three types of context that influenced the communication and care outcomes in this case?

2. Discuss what environmental factors might have put the nursing staff in this case at risk for making communication errors.

3. Write a "safe communication" script for the interactions between the nurses and the mother at their various points of contact in this case.

4. How can nurses help to ensure that family members are included as active members of the healthcare team?

5. What have you learned from this case? How can you use what you have learned to help other nurses?

Case 21: “A Room without orders”

Team interaction
Medication misuse, Adverse event

Clinical context: Acute inpatient admission (chemotherapy)
Communication context: Interaction between three nurses across shifts
Incident: Communication error leading to patient’s medication misuse
Patient safety outcome: Adverse event

Case reprinted with permission of AHRQ WebM&M. Vogelsmeier A, Despins L. A room without orders [Spotlight]. AHRQ WebM&M [serial online]. January 2016. Available at: https://psnet.ahrq.gov/webmm/case/365.

A 56-year-old man with acute lymphoblastic leukemia and diabetes mellitus was admitted to the hospital for a scheduled cycle of chemotherapy. He had no acute complaints. The patient arrived directly to the medical unit on a busy afternoon and waited in a nearby area for his assigned room.

At shift change, the patient’s room was ready, but the nurse who had initially greeted him on arrival had been replaced by a new nurse who ❶ **escorted the patient** to his room. The nurse completed the usual check-in process later in the evening, but ❷ **did not contact the admitting provider**, making the assumption that this had occurred several hours earlier. Therefore, no admitting orders were written.

The patient spent the night in the hospital and took his own insulin, which he had brought from home. No evening meal was delivered; ❸ **the patient thought** that holding his food was part of his chemo regimen, so he ❹ **did not question this**. Because he was not complaining of any symptoms and took few medications at home, he ❺ **did not prompt** the need for any orders overnight.

The following morning, the new nurse (the third in his care so far) noted that the patient was difficult to arouse. She went to review the existing orders and discovered they were completely absent. She paged the on-call team, who immediately evaluated the patient and successfully treated him for symptomatic hypoglycemia, which had been caused by the patient’s insulin taking effect in the absence of food intake. The case prompted a formal review as, in addition to the preventable episode of hypoglycemia, the initiation of his scheduled chemotherapy was delayed.

Communication science principles

Preconceptions and perceptions vary among communicators; Communication is more than words

The nurses and patient in this case committed five critical communication errors based on their discrepant perceptions and incorrect assumptions about communication constituting a mere transfer of verbal information.

First, the nurse committed a ❶ **transactional communication error of sufficiency** (error of underuse) by missing the opportunity to validate the information exchanged with the previous nurse and with the patient while escorting him to his room. The nurse also committed a ❷ **communication encoding error of sufficiency** (error of omission) by not getting in touch with the admitting provider during the check-in process. She also did not document the patient's belongings and home medication during the initial assessment.

In his role as an active partner for safe and high-quality care, the patient committed a ❸ **communication decoding error of accuracy** (error of misuse) by misinterpreting the fact that his dinner was not delivered as being part of his chemo regimen. The patient also committed a ❹ **transactional communication error of accuracy** (error of omission) by not contacting the nurse to verify that he was in fact not supposed to be getting dinner. The patient committed another ❺ **transactional communication error of accuracy** (error of omission) by not validating with the providers that he was not supposed to be getting any medication overnight.

Discussion

Humans often hold differential preconceptions and perceptions of the same object they have in mind. This case illustrates the importance of establishing a common ground as a foundation for neutralizing such discrepant perspectives, en-route to engaging in accurate communication and reaching a shared understanding.

In this case, the opposite happened: the nurse omitted critical information in her communication with the admitting physician, based on her misperception that this communication had already taken place. As a result, admitting orders were never written. In addition, the nurse omitted critical communication with the patient while she was transferring him to his room. Instead, the nurse held firmly to her initial perception that the necessary communication had already taken place. She did not make an effort to validate this perception.

This case also demonstrates the importance of encouraging a communication culture that engages patients as active partners in their own care. The patient trusted in his perception that "not eating" was supposed to be part of his chemo protocol, and thus misinterpreted and omitted critical communication with the clinical team that could have prevented his hypoglycemic episode. He did not communicate with the

providers because he trusted in his perception that he was doing fine with his home medication. A culture that encourages patients to speak up when they perceive something amiss might have prevented this adverse event.

In summary, both the nurses and the patient in this care episode acted based upon incorrect assumptions. Their failure to communicate with each other resulted from their inaccurate beliefs that (1) communication equals words (i.e. underestimating the power of "missing" verbal communication, evident in a missing dinner, to convey meaning); (2) meaning lies *within* people rather than *between* people (i.e. underestimating the importance of interpersonal communication as an essential process for safe and high-quality care); (3) information passes from one person to the next (i.e. understanding communication as a linear information transfer rather than a complex interactive meaning-making process); and (4) others will figure out what is in their head (i.e. acting within the common ground fallacy). The care participants could have overcome these perceptual gaps and prevented an adverse event through direct and sufficient transactional communication.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The care participants (particularly the nurses) could not have assumed that communication had already taken place.
- The nurse could have checked-in the patient and his belongings (insulin) during the initial assessment.
- The nurse could have spoken in more detail with the nurse on the previous shift to understand what had already taken place during this care episode.
- The nurse could have communicated with the admitting physician during the check-in process.
- The patient could have contacted the nurse regarding his missing dinner and medications to validate his perception that they had not been delivered on purpose.

Communication lessons for safer, higher quality care

1 ◯	2 ◯	3 ◯	4 ◯	5 ◯	6 ◯	7 ◯	8 ◯	9 ◯	10 ◯
11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
21 ◯	22 ◯	23 ◯	24 ◯	25 ◯	26 ◯	27 ◯	28 ◯	29 ◯	30 ◯

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Discussion questions and exercises

1. Identify two points in this case at which nurses made assumptions that should have been validated before moving forward.

2. The providers taking care of a hospital patient change several times during the day. How can nurses work together around shift changes, handoffs, and other care transitions to ensure successful communication in accordance with the Hannawa SACCIA competencies?

3. Write a set of instructions that could have helped the patient understand what to expect when being admitted to the hospital to receive chemotherapy.

4. How can nurses encourage patients to participate as active members of the health-care team?

Case 22: “Empty handoff”

Inter-professional interaction
Medication misuse, Harmless hit

Clinical context: Acute-on-chronic inpatient admission to general surgery (“brittle diabetes”)
Communication context: Interactions between a nurse, transportation assistant, surgical nurse, and anesthesiologist
Incident: Communication error leading to clinician’s medication misuse
Patient safety outcome: Harmless hit

Case reprinted with permission of AHRQ WebM&M. Goldman A, Catchpole K. Empty handoff. AHRQ WebM&M [serial online]. September 2012. Available at: https://psnet.ahrq.gov/webmm/case/279.

A 29-year-old man with “brittle diabetes” was admitted to the surgery service for incision and drainage of a leg wound. The patient’s medical history included chronic renal failure, hypertension, and prior stroke after a hypoglycemia event. Prior to surgery, while still on the hospital floor, the patient’s blood glucose level fell precipitously after receiving insulin, requiring glucose several times. For reasons of workload, the nurse did not accompany the patient during transport to the operating room (OR). ❶ **Instead, the nurse informed the transportation assistant** about the patient’s extreme sensitivity to insulin.

❷ **The transportation assistant neglected to pass this information on** to the surgical nurse or the anesthesiologist in OR. The EHR did not reflect the glucose levels because the bedside glucose-monitoring device was not docked, so ❸ **the information did not upload to the EHR** for physician or nurse review.

The patient spent 90 minutes in surgery and went to the recovery room where the blood sugar level was found to be 15 mg/dL, confirmed on repeat testing. Fortunately, the patient recovered quickly once he received intravenous glucose.

Communication science principles

1. Communication is a nonsummative process

The nurse committed a ❶ **communication encoding error of sufficiency** (error of underuse) by merely informing the transportation assistant about the patient’s ex-

treme sensitivity to insulin, but failing to instruct the assistant to pass on that information to the surgical nurse and anesthesiologist in the OR.

2. Redundancy in content and directness in channel enhance accuracy

The nurse committed a ❶ **transactional communication error of sufficiency** (error of omission) by not following up with the surgical nurse and anesthesiologist in the OR to verify their receipt of this important message and their understanding of its implications.

The anesthesiologist and the nurse committed a ❸ **transactional communication error of sufficiency** (error of omission) by relying on the electronic health record (EHR) but failing to verify the completeness of the patient's EHR with the floor clinicians or nursing staff.

3. Communication is contextual

The transportation assistant committed a ❷ **communication decoding error of contextualization** (error of underuse) by decoding the nurse's request to pass on the information about the patient's insulin intolerance insufficiently in the context of the patient's impending surgery (*functional* context).

The transportation assistant committed a ❷ **communication encoding error of contextualization** (error of underuse) by not including the nurse's information about the patient's insulin intolerance when handing off the patient to the surgical nurse and anesthesiologist in the context of the patient's imminent surgery (*functional* context).

Discussion

This case demonstrates how a simple piece of information that passes through a mediator to another care provider can easily get lost in transition and, as a result, create risk for harm. In other words, the case illustrates how communication involves more than a mere transfer of information. Three principles of human communication convey the safety lessons that can be learned from this relatively harmless hit.

The first lesson regards the nurse's assumption that the transportation assistant will deliver her message to the surgical nurse or anesthesiologist, without her needing to explicitly tell the transportation assistant to do so. The nurse also assumed that her communication would arrive at its intended "destination," that the receivers would fully understand and interpret her message as intended, and that they would perform the indicated clinical adjustments for the impending surgical procedure. In other words, the nurse assumed – by mere encoding – that a mutual understanding would be established with the transportation assistant, and that the OR clinicians would figure out what to do with that information in practical terms. The nurse did *not* un-

derstand communication as a complex interpersonal meaning-making process that is error-prone and thus requires skilled contributions from all involved care participants.

The second lesson from this event regards the principle that "communication is contextual." Clinical communication is nested within a highly complex healthcare setting that involves many people from diverse professional backgrounds who work under intense pressures and time constraints. Substantial information passes through these care providers on a daily basis, making it impossible for them to retain all information. Inevitably, clinicians and staff have to judge which pieces of information to keep in their minds for each healthcare encounter. The transportation assistant, in this case, had to make that decision when the nurse informed him about the patient's severe insulin sensitivity. He did not retain this information as crucially important for the patient's imminent surgery and thus did not convey it in his upcoming conversation with the surgical team.

The third lesson from this case relates to the principle of redundancy and directness enhancing accuracy. The providers in the surgical team relied on the patient's EHR without questioning the records' completeness. From past experience, they could have known that not all information is updated in real time. This assumption constitutes a common safety threat in healthcare, because it rests on the incorrect perception that the digitization of care ensures a *safer* exchange of information. Healthcare systems across the globe are increasingly relying on this myth. Their unquestioned reliance on EHRs as a solution to an endemic lack of information exchange is a problem, however, because it is not the *lack of information* as much as the *lack of shared understanding* that commonly causes patient safety events.

EHRs merely contain information. The digitization of information does not facilitate the establishment of a shared understanding among care participants. In fact, they may often *hinder* rather than *aid* the establishment of shared understanding, as shown in this case, because of added structural challenges (e.g. a layout that facilitates decoding errors) and process elements (e.g. records not always being as up-to-date as the providers' minds). Thus, EHRs may actually provide *added* opportunities for information to fall through the cracks, and as long as communication is seen as lying *within* rather than *between* people, this problem will continue to pose a severe threat to the safety of patient care.

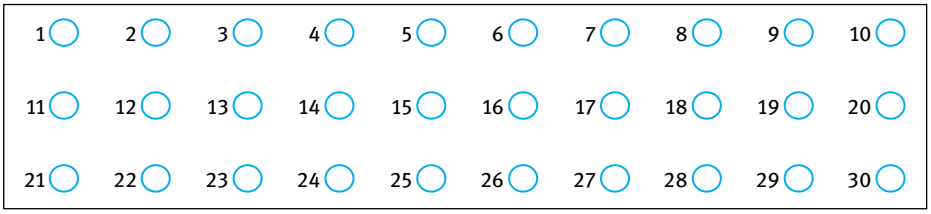
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this harmless hit:

- The nurse could have informed the transportation assistant that the patient's extreme sensitivity to insulin is critical information to pass on to the OR team, given the patient's upcoming surgery.
- The nurse could have explicitly instructed the transportation assistant to pass on that critical information to the colleagues in the OR when handing off the patient.

- The nurse should not have assumed that the surgical nurse and the anesthesiologist had received and understood that information – she could have followed up with them to verify their message receipt and understanding of the implications of the patient's insulin intolerance for his upcoming surgery.
- The anesthesiologist and the nurse should not have relied solely on the EHR – they should have verified the completeness of the patient's EHR with the sending clinicians and/or staff.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. In the context of heavy workload and limited time, what highly reliable systems can healthcare providers adopt to ensure that the patient's relevant health history is understood and acted upon by all clinical staff?

2. With advances in health information technology., how can teams ensure that the EHR serves as a *facilitating* tool, rather than as an ineffective substitute for face-to-face communication?

3. What environmental factors could have put the nurse in this case at risk for communication errors?

4. What could the nurse have done differently to ensure a safe care episode?

5. What policy or system could be developed to prevent this harmless hit from happening again in the future? How could it be implemented?

6. What have you learned from this case?

Case 23: “A triple handoff”

Cross-professional interaction
Inadequate handoff, Delayed treatment, Harmless hit

Clinical context: Acute-on-chronic inpatient admission to cardiac surgery (pacemaker)
Communication context: Interactions between a cardiologist, cardiothoracic surgeon, nurses, on-call intern, night float resident, and radiologist
Incident: Communication error leading to inadequate handoff and delayed treatment
Patient safety outcome: Harmless hit

Case reprinted with permission of AHRQ WebM&M. Vidyarthi A. Triple handoff [Spotlight]. AHRQ WebM&M [serial online]. September 2006. Available at: https://psnet.ahrq.gov/webmm/case/134.

An 83-year-old man with a history of chronic obstructive pulmonary disease (COPD), gastroesophageal reflux disease (GERD), and paroxysmal atrial fibrillation with sick sinus syndrome was admitted to the cardiology service of a teaching hospital for initiation of dofetilide (an antiarrhythmic medication) and placement of a permanent pacemaker.

The patient underwent the pacemaker placement via the left subclavian vein at 2:30 PM. A routine postoperative single view radiograph was taken and showed no pneumothorax. The patient was sent to the recovery unit for overnight monitoring.

At 5:00 PM, the patient stated that he was short of breath and requested his COPD inhaler. He also complained of new left-sided back pain. The nurse found that his pulse oxygenation had dropped from 95% to 88%. Supplemental oxygen was started and the nurse asked the covering physician to see the patient.

The patient was on the nurse practitioner (NP) nonhouse staff service. However, the on-call intern provides coverage for patients after the NPs leave for the day. The intern, who ❶ **had never met the patient** before, examined him and found him already feeling better and with improved oxygenation with the supplemental oxygen. The nurse suggested a STAT X-ray be done in light of the recent surgery. The intern concurred, and the portable X-ray was done within 30 minutes. About an hour later, the nurse wondered about the X-ray and asked the covering intern if he had seen it. The covering intern stated that he was ❷ **signing out the X-ray to the night float resident**, who was coming on duty at 8:00 PM.

Meanwhile, the patient continued to feel well except for mild back pain. The nurse gave the patient acetaminophen as prescribed and continued to monitor his heart rate and respirations.

At 10:00 PM, the nurse still had not heard anything about the X-ray, so he met with the night float resident. The night float resident had been busy with an emergency but ❸ **promised to look at the X-ray** and advise the nurse if there was any problem.

Finally, at midnight, the nurse signed out to night shift, ❹ **mentioning the patient's symptoms** and noting that the night float had not called with any bad news.

The next morning, the radiologist read the X-ray and notified the NP that it showed a large left pneumothorax. Cardiothoracic surgery service was consulted and a chest tube was placed at 2:30 PM, nearly 23 hours after the X-ray was performed. Luckily, the patient suffered no long-lasting harm from the delay.

The team subsequently learned that the night float resident had mistakenly examined the radiograph done immediately postoperatively rather than the chest X-ray done at 4:00 PM, and therefore did not see the film with the large pneumothorax.

Communication science principles

1. Communication is contextual

The intern committed a ❶ **communication decoding error of contextualization** (error of misuse) by assessing that the patient was "feeling better" in disregard of the context that he had never met the patient before (*relational* context). The nurse intervened with his error by contextualizing the intern's assessment in light of the patient's recent surgery and recommending an X-ray (*functional* context).

The nurse and the night shift nurse committed a ❸ **transactional communication error of contextualization** (error of omission) by not communicating with the night float resident to make sure that he had viewed the X-ray, given his busy night shift (i.e. an emergency case, *environmental* context), the impending implications of a potentially negative result for the patient's health (*chronological* context), and the fact that there were two chest X-rays of the patient taken on the same day (*functional* context).

2. Communication is a nonsummative process

The intern committed a ❷ **transactional communication error of sufficiency** (error of underuse) by not engaging in enough communication with the incoming night float resident to ensure that he had fully understood the patient's recent course, including the fact that both the chest X-ray and the second STAT X-ray had been taken only a few hours apart, with the latter still needing to be read.

The nurse committed a ❹ **communication encoding error of sufficiency** (error of underuse) by merely noting to the night shift nurse that the night float resident had

not called with "any bad news," leaving the night shift nurse uninformed about other important information, such as the fact that there had been two X-rays taken, what the anticipated bad news might be, and that there might be a need to follow-up again with the night float resident.

3. Redundancy in content and richness in channel enhance accuracy

Both the nurse and the night float nurse committed a ❸ **transactional communication error of accuracy** (error of omission) by not following up with the night float resident to make sure that he had viewed the correct X-ray.

Discussion

This case illustrates the challenge of conducting *sufficient* communication in the context of a healthcare episode that is complicated by time pressures and inter-professional hierarchies among participants who bring varying perspectives to the patient's care. However, sufficiency is a foundation for successful communication. Therefore, it is crucial that clinicians and staff find a way to establish sufficient communicative exchange with their colleagues, despite and *because* of the challenging contextual layers that frame their interactions.

In this case, the day nurse and the night shift nurse faced the challenge of having to engage in sufficient communication with each other and with the night float resident to optimize accuracy through redundant communication. Given the status differential between the nurses and the resident, however, repeated interactions may have caused interpersonal conflict, because the resident may have perceived the nurses' message redundancy as inappropriate – regardless of the fact that it would have facilitated the objective of the resident viewing and assessing the correct chest image in a timely manner.

This example illustrates how the "redundancy enhances accuracy" principle of communication becomes a challenge when hierarchical status differentials are involved. People run the risk of patronizing others if they *overuse* redundancy. Paradoxically, the solution to this contextual barrier lies in the contextualization itself: Care participants can *use* the exact contextual layers that *constrain* a healthcare interaction – in this case, the *relational* context of the hierarchical communication, the *functional* context of the two X-rays taken on the same afternoon, the *chronological* context of the pressing timeliness, and the *environmental* context of the resident's busy schedule due to a parallel emergency case – as **framing tools** to facilitate the co-creation of a shared understanding. In other words, it is *through* the contextual framing of their messages that the nurses could have established a shared understanding with the resident in this case without triggering interpersonal conflict.

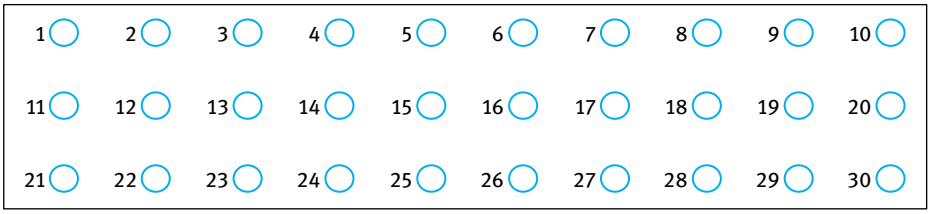
In summary, this case conveys the lesson that any contextual layer that threatens to compromise the effectiveness and appropriateness of a given interaction can be used to *facilitate* the establishment of a shared understanding during that interaction. In other words, the *context* within which an interaction is framed both constrains and facilitates communication – on the one hand, by challenging the establishment of a shared understanding, but on the other hand, by providing explicit contextual framing tools that can be used by participants to *overcome* these same constraints. So it is the *use* of context as a framing tool that *dissolves* the constraining function of context, and facilitates a shared understanding.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this harmless hit:

- The intern could have evaluated the patient's well-being in light of the limiting fact that he had never seen the patient before.
- The nurse and the night shift nurse could have followed up with the night float resident anticipating that, given the busy night schedule, he may have forgotten to look at the X-ray or examined the wrong one.
- The night shift nurse could have framed this additional follow-up with the night float resident within the context of her being new on the shift, the fact that two chest images were taken on the same day, and the need to make sure that the resident views the correct one.
- The intern and the nurse could have communicated *more* with the incoming night shift resident and nurse to establish a common ground and shared understanding of the care episode.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. What factors contributed to the reviewing of the incorrect X-ray in this case? What changes could be made to prevent this error from reoccurring in the future?

2. Reflect on this case and identify points where the nurses could have ensured message receipt and a shared understanding. For each point, describe one action that could have helped to accomplish this goal.

3. Write a new script in which one of the nurses validates the accuracy of the communicated content.

4. What have you learned from this case? How can you use what you learned from this case to help other members of the healthcare team?

Case 24: "A blind eye"

Inter-institutional interaction
Inadequate handoff, Sentinel event

Clinical context: Acute inpatient admission for functional evaluation (blind patient with chronic conditions)
Communication context: Inadequate inter-institutional handoff communication
Incident: Communication errors leading to preventable patient death
Patient safety outcome: Sentinel event

Case written by Barbara Wojnowski, B.S., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 52-year-old male patient with significant visual impairment arrives on a Saturday afternoon as a direct admission from his out-of-state long-term residential care facility at the Skilled Care Facility for Education of the Blind. The nursing staff is notified to expect his admission, but ❶ **the transferring nursing staff member does not provide any clinical information** regarding the patient's condition such as his elevated potassium and blood glucose levels. The patient arrives with ❶ **no admission papers or any information other than a phone report** in which the transferring nurse reported that the patient is being "admitted for patient teaching of life skills, self-care, and management of insulin-dependent diabetes mellitus (IDDM, type 1)."

During admission, the patient appears tired from the stress of travel and admits that he has been unable to adhere to his diet and medication plan and has overindulged in all the "forbidden" foods he should not eat. ❷ **The nurse does not pay attention** to the patient's "confession" and its clinical implications. She follows standard admission orders for routine labs and vital signs. Specimens for lab values are collected on Sunday morning. A physician is scheduled to see the patient on Monday to perform a history and physical, to review the labs and vital signs, and to write orders.

The patient's vital signs on Saturday and Sunday are slightly elevated with a blood pressure of 150/90, pulse of 90, and respirations of 20. The patient does not report any new symptoms or concerns. The patient's labs drawn on Sunday reveal a potassium of 5.4 MEq/ml (above normal and at a critical level) and a blood glucose of 306 mg/dl (above the normal range but not critical). The remaining laboratory values are within normal limits. ❸ **The hospital laboratory technician does not call to alert** the nursing staff at the Skilled Care Facility that the potassium level is elevated to a critical value, and paper copies of the lab results are not available on a Sunday. Routine labs

are drawn again on Monday morning just before the admitting physician conducts a history and physical.

On Monday morning, the physician sees the patient. ❹ **The physician does not check the patient's records** for lab results, assuming that the Monday morning labs are not ready yet and that the paper copies of the Sunday labs have not yet been delivered to the facility (there is no electronic health record). The EKG performed by the physician does not reveal changes consistent with an electrolyte imbalance.

Within 20 minutes of leaving the physician's office, the patient experiences a cardiac arrest. Efforts to resuscitate the patient fail and the patient dies. An investigation into the event reveals that on Monday morning, the patient's potassium was 5.7 MEq/ml and blood glucose was 397 mg/dl, both at critical levels.

Communication science principles

1. Redundancy in content and directness in channel enhance accuracy

The transferring nurse committed a ❶ **communication encoding error of sufficiency** (error of underuse) by providing insufficient clinical information about the patient during the inter-institutional handoff.

The transferring nurse and the nursing staff at the receiving facility committed a ❶ **transactional communication error of sufficiency** (error of omission) by failing to follow up via direct communication to establish a shared understanding of the patient's health condition.

The physician committed a ❹ **transactional communication error of sufficiency** (error of omission) by failing to activate direct communication with the nurse and the laboratory technician to establish a shared understanding of the patient's health condition.

2. Communication is contextual

The nurse at the Skilled Care Facility committed a ❷ **communication decoding error of contextualization** (error of underuse) by not sufficiently decoding the patient's tired appearance (resulting from the stress of travel) and his confession that he has been noncompliant with his diet and medications as clinically relevant information (*functional* context) that require immediate lab tests that could not wait until Monday morning (*chronological* context).

The hospital laboratory technician committed a ❸ **communication encoding error of contextualization** (error of omission) by not calling the nursing staff at the Skilled Blind Facility to alert them about the patient's critical potassium level, given that paper copies of lab results are not available on Sundays.

The physician committed a ❹ **communication decoding error of contextualization** (error of overuse) by failing to check the patient's health records for lab results, assuming that they are not yet available (*chronological* context).

Discussion

This case evidences that communication in healthcare is not merely a "soft skill," but that it constitutes the vehicle for safer patient care. Numerous communication deficiencies caused the patient's death in this case. Initially, the transferring nurse did not convey sufficient information about the patient's clinical condition (particularly his elevated blood glucose and potassium levels) to the receiving nurse. The receiving nurse did not activate any direct communication with the transferring nurse to fill in the missing information. She also decoded the patient's confession that he had been noncompliant with his diet and medications insufficiently as an indication that his behavior, along with the patient's incurred stress from traveling (his tired appearance), could have caused his blood glucose and potassium to rise to critical levels – which, in the end, caused his cardiac arrest. More and better communication among all involved care participants would have been the only pathway to preventing the patient's death. The care participants could have jointly established, rather than assumed, a shared understanding of the patient's condition through direct communication. They should have engaged such communication with each other as a validation process to optimize the accuracy of the care provision. For example, the transferring nurse could have sent admission papers along with the patient as a complementary communication pathway (written) to her verbal report. The physician could have engaged in direct communication with the nursing staff and the laboratory technician to establish a shared understanding of the patient's health condition and lab values, rather than passively waiting for (much slower) written reports. Direct (rather than written) communication and more communication pathways would have facilitated timelier and more accurate care – it would have been the more efficient route to establishing a shared understanding which, in the end, could have prevented the patient's death.

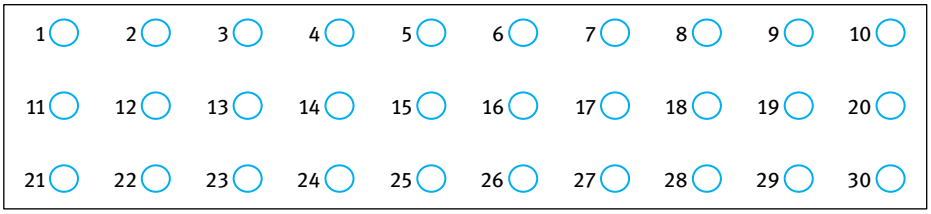
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this sentinel event:

– The transferring nurse could have conveyed sufficient clinical information about the patient during handoff, and sent complete admission papers along with the patient. Such communication could have facilitated a timelier and more accurate care provision for the patient.

- The transferring nurse and the nursing staff could have followed up with each other to establish a shared understanding of the patient’s health condition through direct communication with each other.
- The nurse at the Skilled Care Facility could have decoded the patient’s tired appearance and his confession that he had been noncompliant with his diet and medications as clinically relevant information that require urgent lab tests and immediate follow-up.
- The hospital laboratory technician could have directly contacted the nursing staff at the Skilled Blind Facility to alert them about the patient’s critical potassium level.
- The physician could have checked the patient’s health records for lab results, regardless of his perception that they may not yet be available.
- The physician could have engaged in direct communication with the nurse and the laboratory technician to establish an immediate shared understanding of the patient’s health condition and lab results, instead of waiting for (much slower) written reports.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. What concerns you about this case?

2. What institutional characteristics and policies might have increased the risk for the communication errors in this case?

3. What policies could be implemented to prevent the communication errors that contributed to the patient's death?

4. Is there anything that the nurse could have done differently to increase the safety and quality of care in this case?

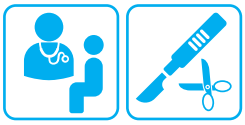
5. What positive action(s) did the nurse take on behalf of the patient?

6. Perform a root cause analysis of this sentinel event.

Stage 5: Implementation

Implementation is the stage of nursing practice that involves the application of the care plan in attempted remediation of a patient's health condition, prevention of illness and/or maintenance of health. Implementation can proceed as planned or not-as-planned. Barriers to successful implementation can be located at multiple levels of the healthcare system, including but not restricted to failures of actions by patients/families/caregivers, clinicians, and institutions.

https://doi.org/10.1515/9783110454857-011



Case 25: "Hip horror"

Provider-patient interaction
Wrong-site surgery, Sentinel event

Clinical context: Acute inpatient admission for orthopedic surgery (hip replacement)
Communication context: Interaction between two physicians, a nurse, and a patient
Incident: Communication error leading to wrong-site surgery (treatment misuse)
Patient safety outcome: Sentinel event

Case written by Annegret F. Hannawa, Ph.D. and Sandra W. Hwang, M.S.P.H. and Anne Wendt Ph.D., M.S.N., R.N.

An 82-year-old female is being cared for by a primary care physician for chronic osteoarthritis and pain in her hip. She is referred to an orthopedic surgeon who recommends replacement of her right hip. The patient is admitted to a large regional hospital by the orthopedic surgeon for right hip replacement. The admitting nurse performs an initial assessment and prepares the patient for surgery, which includes gowning and labeling her belongings.

In the middle of the admission process, the nurse is called to assist another patient, and does not complete the preoperative preparation. ❶ **The nurse has not yet marked the right hip to be replaced**. ❷ **A float nurse completes the preoperative checks**, but ❸ **does not ask the patient which hip is being replaced today, assuming** that the previous nurse has already asked the patient that question.

Under the pressure of a heavy workload that day and upset by an earlier case, the attending anesthesiologist and anesthesia resident seeing the patient for the first time enter the room quickly and take a brief skim of her X-rays to confirm the joint disease. The two physicians ❹ **do not greet the patient** and ❺ **briefly discuss the procedures**, ❻ **talking to each other more so than with the patient**. The anesthesiologist ❼ **refers to the patient as "the patient"** as he ❽ **begins preparing her left hip for surgery**.

When she is transferred to the operating room (OR) table, the OR nurses explain how they will position her onto her right side with her left hip exposed for the surgeon to prepare. Confused, the patient hesitates to question aloud why her left hip will be prepared. Considering that she has no clinical background and both hips are causing her pain, she rationalizes that it could be standard procedure. She attributes her concerns to her overall anxiety about the procedure and ❾ **elects to remain silent**.

The patient is put under general anesthesia supplemented by epidural, and the resident surgeon prepares and drapes the left hip. The attending surgeon enters the room shortly after this and ⑩ **assumes** that the clinicians (i.e. nurses and residents) followed standard protocol to identify the correct hip to be replaced.

The hip replacement surgery is uneventful. When the patient comes out of anesthesia, she is horrified to learn that hip replacement surgery had been completed on the wrong hip.

Communication science principles

1. Communication is a nonsummative process

The admitting nurse committed a ❶ **communication encoding error of sufficiency** (error of omission) by failing to inform the float nurse, before leaving, that the patient's right hip was going to be replaced and that the right hip still needs to be marked for surgery.

The float nurse committed a ❸ **communication decoding error of sufficiency** (error of underuse) by failing to actively access and retrieve sufficient information to complete the admission work, such as engaging the patient as an active care participant by clarifying directly with the patient which hip was scheduled to be replaced that day.

The admitting nurse and the float nurses committed a ❷ **transactional communication error of sufficiency** (error of underuse) by not engaging in enough communication with each other to establish a shared understanding of the required components of the admission work that had and had *not yet* been completed.

2. Communication is contextual

The float nurse committed a ❸ **communication decoding error of contextualization** (error of overuse) by assuming, but not verifying, that the admitting nurse had already asked the patient which hip was going to be replaced that day (*functional* context; i.e. assuming that goal alignment had already been established with the patient by the admitting nurse).

3. Communication entails factual and relational information

The surgeon committed a ❹ **communication encoding error of interpersonal adaptation** (error of underuse) by adapting the way he greeted the patient insufficiently to the patient's needs and expectations.

The attending anesthesiologist committed a ❼ **communication encoding error of interpersonal adaptation** (error of misuse) by inappropriately referring to the patient as "the patient" in his conversation with the resident.

4. Redundancy in content and directness in channel enhance accuracy

The nurses, resident, and anesthesiologist committed a ❺ **transactional communication error of sufficiency** (error of underuse) by engaging in insufficient communication to establish a shared understanding of the impending surgical procedure.

The clinicians (nurses, residents, and anesthesiologist) committed a ❺❽ **transactional communication error of accuracy** (error of underuse) by engaging in insufficient communication to validate the accuracy of the planned surgical procedure with one another and the patient.

The patient committed a ❾ **communication encoding error of sufficiency** (error of omission) by remaining quiet instead of expressing her concern about the wrong hip getting prepared for surgery.

The orthopedic surgeon committed a ❿ **transactional communication error of sufficiency** (error of omission) by engaging in insufficient communication with his colleagues and the patient about the surgical procedure.

The orthopedic surgeon committed a ❿ **transactional communication error of accuracy** (error of omission) by not validating the accuracy of the planned surgical procedure with his colleagues and the patient.

Discussion

In this case, the admitting and float nurses' insufficient communication with each other and with the surgical team laid the groundwork for a sentinel event. The admitting nurse could have conveyed more sufficient information to the float nurse who took over the admission procedures. They did not utilize their communication with each other to establish a sufficient shared understanding that prioritizes the safety of the patient. The admitting nurse may have *assumed* that the float nurse will figure out the missing parts. The float nurse *assumed* that the admitting nurse had already performed the required tasks. But the validity of their assumed understandings was never confirmed by direct communication. This issue demonstrates the **common ground fallacy** (i.e. people tending to assume that others know what they intend to convey) and the communication principle "Communication is a nonsummative process": Interpersonal communication is greater than the sum of its parts. A shared understanding does not occur within people. It must be actively co-established *between* care participants through the use of sufficient and high-quality communication – in this case, also with the involvement of the patient. This shows the importance of engaging patients as active partners for safe and high-quality care. In this care episode, the patient could have been brought in as an important resource to validate the accuracy of the planned surgical procedure, which would have likely prevented the wrong-site surgery.

This case also demonstrates how *appropriateness* can be an important element of safety-promoting communication. Appropriate communication not only contributes

to patient satisfaction. As illustrated in this case, it can also trigger preventable patient harm. The clinicians' inappropriate behavior in front of (and implicitly toward) the patient discouraged the patient from speaking up to prevent a severe patient safety event. The trigger was not only *what* the clinicians said, but *how* they said it – their nonverbal communication generated an unsafe environment for the patient to raise her concerns. In other words, it disabled rather than enabled patient engagement for safe and high-quality care.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this sentinel event:

- The admitting nurse could have informed the float nurse, before leaving, that the patient's right hip was going to be replaced and that the right hip still needs to be marked for surgery.
- The float nurse could have actively accessed and retrieved sufficient information to complete the admission work properly, such as engaging the patient as an active care participant by clarifying directly with the patient which hip was scheduled to be replaced that day.
- The admitting nurse and the float nurses could have engaged in sufficient communication with each other to establish a shared understanding of the required components of the admission work that had and had *not yet* been completed.
- The float nurse could have verified, rather than assumed, whether the admitting nurse had already asked the patient which hip was going to be replaced that day.
- The clinicians could have greeted the patient more appropriately to establish a trusting communication environment in which the patient would have felt safe to speak up.
- The clinicians could have involved the patient as an active care participant rather than talking about her as the "subject" of the care episode.
- The clinicians (nurses, residents, and anesthesiologist) could have communicated with one another and with the patient to jointly establish a shared understanding of the surgical procedure.
- The patient could have used the relational context of the encounter as a *facilitator* rather than a constraint to expressing her concern about the wrong hip getting prepared for surgery.

Communication lessons for safer, higher quality care

1 ◯	2 ◯	3 ◯	4 ◯	5 ◯	6 ◯	7 ◯	8 ◯	9 ◯	10 ◯
11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
21 ◯	22 ◯	23 ◯	24 ◯	25 ◯	26 ◯	27 ◯	28 ◯	29 ◯	30 ◯

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Discussion questions and exercises

1. What methods could providers use in a case like this to engage patients and encourage them to be active partners for safe and high-quality care?

2. What highly reliable systems can hospitals employ to reduce communication errors that contribute to wrong-site surgery?

3. Write a script for a new interaction between the patient, the float nurse, and the attending anesthesiologist and resident. Focus on establishing a safe space that encourages the patient to speak up about the wrong hip being prepared for surgery.

4. Perform a root cause analysis of this sentinel event.

Case 26: "Mismanagement of delirium"

Provider-family interaction
Delayed revised diagnosis, Adverse event

Clinical context: Acute inpatient admission to a geriatric-psychiatry ward (delirium, agitation)
Communication context: Interaction between geriatric-psychiatry ward clinicians and the patient's family
Incident: Communication error leading to delayed revised diagnosis
Patient safety outcome: Adverse event

Case reprinted with permission of AHRQ WebM&M. Merrilees J, Lee K. Mismanagement of delirium. AHRQ WebM&M [serial online]. May 2016. Available at: https://psnet.ahrq.gov/webmm/case/375.

An 85-year-old man with early stage vascular dementia fell on the sidewalk and fractured his leg. Although fitted with a cast at a regional hospital, the patient was not able to walk independently. He was given crutches and instructions for no weight bearing on the injured leg. He was admitted to a skilled nursing facility (SNF) for physical therapy to establish mobility and for assistance with bathing and dressing. His wife stayed with him most of the time during the first 2 days.

Prior to this event, the patient lived at home and was independent in activities of daily living. He used distance and reading glasses, eye drops three times daily, and had hearing aids. Over the previous year, he experienced nondisturbing visual hallucinations (e.g. bird in the tree, squirrel on the lawn, and bug on the floor). He had disturbed nighttime sleep and occasionally got up at night, showered, and dressed, before asking his wife the time. He experienced frequent daytime sleepiness with varying levels of concentration. He had a shuffling and sometimes propulsive gait, and he fell easily.

On day 3 in the SNF, prior to arrival of his wife, the patient became delirious and agitated. He waved his crutch to keep staff at a distance, threatened to kill them if they approached, and knocked over furniture. The sheriff was called.

The patient was taken to the hospital ED. The patient spent his first night in the ED hallway with his wife and daughter alternately by his side. On day 2 of hospitalization, he was transferred to a hospital room and was visited by a psychiatrist. That night, the patient became delirious and threw a cup of water at a sitter.

On day 3, the patient was lucid and explained he thought he had been captured and was trying to escape. He expressed remorse. The psychiatrist ❶ **recommended transfer** to the geriatric-psychiatry ward for better patient management, and the pa-

tient's wife ❷ **accepted the recommendation without understanding the implications**. At the time of the transfer, the patient had been immobile for 3 days, and he had constipation, mild dehydration, and pain.

Over the next 2 days, the wife and daughter became concerned about their loved one's care and ❸ **requested alternate ward placement** that allowed a 24-hour family caregiver at the bedside. They further ❹ **requested that the staff address the patient's mobility needs** and work to eliminate some of the delirium triggers. The psychiatric intern was called and ❺ **explained to the patient's family** that the patient had been involuntarily admitted, and no change in placement or treatment would be considered. The intern further explained that ❻ **the primary medical concern** was the patient's behavior, not his mobility. The family ❼ **requested to see the intern's supervisor**, who spoke to the family by telephone and ❽ **confirmed the intern's statement**. The family then ❼ **called the patient's primary care physician**, who ❽ **deferred to the specialists** on the overall plan, but requested that the patient's daughter be allowed to stay with the patient overnight. The ❽ **ward nurse refused the request** and the ❽ **wife and daughter were escorted** from the locked ward at 9:30 PM.

The patient continued to experience nighttime agitation and was aggressive toward staff during nights 3–5, which led to the use of restraints. Ward staff extended the daytime visiting hours for the family, 8 AM-10 PM, but continued to ❽ **refuse the family's requests** to stay at night to provide comfort and reassurance.

Medical students rounded on days 5 and 6 and administered mini-mental status exams, but no in-depth medical history or dementia evaluation was administered. The patient continued to have constipation, mild dehydration, increased leg pain, and ingrown toenail pain. Risperidone was administered to control agitation and hallucinations on day 5. On day 6, the patient became aphasic, exhibited slurred speech, moaned with discomfort, occasionally cried "spinning," and exhibited breakdown on the skin of his heels and buttocks.

On day 8, the patient's wife called the hospital legal department to file a complaint. At that point, the hospital allowed the patient's daughter to spend the night. The patient continued to act out dreams, but having a family caregiver at the bedside prevented escalation to aggression.

The patient was released back to the SNF on day 9, with a revised diagnosis of Lewy body dementia. The risperidone was discontinued several months later by a new geriatrician in the SNF. Since the precipitating incident, the patient has lost 40 lbs. He now has limited speech, limited mobility, and tardive dyskinesia, and he is dependent for all activities of daily living.

Communication science principles

1. Communication includes factual and relational information

The psychiatric intern committed a ❺ **communication encoding error of interpersonal adaptation** (error of underuse) by insufficiently adapting his explanation that the patient had been involuntarily admitted and no ward change would be considered for the ad-hoc needs of the patient's wife and daughter, e.g. to accommodate their emotional involvement and expectancies regarding the patient's care.

The intern's supervisor, the primary care physician, and the ward nurse committed a ❽ **communication encoding error of interpersonal adaptation** (error of underuse) by insufficiently adapting the way in which they responded to the family's request in relation to their ad-hoc needs and expectations.

2. Communication is contextual

The psychiatrist committed a ❶ **communication encoding error of contextualization** (error of underuse) by framing his recommendation to transfer the patient to the geriatric-psychiatry ward "for better patient management" insufficiently in the context of the patient's immobility, acute constipation, mild dehydration, and pain (*functional* context).

The psychiatry ward nurses committed a ❹ **communication decoding error of contextualization** (error of underuse) by decoding the family's requests insufficiently in light of their potential to become active *facilitators* of the care episode (*functional* context).

The psychiatry ward nursing staff member committed a ❸ **communication decoding error of contextualization** (error of underuse) by framing his interpretation of the patient's wife and daughter's request for alternate ward placement insufficiently within the context of their close relationship with the patient (*relational* context).

The psychiatry intern committed a ❻ **communication encoding error of contextualization** (error of underuse) by framing his explanation that the primary concern was the patient's behavior (not his mobility) insufficiently within the context of the wife and daughter's relational closeness to the patient (*relational* context) and the potential facilitating function of their knowledge of the patient (*functional* context) for a safer, higher quality care episode.

The intern's supervisor, the primary care physician, and the ward nurse committed a ❼ **communication decoding error of contextualization** (error of underuse) by decoding the family's request insufficiently within the context of them being close to the patient (*relational* context) and disregarding the potentially facilitating function of them knowing the patient well (*functional* context).

3. Preconceptions and perceptions vary among communicators

The psychiatrist and the patient's wife committed a ❷ **transactional communication error of sufficiency** (error of underuse) by establishing an insufficient shared

understanding of the implications of the patient's transfer to the geriatric-psychiatry ward.

Discussion

This case exemplifies how a chain of communication errors can contribute to preventable patient harm. Two lessons can be learned from applying the principles of human communication to this case.

First, the case illustrates the importance of communication as a *contextually embedded* interpersonal meaning-making process. All care providers in this episode failed to recognize the *functional* context within which their communication with the patient's wife and daughter took place. They did not recognize that the family's knowledge of the patient and their relational closeness could be a potential *facilitating resource* for a safer and higher quality care episode. For example, the wife and the daughter were able to prevent escalation to aggression, provide comfort and reassurance, and validate the clinician's assessments of the patient's condition in comparison to what behavior has been "normal" in the patient's everyday life outside of the ward.

Second, the nurses and physicians in this case understood communication as a mere message transfer. They disregarded the fact that interpersonal communication conveys both informational and relational meaning. For example, rejecting the family's requests without adapting that communication to the needs of the family, escorting them from the locked ward, and disregarding their concerns conveyed important relational messages that upset the family and caused them to contact the hospital's legal department to file a complaint. It was not the informational content of *what* they were saying, as much as *the way in which* they disregarded the family members that triggered the complaint.

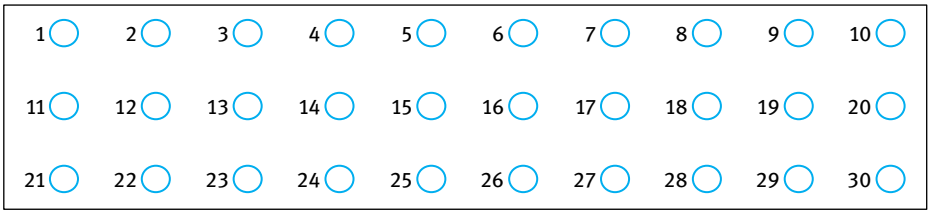
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The psychiatrist and the patient's wife could have fully discussed and established a shared understanding of the implications of the patient's transfer to the geriatric-psychiatry ward.
- The psychiatrist could have decoded the patient's behaviors within the context of the patient's physiological symptoms before administering risperidone to control the patient's agitation and hallucinations.
- The nurses and physicians could have interpreted the patient's wife and daughter's requests in the context of their potentially facilitating role as active care participants.

– The nurses and physicians could have adapted their interpersonal communication with the patient's wife and daughter to their ad-hoc needs (e.g. their emotional involvement and expectancies regarding the patient's care), conscious of the fact that their communication conveys both factual and relationship-defining information in relation to the patient's family.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. Caregivers and family members can be valuable participants in a patient's care and, when activated, play a critical role in improving the patient's health outcomes. How can nurses better engage family members and care companions as a valuable resource for safer, higher quality care?

2. Reflect on this case and identify points at which the nurses could have engaged the patient's wife and daughter as active members of the healthcare team. For each point, describe one action that could have helped to accomplish this goal.

3. In this case, are there any policies that could be implemented to provide better quality of care and reduce the risk for communication errors?

4. What have you learned from this case? How can you use what you have learned to educate other nurses?

Case 27: "Raise the bar"

Team interaction
Patient fall, Adverse event

Clinical context: Acute outpatient surgery (lipoma)
Communication context: Interaction between an anesthesiologist and a nurse
Incident: Communication error leading to a preventable patient fall
Patient safety outcome: Adverse event

Case reprinted with permission of AHRQ WebM&M. Stotts J, Lyndon A. Raise the bar. AHRQ WebM&M [serial online]. May 2014. Available at: https://psnet.ahrq.gov/webmm/case/324

A 57-year-old man presented to an ambulatory surgery center for excision of a right groin lipoma. The patient was seen and evaluated by an anesthesiologist who was new to the center. After discussing anesthetic options with the patient, the ❶ **physician proceeded** with regional anesthesia and performed a right iliac block in the preoperative holding area. The patient was then taken to the operating room (OR), where he awaited the arrival of the surgeon.

❷ **Without alerting the nurse**, the patient tried to get up to use the restroom, but – because his leg was now numb – fell and hit his head on the ground. After hearing the fall, the nurse came quickly to evaluate and, given complaints of acute neck pain, the patient was transferred to the local emergency room. A heated interaction ensued between the anesthesiologist and nurse around why certain safety measures had not been taken to protect the patient. Ultimately, the patient did not experience any significant injury and he had his lipoma removed the following week.

The quality review committee at the ambulatory surgery center investigated the events. It was noted that the rails of the patient's bed were not raised after the block was placed, largely because the ❶ **nurses were unaware** that the procedure had been performed by the anesthesiologist. Because of this poor communication, the ❸ **nurse assumed** that the block would be placed in the OR (as done by other anesthesiologists on staff).

Communication science principles

1. Communication is a nonsummative process

The anesthesiologist committed two ❶ **communication encoding errors of sufficiency** (errors of omission) by not informing the nurses about the fact that he had performed the block, and by failing to make sure that the patient understood that he would need to call a nurse if he wanted to get up because his leg would be numb. Because of this lack of communication, the patient committed a ❷ **communication encoding error of sufficiency** (error of omission) by not calling the nurse when he needed to get up.

2. Communication is contextual

The anesthesiologist and the nurse committed a ❸ **transactional communication error of contextualization** (error of underuse) by establishing an insufficient shared understanding of the surgical procedure within the context of the anesthesiologist being new to the team (*relational* context) and requiring information about the hospital's standard procedures such as blocks normally being placed in the OR (*cultural* context).

Discussion

This case demonstrates the importance of understanding communication as a vehicle for enculturating clinicians to a new institution. Clinicians need to become accustomed to an institution's unique processes and procedures before they begin their clinical work in that new setting. This training is also important in a *relational* context, because it gives newcomers an opportunity to get to know their new colleagues, build a relational history, and establish a shared understanding with their team, all of which are prerequisites for the provision of safe and high-quality care.

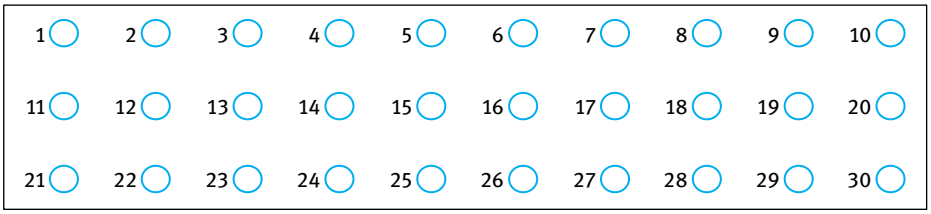
This case also highlights the importance of *sufficient* communication. It demonstrates that it is safer to communicate *some* than *none* – with both colleagues and patients – to make sure that a shared understanding can be attained. The anesthesiologist in this case would have acted more safely if he had informed the nurses about the block. Although he might have perceived such communication as *redundant*, it would have fulfilled a reinforcing safety function. In the same vein, the anesthesiologist would have acted more safely if he had told the patient about the danger of getting out of bed without calling the nurse for help. Such communication sufficiency would have been the only path to preventing the adverse event.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The anesthesiologist and the nurses could have established a shared understanding of the procedures that are routinely performed in the OR (e.g. blocks typically being placed in the OR). The hospital could maintain a list of these procedures to be included in materials used to orient new staff.
- The anesthesiologist could have informed the nurses that he placed the block.
- The anesthesiologist could have informed the patient about him needing to call the nurse for assistance in case he would like to use the bathroom prior to surgery.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. What would you do differently to prevent the communication errors in this case and increase the safety and quality of care?

2. On the basis of results of the quality review committee's investigation, what are two steps that the institution could take to avoid these types of errors recurring in the future?

3. A core tenet of patient safety and quality is *eliminating a blame culture*. Heated interactions such as the one seen in this case may naturally ensue after an error. What policies could the institution adopt to support providers and help them learn postevent?

4. Write a set of preoperative instructions that could have informed the patient what to expect around the experience of surgery and anesthesia.

Case 28: “The results stopped here”

Inter-professional interaction
Medication misuse, Delayed treatment, Adverse event

Clinical context: Acute inpatient admission to a skilled nursing unit (wound care and methicillin-resistant *Staphylococcus aureus* [MRSA] treatment)
Communication context: Interaction between an attending physician, laboratory staff, and nurses
Incident: Communication error leading to incorrect medication and delayed treatment
Patient safety outcome: Adverse event

Case reprinted with permission of AHRQ WebM&M. Astion M. The result stopped here. AHRQ WebM&M [serial online]. June 2004. Available at: https://psnet.ahrq.gov/webmm/case/65

A 91-year-old female was transferred to a hospital-based skilled nursing unit from the acute care hospital for continued wound care and intravenous (IV) antibiotics for MRSA osteomyelitis of the heel. She was on IV vancomycin and began to have frequent, large stools.

The attending physician ordered a test for *Clostridium difficile* on Friday, and was then off for the weekend. That night, the test result came back positive. The lab called infection control, who in turn notified the float nurse caring for the patient. ❶ **The nurse did not notify** the physician on call or the regular nursing staff. Isolation signs were posted on the patient’s door and chart, and the result was noted in the patient’s nursing record. Each nurse who subsequently cared for this patient ❷ **assumed that the physician had been notified**, in a large part because the patient was receiving vancomycin. However, it was IV vancomycin (for the MRSA osteomyelitis), not oral vancomycin, which is required to treat *C. difficile*.

On Monday, the physician who originally ordered the *C. difficile* test returned to assess the patient and found the isolation signs on her door. He asked why he was not notified and why the patient was not being treated. The nurse on duty at that time told him that the patient was on IV vancomycin.

The float nurse, who had received the original notification from infection control, stated that she had ❸ **assumed that the physician would check the results of the test** he had ordered. Because of the ❹ **lack of follow-up**, the patient went 3 days without treatment for *C. difficile*, and continued to have >10 loose stools daily. Given her

advanced age, this degree of gastrointestinal loss undoubtedly played a role in her decline in functional status and extended hospital stay.

Communication science principles

1. Communication is a nonsummative process

The float nurse committed a ❶ **communication encoding error of sufficiency** (error of omission) by not notifying the physician on call and the regular nursing staff about the infection control alert. The nurse also committed a ❸ **transactional communication error of sufficiency** (error of omission) by assuming but not verifying that the physician had checked the results of the test he had ordered.

2. Preconceptions and perceptions vary among communicators

The nurses who subsequently cared for the patient committed a ❷ **communication decoding error of accuracy** (error of misuse) by misinterpreting the fact that the patient was receiving vancomycin as an indication that the physician had been notified. The inaccuracy of their decoding was evident in the fact that the medication was *IV* vancomycin rather than *oral* vancomycin, which would have been required to treat *C. difficile*. However, they failed to recognize this.

The nurses also committed a ❷ **transactional communication error of sufficiency** (error of omission) by assuming but not verifying with the physician and the other nurses that the physician knew about the infection alert.

3. Communication is contextual

The physician committed a ❹ **communication decoding error of contextualization** (error of underuse) by taking too long to follow up with the test results (*chronological* context).

Discussion

This case demonstrates three important communication challenges that contributed to the adverse event:

First, the case illustrates how the common misperception of communication as a linear message transfer that largely "takes care of itself" (e.g. by posting isolation signs or noting it into the patient's record) can cause severe patient harm. In this case, the nurses engaged in insufficient interaction with one another. As a result, they failed to establish a common ground and shared understanding of the patient's infection, which was a safety threat to other patients in the hospital.

Second, the nurses misperceived "information" as resting *within* rather than *between* people. As a result, they did not understand *accuracy* as a *product* that is co-established among care participants by jointly engaging in successful communication.

Third, the physician failed to contextualize his decoding of the laboratory test results as a time-sensitive matter (i.e. chronological context). Instead, he implicitly (instead of explicitly) delegated the responsibility for this task to others, assuming they would act on the lab results if the test was positive.

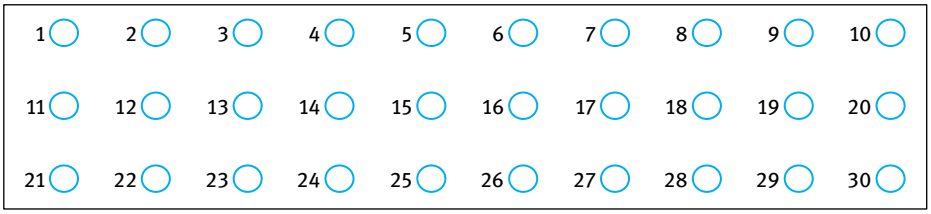
In summary, all clinicians in this case underestimated, underused, and misperceived the role of communication as a necessary interpersonal process for facilitating accuracy and establishing a common ground as a foundation for safe and high-quality patient care.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The float nurse could have been mindful of the tendency for information to "fall through the cracks" (common ground fallacy) and notified both the physician on call and the regular nursing staff about the infection alert.
- The physician could have been mindful of the *chronological* context within which he ordered the lab test and followed up despite the fact that he was off for the weekend, or ensured that the covering physician was aware of the need to look for the result.
- The float nurse could have verified with the physician that he checked and received the test results he had ordered.
- At sign-out, the nurses who subsequently cared for the patient could have debriefed the float nurse and verified whether the physician knew about the alert.

Communication lessons for safer, higher quality care



Select the communication lessons from Chapter 6 that best apply to this case and mark the respective circle(s) in this graph. Explain your choices and discuss how the lessons you selected inform this particular case. Compare your choices with the responses

others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

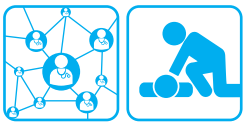
Discussion questions and exercises

1. How does this case relate to the myth that "communication can be accessed, deposited, and delegated" (see Chapter 2)?

2. What changes could be made at the system level to make it easier for providers to communicate more effectively in cases like this?

3. Draw an assumptions flowchart, outlining each interaction in this case and the underlying assumptions that informed each actor's behavior. What could have been done to promote more effective communication?

4. How can you use the "lessons learned" activity in this case to make changes in your institution to prevent a similar event from happening in the future?



Case 29: "No DNR for dad"

Cross-professional interaction
Unindicated treatment, Adverse event

Clinical context: Acute ED admission with subsequent inpatient admission to the intensive care unit (ICU)
Communication context: Interaction between a nurse, physician, chaplain, and patient's family
Incident: Communication errors between professional staff leading to unnecessary/unwanted treatment and inadvertent resuscitation
Patient safety outcome: Adverse event

Case written by Barbara Wojnowski, B.S., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

Late in the evening, three sons rush their 85-year-old father into the Emergency Department (ED) of a large regional hospital where the patient had been treated before. The sons tell the triage nurse that their dad had been feeling bad for a few weeks and more recently reported chest pain, shortness of breath, and "feeling bad" for several days. Just a few minutes ago in the car, the father complained of severe chest pain.

The sons look very distressed and concerned for their father. ❶ **The ED triage nurse interprets the sons' nonverbal appearance and expressed concerns** as indications that all measures should be taken to save their father's life. ❷ **Because of the patient's critical condition, the triage nurse rushes the patient back to the treatment area without checking his health records for advance directives** that are available as paper copies stored in the hospital's medical records department.

The sons continue to be very distressed over what is happening to their father. Therefore, the licensed practical nurse (LPN) working in the ED calls the hospital Chaplain to sit with the family and provide spiritual support. ❸ **The family hands the Chaplain the father's advance directives and asks if these papers are important.** Under their emotional distress, the sons do not realize the importance of that paperwork to their father's treatment.

The patient is now nonresponsive, has no pulse, and is not breathing. The ED staff quickly respond and ❹ **begin resuscitation procedures without confirming with the sons or the medical records department** that there are no advance directives. After successful resuscitation, the patient is intubated and stabilized, awaiting transfer to the Medical Intensive Care Unit (MICU).

As the nursing staff is preparing the patient for transfer to the MICU, ❺ **the Chaplain hands the nurse the patient's advance directive papers**, which include the instruction not to resuscitate in the event of a cardiopulmonary arrest.

The nurse presents the ED physician the patient's advance directive papers. The physician offers no response and the patient is transferred to MICU intubated and on a mechanical ventilator. The patient has to endure substantial pain at the end of his life including a fractured sternum and ribs incurred as a result of chest compressions that could have been prevented if his advance directive had been noted and followed. The patient dies four days later.

Communication science principles

1. Communication is contextual

The ED triage nursing staff committed a ❶ **communication decoding error of contextualization** (error of underuse) by failing to decode the three sons' distress and concern in the context of their relational closeness to their dad (*relational* context). Detached from this context, they decoded the sons' nonverbal appearance and expressed concerns as an indication of needing to rush, help, and use all measures to save their dad.

The ED triage nurse committed a ❷ **communication decoding error of contextualization** (error of omission) by failing to take the time (*chronological* context) to ask the sons and check the patient's health records for advance directives (*functional* context) prior to rushing the patient to the treatment area.

The son who handed the advance directives with the DNR order to the Chaplain committed a ❸ **communication encoding error of contextualization** (error of misuse) by handing the paperwork to the wrong person (*functional* context). The son should also have handed the form to one of the clinicians.

The Chaplain committed a ❺ **communication encoding error of contextualization** (error of underuse) by handing the advance directives with DNR documents to the nursing staff too late (*chronological* context).

2. Redundancy in content and directness in channel enhance accuracy

The ED staff committed a ❹ **transactional communication error of accuracy** (error of omission) by failing to validate with the sons and the medical records department prior to initiating vigorous CPR and rescue procedures that the patient had no advance directives on file.

Discussion

This case demonstrates how powerful nonverbal communication is in influencing care participants' perceptions in the context of a highly emotional care setting. Here, the ED triage nursing staff member naturally perceived the three sons' nonverbal appearance (distress and concern) as an indication that the clinicians need to do everything they can to save their dad's life. The team disregarded the necessity to inquire about the patient's advance directives.

This case also demonstrates the importance of contextualizing communication. The ED triage nursing staff member and physician communicated out-of-context (i.e. in disregard of advance directives) when deciding to initiate resuscitation and intubation in response to the sons' rather than the patient's desires (relational context); the son handed the DNR form to the wrong person (*functional* context), not realizing (under emotional distress) the importance of the paperwork for his dad (*relational* context); and the Chaplain handed that DNR paperwork to the nursing staff too late (*chronological* context). These contextualization errors led to inaccurate treatment (violation of the patient's DNR wishes) and directly caused an adverse event that harmed the patient (preventable fractures and pain at the end of his life).

This case also shows that a shared understanding may never be assumed, but must always be jointly established through sufficient transactional communication. The ED triage nursing staff member and physician did not engage in such important communication with the three sons and the medical records department. They merely relied on the sons' nonverbal expressions and assumed a shared understanding based on their perception of their distressed appearance. They never engaged in any transactional communication to validate the accuracy of their perceived understanding of their nonverbal behavior, and assumed that resuscitation and intubation were the correct procedures for this particular patient.

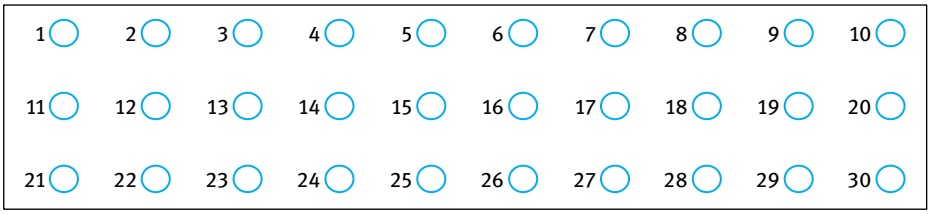
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The sons could have handed the DNR form to the clinical staff, not to the Chaplain.
- The Chaplain could have immediately informed the nursing and medical staff of the patient's advance directives.
- The ED staff could have contextualized the sons' distress and concern as being natural reactions, given that the patient was their dad. Cognizant of this context, they should have detached their decision to resuscitate and intubate the patient from the sons' nonverbally expressed despair.
- The ED nursing staff or ED physician could have accessed and decoded sufficient information from the three sons and from the medical records department to es-

tablish a shared understanding of the patient's advance directives prior to resuscitating and intubating the patient.

Communication lessons for safer, higher quality care



Select the communication lessons from Chapter 6 that best apply to this case and mark the respective circle(s) in this graph. Explain your choices and discuss how the lessons you selected inform this particular case. Compare your choices with the responses others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

Discussion questions and exercises

1. What communication errors were made in this case?

2. What could the nurses have done differently to prevent the adverse event?

3. What environmental factors might have increased the risk for communication errors in this case?

4. How can you use this case to teach other nurses how to prevent communication errors that may cause preventable harm to patients?

Case 30: “Spread the bacteria”

Inter-institutional interaction
Nosocomial infection, Adverse event

Clinical context: Acute inpatient admission with prolonged hospitalization for VRE and transfer to a skilled nursing facility (SNF)
Communication context: Interaction between a physician and a nurse at a regional healthcare center, and nursing staff at a skilled nursing facility (SNF)
Incident: Inadequate handoff communication leading to a nosocomial infection (spread of VRE because of insufficient precautions)
Patient safety outcome: Adverse event

Case written by Barbara Wojnowski, B.S., R.N., Anne Wendt, Ph.D., M.S.N., R.N., and David Hines, M.D.

An 85-year-old female patient is being transferred back to her skilled nursing facility (SNF) after a prolonged stay at the hospital, where she was diagnosed and treated for a vancomycin-resistant bacterial infection (VRE) related to a sacral pressure ulcer. The patient was also treated for a urinary track infection (UTI) and due to her age, illnesses and prolonged hospitalization, she also experienced severe deconditioning, which further prolonged her hospitalization.

❶ **The transferring nurse fails to report** to the receiving SNF nurse that the patient’s wound is colonized with vancomycin-resistant bacteria and will require contact isolation precautions. This information is buried in the patient’s extensive electronic health record.❷ **The transferring physician also does not report** this information. ❸ **The receiving nurse does not review** the patient’s health record completely. Therefore, the receiving nursing staff do not recognize that the patient needs contact isolation precautions.

As a result, ❹ **the patient is readmitted to a semi-private room at the SNF without notice** of the wound bacteria, and without any alert to nursing staff regarding the need for additional infection control precautions. As a result, the treatment nurse does not wear a protective gown when cleaning and dressing the patient’s wound and carries the resistant bacteria on her clothing to multiple other residents of the SNF.

Communication science principles

1. Preconceptions and perceptions vary among communicators

The transferring nurse committed a ❶ **communication encoding error of sufficiency** (error of underuse) by not reporting to the SNF nurse that the patient had a previous VRE infection and thus required special infection control precautions.

The transferring physician committed a ❷ **communication encoding error of sufficiency** (error of underuse) by not reporting to the SNF that the patient had a VRE infection and thus required additional infection control precautions.

The receiving nurse at the SNF committed a ❸ **communication decoding error of sufficiency** (error of underuse) by not reviewing the complete health record of the patient sufficiently to decode the patient's VRE infection and understand the need for additional infection control precautions.

2. Redundancy in content and directness in channel enhance accuracy

The transferring nurse, the transferring physician, and the receiving nurse at the SNF committed a ❹ **transactional communication error of contextualization** (error of underuse) by not utilizing their communication with each other enough to establish a shared understanding of the patient's complete health condition, given the extensive length of the patient's health record (*environmental* context).

Discussion

This case exemplifies how care participants' inability to use their communication with one another to overcome the **common ground fallacy** can severely compromise people's health and well-being – here, not only the safety of the treated patient, but also the safety of many other patients and care providers.

The care participants in this case predominantly relied on their own perceptions. They did not realize that "Preconceptions and perceptions vary among communicators," and that sufficient and adequate communication is the vehicle to bridging their interpersonal perceptual gaps. The care participants failed to engage in sufficient communication with one another to extend their perceptual boundaries and establish a common ground *between* each other, based on which they could have advanced a shared understanding of the patient's complete health condition.

This is not surprising. The nurse and the physician at the transferring healthcare center were very familiar with the patient's history and condition. The patient had spent a long time at their hospital and established an extensive internal health record at their institution – the patient's condition was very familiar to them. Given this context, their transfer communication with the receiving SNF nurse was a perfect example of the **common ground fallacy**: humans naturally assume in their daily interactions that their conversational counterparts are more similar to them than they actually

are, and that others will naturally understand the intentions, thoughts, feelings, and meanings they want to convey. The same thing happened in this case: because the providers had seen the patient as part of their daily routines over such a long time period, the VRE infection had become a "normality" for them. They did not utilize sufficient and adequate communication with the SNF nurse to establish a shared understanding of the patient's complete health condition, including her history of VRE.

Assuming **no common ground** in their interactions with the SNF nurse could have enabled the transferring nurse and physician to engage in more sufficient communication with one another that, in the context of the patient's lengthy health record, could have facilitated a more complete and accurate shared understanding of the patient's health condition and the required safety precautions. Instead of approaching their transfer communication with the SNF nurse as a mere "informational docking point" where current information was "handed over" from one point of care to the next, the transferring nurse and physician could have thought the patient's care episode through to the end and asked themselves what the SNF needs to *understand* (i.e. not only what information she needs to "know") to provide optimal care to this patient at the SNF, while prioritizing the safety for all involved care participants, given that this patient had a VRE infection that required special precautions. Direct and redundant communication between the transferring and receiving clinical staff could have facilitated this objective and prevented the adverse event.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The transferring nurse and physician could have assumed **no common ground** in their transfer communication with the receiving nurse and clinical staff at the SNF.
- The transferring nurse and physician could have engaged in direct communication with the nurse and clinical staff at the SNF to co-establish a shared understanding of the patient's complete health condition (including the VRE infection and the need for additional infection control precautions).
- The receiving nurse at the SNF could have taken the time to decode and understand the patient's extensive health records, and to follow up with the sending nurse in direct communication for eventual clarification.
- The transferring nurse, the transferring physician, and the receiving nurse at the SNF could have utilized direct communication with each other to establish a shared understanding of the patient's complete health condition, given the extensive length of the patient's records.

Communication lessons for safer, higher quality care

1 ◯	2 ◯	3 ◯	4 ◯	5 ◯	6 ◯	7 ◯	8 ◯	9 ◯	10 ◯
11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
21 ◯	22 ◯	23 ◯	24 ◯	25 ◯	26 ◯	27 ◯	28 ◯	29 ◯	30 ◯

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Discussion questions and exercises

1. What environmental factors in this case might have contributed to the adverse event?

2. What knowledge would have been needed for the nurses to prevent this adverse event?

3. Write a policy that could be implemented to prevent errors like this in the future.

4. Perform a root cause analysis of this adverse event.

Stage 6: Evaluation

Evaluation involves processes such as follow-up and monitoring of a patient after the implementation of a care plan. It encompasses clinical, administrative, and interpersonal components. For instance, evaluation may include in-person follow-up visits, or it may be performed with repeated laboratory tests or by measuring certain parameters (e.g. blood glucose). It also involves transitions of patients in and across different healthcare settings (e.g. between different locations within one facility, between hospitals, between ambulatory healthcare settings, between hospitals and skilled nursing facilities, between hospitals and residential care for the elderly, to the patient's residence (i.e. home)).

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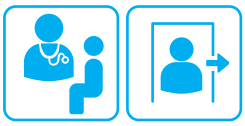

Case 31: "Discharged blindly"

Provider-patient interaction
Unsuccessful discharge, Near miss

Clinical context: Acute inpatient admission (thrombosis)
Communication context: Interactions between nurses, a pharmacist, and a patient
Incident: Communication error leading to unsuccessful discharge and preventable patient readmission
Patient safety outcome: Near miss

Case reprinted with permission of AHRQ WebM&M. Iezzoni LI. Discharged blindly. AHRQ WebM&M [serial online]. December 2005. Available at: https://psnet.ahrq.gov/webmm/case/111.

An elderly blind man developed a deep vein thrombosis during his hospital stay. At discharge, he was to receive enoxaparin (Lovenox) for self-administration at home in addition to other medications. Before leaving the hospital, he was given ❶ **written information sheets** regarding his medications and received counseling from a nurse and a pharmacist. ❷ **They did not notice that the patient was blind**.

❸ **Several days after discharge**, the patient called the primary care triage nurse and stated that he had been discharged with a bag of medications and some injections, but that he could not administer them because ❹ **he could not read the instructions**.

After retrieving his chart, the triage nurse noted that the patient was blind and, upon questioning, also learned that he lived alone. The patient was subsequently readmitted to the hospital for continuation of anticoagulation therapy.

Communication science principles

1. Communication is more than words

Both the nurse and the pharmacist committed a ❷ **communication decoding error of sufficiency** (error of underuse) by not noticing during their interaction with the patient that the patient was blind.

2. Communication is a nonsummative process

The nurse and pharmacist committed a ❷ **communication decoding error of sufficiency** (error of underuse) by not retrieving the fact that the patient was blind and lived alone from the medical chart.

The nurse and the pharmacist committed a ❶ **transactional communication error of interpersonal adaptation** (error of underuse) by not flexibly adapting the content and delivery of their medication instructions to the patient's displayed ad-hoc needs during the conversation, to make sure that the patient fully understands the instructions and knows how to apply them in the context of his daily life routine.

As an active partner of safe and high-quality care, the patient committed a ❹ **transactional communication error of sufficiency** (error of omission) by not reinforcing the fact that he was unable to read the discharge instructions during his conversation with the pharmacist and nurse.

3. Communication is contextual

As an active partner of safe and high-quality care, the patient committed a ❸ **communication encoding error of contextualization** (error of underuse) by waiting several days until he called the primary care triage nurse for clarification (*chronological* context).

4. Communication entails factual and relational information

Both the nurse and the pharmacist committed a ❶ **communication encoding error of interpersonal adaptation** (error of misuse) by not adapting their communication with the patient to the fact that the patient was blind and lived alone.

Discussion

This case illustrates three key insights that can be derived from communication science to facilitate safer and higher quality care:

First, the case demonstrates the importance of nonverbal communication in healthcare settings. More often than not, nonverbal behaviors carry more reliable and accurate information than verbal communication. Despite that fact, clinicians often focus on computer screens or verbal information, neglecting this crucial source of information. In this particular case, their lack of decoding effort caused two care providers (i.e. both the pharmacist and the nurse) to independently miss the crucial nonverbal cue of the patient being blind during two separate face-to-face encounters with the patient.

Second, this case shows how interpersonal communication is a complex, adaptive process that entails multiple components and requires interpersonal skills that reach far beyond mere information sufficiency. It demonstrates that communication is an interactive meaning-making process that occurs *between* people. Through this complex process, humans pursue the objective of establishing a common ground based on which they can co-create a shared understanding. This case illustrates several different layers that contribute to the complexity of this process: communication needs

to be not only sufficient in quantity, but also optimal in quality – in this case, interpersonally adaptive and clear in the decoding and encoding of both messages and behaviors.

Third, this case shows how any given interaction is nested within a larger context (e.g. functional, relational, chronological, environmental, and/or cultural context) that needs to be taken into account when encoding and decoding information. In other words, communication needs to be *adapted* to be most effective and appropriate in the given context within which it is taking place. In this case, the care participants' insufficient adaptation of their communication to the *chronological* context (i.e. the timing and timeliness) and to the *functional* context (i.e. the alignment of objectives pursued by their communication) compromised both the safety and the quality of the care episode.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this near miss:

- The nurse and the pharmacist could have read the patient's medical chart prior to consulting him on the medication use. This way, they could have contextualized and adapted their communication to the patient's needs.
- The nurse and the pharmacist could have paid closer attention to and accurately decoded the nonverbal behaviors of the patient during their discharge conversations.
- The nurse could have demonstrated how the medication is administered and then asked the patient for demonstration of that skill. The fact that the patient was "blind" would have become apparent during this activity.
- The patient could have actively contributed to the establishment of a shared understanding during his discharge conversations with the nurse and the pharmacist.
- The patient could have immediately clarified his lack of understanding of the medication use with the care providers, rather than waiting several days.

Communication lessons for safer, higher quality care

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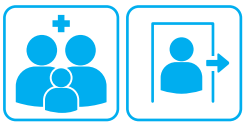
Discussion questions and exercises

1. What are three examples of nonverbal communication that the primary care nurse and the pharmacist may have missed in this case?

2. Write a script for an initial interaction between the nurse and the patient where the nurse uses critical listening and critical speaking to ensure the patient receives safe and high-quality care.

3. Think of a creative solution that would allow this patient to receive appropriate medication teaching in the future.

4. What can nurses say or do to ensure patients feel free to speak up during their care?



Case 32: "Discharge ready?"

Provider-family interaction
Unsuccessful discharge, Adverse event

Clinical context: Surgical inpatient admission with subsequent discharge to home (gastrointestinal surgery)
Communication context: Insufficient discharge instructions for home care
Incident: Ineffective discharge leading to preventable patient harm and readmission to the hospital
Patient safety outcome: Adverse event

Case written by Rhonda Malone Wyskiel, M.S.N., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 48-year-old female patient recently underwent gastrointestinal (GI) surgery. She has an unremarkable course of recovery on the surgical floor, and is being discharged by her primary care physician to home. ❶ **The discharge orders** include durable medical equipment (tube feeding pump and supplies) for home use. The patient had a jejunostomy tube (j-tube) placed during her hospital stay that requires tube feedings followed by flushes at home.

❷ **The discharge nurse reviews the written discharge instructions** with the patient's husband, who is visibly overwhelmed with taking care of his wife at home, ❸ **but does not say anything** to the nurse. ❹ **The discharge nurse assumes** that the husband is familiar with caring for his wife's j-tube, **because he has been at her bedside for most of her hospitalization and presumably observed her care**. ❺ **The discharge nurse does not ask the husband** to demonstrate the j-tube feeding and flush. ❺ **The husband also does not ask the nurse** for a demonstration.

At home, the patient's husband does not fully recall the instructions, but ❻ **he proceeds with what he remembers**. Forty-eight hours later, his wife becomes lethargic and experiences nausea and vomiting, requiring the husband to phone the on-call physician at the hospital. The physician asks the husband to bring the patient back to the hospital's Emergency Department (ED), where the clinical team determines that the patient is dehydrated.

While reviewing the discharge orders, the husband and the clinical team realize that ❶ **the patient's j-tube instructions did not include flushing the j-tube** with 200 mL of water every 12 hours to prevent dehydration. The patient is readmitted for observation.

Communication science principles

1. Preconceptions and perceptions vary among communicators

The discharge nurse committed a ❶ **communication encoding error of sufficiency** (error of underuse) by not specifying in the discharge instructions that the j-tube needed to be flushed with a bolus of 200 mL of water every 12 hours.

The patient's husband committed a ❸ **communication encoding error of sufficiency** (error of omission) by not speaking up to raise his concern about his lack of understanding and his inability to care for his wife at home to the nurse.

The discharge nurse and the patient's husband committed a ❸ **transactional communication error of sufficiency** (error of underuse) by not engaging in enough communication with each other to establish a sufficient shared understanding of the discharge instructions to an extent that the husband would be able to implement them properly at home.

2. Communication is more than words

The discharge nurse committed a ❷ **communication decoding error of sufficiency** (error of underuse) by paying insufficient attention to the husband's nonverbal behavior to decode that he was feeling overwhelmed.

The discharge nurse committed a ❷ **transactional communication error of interpersonal adaptation** (error of omission) by not adapting her discharge communication to the husband's needs, in response to the husband's nonverbal expression that he did not feel able to implement the discharge instructions on his own and take care of his wife at home.

3. Communication is contextual

The discharge nurse committed a ❷ **communication decoding error of contextualization** (error of underuse) by not decoding the husband's nonverbal expression as "feeling overwhelmed" in the context of the husband (1) being emotionally distressed about not being able to provide proper support for his beloved wife (*relational* context) at home (*environmental* context), and, (2) given that he does not have any clinical background, not understanding the discharge instructions to an extent that he would be able to implement the procedures properly by himself (*functional* context).

The discharge nurse committed a ❹ **communication encoding error of contextualization** (error of overuse) by overly framing her instructions on how to use the j-tube in the context of her assumption that the husband had been at the patient's bedside most of the time and thus already knew how to use it (*functional* context).

4. Redundancy in content and directness in channel enhance accurately

The discharge nurse and the patient's husband committed a ❸ **transactional communication error of accuracy** (error of underuse) by not utilizing their communication with each other as a co-constructed pathway to jointly validate the accuracy of the husband's understanding of the discharge instructions and their proper implementation at home.

The discharge nurse and the patient's husband committed a ❺ **transactional communication error of accuracy** (error of omission) by not utilizing their nonverbal communication as a pathway to demonstrate the j-tube feeding and flush, to ensure that the husband had properly understood the instructions and knew how to conduct the procedure by himself at home.

The patient's husband committed a ❻ **transactional communication error of accuracy** (error of omission) by proceeding with the procedure at home without contacting the clinical team first to validate the accuracy of his recall.

The clinical team committed a ❻ **transactional communication error of accuracy** (error of omission) by not following up with the patient's husband after discharge to make sure that the husband remembered what to do and how to perform the discharge instructions accurately at home.

Discussion

This case demonstrates that interpersonal communication is a crucial "patient safety pathway" for care participants to jointly generate an accurate, shared understanding of indicated care procedures. In this case, such "safe communication" was insufficiently established by the nurse and the patient's husband during discharge. Their care interaction remained at a level of mere presumption. The space between them was never substantiated with communication to establish a shared understanding. As a direct result, the patient's husband did not understand, recall, and implement the j-tube procedures accurately at home, and the patient had to be readmitted to the hospital. Neither the patient's husband nor the clinical staff used their communication with each other as a process to validate a shared understanding of the procedure, and to ensure that the patient's husband implemented them accurately at home. More redundant communication that utilizes repetition of content, and direct communication that engages both verbal and nonverbal cues, could have been used as rich resources to facilitate an accurate understanding, and prevented the adverse event.

One of the reasons why such "safe communication" was engaged insufficiently is the discharge nurse's and the patient's husband's failures to contextualize their communication with each other, both in their encoding and decoding of messages. For example, the nurse mistakenly assumed (based on insufficient decoding) that the husband had been a careful observant at the patient's bedside most of the time and thus already knew how to administer the feedings and flushing. The nurse did not de-

code the husband's nonverbal communication, which conveyed his emotional distress about the fact that the patient was his beloved wife, that he needed to take her home on his own soon, and that he did not feel able to implement the discharge instructions by himself. More contextualized decoding of the patient's nonverbal expressions could have facilitated more and better communication both during and after the discharge encounter to prevent the adverse event.

The patient's husband also did not engage himself sufficiently as an active partner in safe and high-quality care for his wife. In addition to his nonverbal expressions of concern, he could have voiced his lack of understanding of the discharge instructions and his fear of not being able to care for his wife on his own to the nurse. Finally, prior to implementing the procedures at home, he could have engaged "safe communication" with the clinical staff to reduce his uncertainty about the accuracy of his recall, and about the proper implementation of the discharge instructions at home. This illustrates that safe and high-quality care requires active communication skills on behalf of all involved care participants – not only from the providers. Also patients and their care companions must be activated and involved consistently as partners for safer patient care. Communication is the glue that holds them together, enabling them to act as a resilient team that delivers optimal patient care.

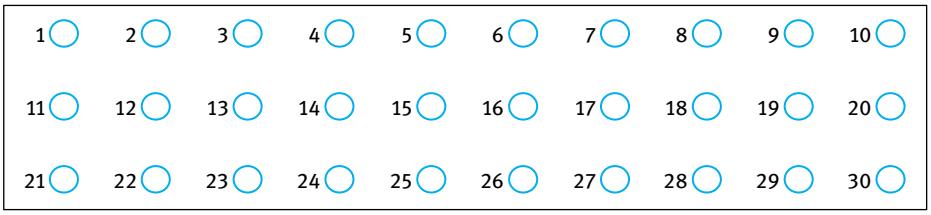
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this adverse event:

- The discharge nurse could have been more sufficient in her discharge instructions. She could have asserted (both in writing and in direct conversation with the patient's husband) that the j-tube needed to be flushed with a bolus of 200 mL of water every 12 hours.
- The discharge nurse could have decoded the patient's nonverbal expressions as an indication that the patient was feeling overwhelmed.
- The discharge nurse could have decoded the patient's nonverbal expressions within the context of (1) him being emotionally distressed about not being able to provide proper care for his beloved wife at home, and (2) his lack of clinical background to understand the discharge instructions to an extent that he could implement them on his own.
- The patient's husband could have expressed to the nurse that he felt overwhelmed by the discharge information, and that he was concerned that he may not be able to take care of his wife on his own at home.
- The discharge nurse and the patient's husband could have engaged in sufficient communication with each other to establish a shared understanding of the discharge instructions to an extent that the husband would be able to implement them properly at home.

- The discharge nurse could have adapted her discharge communication to the patient's needs, in response to the patient's nonverbal expression that he did not seem to feel able to implement the discharge instructions on his own to take care of his wife at home.
- The discharge nurse could have verified with the patient's husband, rather than assumed, that he already knew how to administer the tube feedings, given that he had observed the procedure several times at the patient's bedside.
- The discharge nurse and the patient's husband could have utilized their communication with one another as a co-constructed pathway to jointly validate the accuracy of their shared understanding of the discharge instructions and how to implement them at home.
- The discharge nurse and the husband could have encouraged each other to demonstrate the j-tube feeding and flushing ad-hoc, to ensure that the husband was actually able to conduct this procedure properly at home.
- Prior to conducting the procedure at home, the patient's husband could have contacted the clinical team to reduce his uncertainty about how to conduct the procedure properly.
- The clinical team could have followed up with the patient's husband after discharge to make sure that the husband still remembered what to do at home and how to implement the discharge instructions properly.

Communication lessons for safer, higher quality care



Select the communication lessons from Chapter 6 that best apply to this case and mark the respective circle(s) in this graph. Explain your choices and discuss how the lessons you selected inform this particular case. Compare your choices with the responses others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

Discussion questions and exercises

1. What would you have done differently as the nurse in this case to prevent the adverse event?

2. How could the nurse in this case have involved the patient and family as active members of the healthcare team?

3. What type of patient and family teaching could the discharge nurse have performed before discharging the patient?

4. Write a policy/procedure that could be implemented to ensure that this kind of event does not happen again in the future.

5. What have you learned from this case?

Case 33: "Communication failure – Who's in charge?"

Team interaction
Insufficient postoperative monitoring, Sentinel event

Clinical context: Acute inpatient admission to cardiac surgery (hypoplastic heart syndrome)
Communication context: Interactions between patient's postoperative clinical team members (i.e. resident physician, nurse, on-call ICU attending, surgeon, and cardiology fellow)
Incident: Communication error leading to insufficient monitoring of a postoperative patient
Patient safety outcome: Sentinel event

Case reprinted with permission of AHRQ WebM&M. Fackler J, Schwartz JM. Communication failure – who's in charge? AHRQ WebM&M [serial online]. October 2011. Available at: https://psnet.ahrq.gov/webmm/case/253.

A 20-month-old boy was admitted to the ICU following a Fontan surgical procedure for hypoplastic left heart syndrome. The child initially made good progress. He was weaned from inotropic support and tolerated enteral liquids on the first postoperative day.

That evening, the child developed respiratory distress with acidosis and fever. The resident physician ❶ **notified the on-call ICU attending**, who came in from home to manage the child's respiratory status. The surgeon called from home to check on the child at midnight and spoke with the resident, who indicated that the ❷ **child had suffered respiratory deterioration and that the ICU attending was at the bedside managing the patient**.

The surgeon requested an echocardiogram, but ❸ **did not speak directly to the ICU attending**, and the cardiology fellow who performed the echocardiogram communicated results to the surgeon, the child's attending of record for this admission.

❹ **After stabilizing and monitoring the child's respiratory status, the ICU attending returned home**. The resident communicated with the ICU attending by phone and pager through the rest of the night, as the child's status was not improving as expected. The resident assumed that the ICU attending was communicating with the surgeon, and thus ❺ **did not contact** the surgeon or cardiologist. The child suffered a cardiac arrest at 7:00 AM from low cardiac output. Despite aggressive resuscitation efforts, the child suffered massive brain injury and subsequently died.

In postevent debriefings, staff identified several issues in the care of this patient. The attending surgeon and cardiologist ❶❹ **were only briefed on the initial respiratory distress and did not have a complete picture** of the child's condition; similarly, the ICU attending focused on stabilizing the child's respiratory status and missed his low cardiac output. There was ❷ **confusion among the resident physicians and nursing staff about who was coordinating the child's care**, and a lack of awareness of how to ensure effective team communication when multiple attending physicians are involved in caring for a child.

❻ **The nurse observed the resident on the phone** frequently discussing the case, and did not realize that no one was communicating with the other physicians involved. ❼ **The resident and nurses noted** that having the ICU attending physician at the bedside left them with the impression that the surgeon and cardiologist were being updated about the child's continuing deterioration.

Communication science principles

1. Communication is contextual

The resident physician committed a ❶ **communication encoding error of contextualization** (error of underuse) by insufficiently framing his communication with the on-call ICU attending within the context of the child just having undergone heart surgery (*functional* context).

The ICU attending committed a ❹ **communication decoding error of contextualization** (error of overuse) by assessing the patient only in the context of his respiratory distress (*functional* context).

The resident physician and the surgeon committed a ❷ **transactional communication error of contextualization** (error of underuse) by insufficiently discussing the patient's respiratory distress within the context of the child's recent heart surgery (*chronological* context), and the fact that the ICU attending was only managing the respiratory distress (no potential cardiac issues) at the bedside of the patient (*functional* context).

2. Communication is more than words

The nurse committed a ❻ **communication decoding error of accuracy** (error of misuse) by misinterpreting the resident being on the phone as an indication of the surgeon and the cardiologist being informed.

3. Redundancy in content and directness in channel enhance accuracy

The resident physician and the ICU attending committed a ❶ **transactional communication error of sufficiency** (error of underuse) by establishing an insufficient shared understanding of the patient's complete health condition.

The ICU attending committed a ❶ **communication decoding error of sufficiency** (error of underuse) by not retrieving sufficient information about the patient's health condition (e.g. by reading the patient's records).

The resident physician committed a ❺ **communication encoding error of sufficiency** (error of omission) by not contacting the surgeon or cardiologist, under the incorrect assumption that the ICU attending was communicating with the surgeon.

The nurse committed a ❻ **communication encoding error of sufficiency** (error of omission) by not contacting the surgeon or cardiologist under the incorrect assumption that the ICU attending was communicating with the surgeon.

The surgeon and the ICU attending committed a ❸ **transactional communication error of sufficiency** (error of omission) by not speaking with each other directly and sufficiently to establish a shared understanding of the patient's deteriorating health condition.

The resident physician, the surgeon, and the nursing staff committed a ❷ **transactional communication error of sufficiency** (error of underuse) by establishing an insufficient shared understanding of who would communicate with whom in attending to the patient's acute postoperative condition.

4. Preconceptions and perceptions vary among communicators

The nurses and the resident committed a ❼ **communication decoding error of accuracy** (error of misuse) by misinterpreting the ICU physician being at the bedside as indicative of the ICU physician remaining with the patient all night and the surgeon and cardiologist being updated about the patient's deteriorating health condition.

Discussion

This case illustrates the importance of the *context* within which a care episode is embedded, and the *constraining* and *facilitating* functions such context can have for the safety and quality of care. In this case, the context *constrained* rather than *facilitated* the clinicians' communication. The resident physician's initial communication with the ICU on-call physician narrowed the patient's health issue to "respiratory deterioration." The omitted content of the patient just having undergone heart surgery from thereon contextually constrained the clinicians' perceptions of the child's condition. In other words, the resident physician *overused* his communicative contextualization of the care episode, which turned the context into a *constraint* that narrowed the clinicians' perspectives onto a "respiratory issue." This constraining contextualization left the patient's cardiac problems undiagnosed and ended up contributing to the patient's death.

This case also demonstrates how communication contains more than words. The nurse's interpretation of the resident physician being on the phone as indicative of

the surgeon and the cardiologist "being informed" demonstrates that communication, both in encoding and decoding, entails more than words – with nonverbal behavior typically being perceived as more accurate than verbal information (see Seiler and Beall 2000).

The events in this case also draw attention to the communication principle "Redundancy in content and directness in channel enhance accuracy." The care episode demonstrates that care participants should never assume that communication has taken place. Follow-ups are generally the safer way to establish a shared understanding, because even if information has been exchanged, it does not mean that the information was understood accurately, and that this understanding was being shared by all participants. In fact, the odds predict the contrary.

Finally, this case demonstrates that successful interpersonal communication is the *only* process through which care coordination and consistency can be attained. The clinicians in this case did not achieve this outcome, as a direct result of the prevalent lack of clarity, accuracy, and sufficiency in their communication.

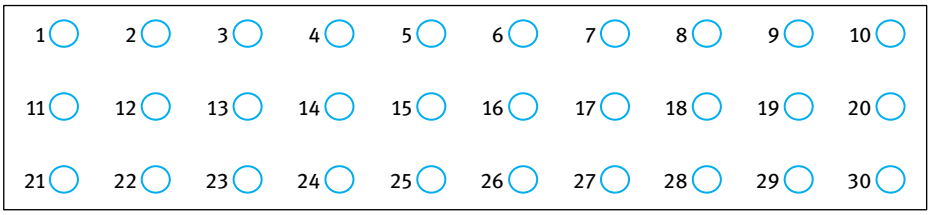
Communication strategies per Hannawa SACCIA

In this case, several behaviors may have prevented the sentinel event:

- The resident physician could have framed his notification of the on-call ICU attending within the context of the child just having undergone heart surgery.
- The resident physician and the nurse could have ensured that the on-call ICU attending knew and understood the patient's relevant medical history (i.e. recent cardiac surgery and current respiratory distress).
- The on-call ICU attending could have retrieved all available information about the patient's condition from colleagues and from the patient's health records, to ensure a complete and accurate understanding of the patient's health condition.
- The resident physician and the surgeon could have discussed the patient's respiratory distress within the context of the child's recent heart surgery and clarified the fact that the ICU attending was focusing on the patient's respiratory distress at the bedside.
- The nurse could have addressed her assumption that the resident talking on the phone indicated that the surgeon and the cardiologist had been informed by asking the resident directly.
- The resident physician could have remained in direct contact with the surgeon, and the surgeon and the ICU attending could have communicated with each other directly. Ideally, all of them could have had a direct conversation (e.g. conference call) to establish a common ground and coordinate the patient's postoperative care.

- The resident physician and the surgeon could have established a shared understanding of who will communicate with whom in attending to the patient's postoperative care.
- The surgeon and the cardiologist could have decoded the resident physician's communication of the ICU physician being "at the bedside of the patient" accurately, using transactional communication to verify whether the ICU physician would indeed remain with the patient all night.

Communication lessons for safer, higher quality care



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Discussion questions and exercises

1. Reflect on this case and identify the errors that led to the sentinel event.

2. In what way was nonverbal communication given greater weight than verbal communication in this case?

3. Using the Hannawa SACCIA "safe communication" competencies (see Chapter 5), write a script of how the nurse could have communicated with the other members of the healthcare team to ensure safe and high-quality care.

Case 34: "Something is not right"

Inter-professional interaction
Delayed surgery, Sentinel event

Clinical context: Acute inpatient admission (surgery for chronic bowel disease)
Communication context: Interaction between two nurses across units, family, and physician
Incident: Communication errors leading to delayed surgery
Patient safety outcome: Sentinel event

Case written by Rachel Ridgeway M.S.N., R.N., C.N.L., C.P.N. and Anne Wendt, Ph.D., M.S.N., R.N.

A 14-year-old female with a history of Crohn's disease experiences increased bloody stools and abdominal pain. She is on total parenteral nutrition (TPN) and lipids at home. She is admitted to the Pediatric Intensive Care Unit for a two-phase bowel surgery: (1) resect the diseased part of the bowel and create an ostomy for bowel rest, and (2) re-anastomosis of the bowel after 3–4 months.

The first phase of the surgery is performed and the patient recovers in the postanesthesia care unit (PACU), where a patient-controlled analgesia pump (PCA) is started with continuous and on-demand doses. The PACU nurse is harried because her shift is ending and she wants to leave. Therefore, she does not accompany the patient herself, but sends a transport aide to bring the patient to the surgical floor, where the patient is placed on a cardiac telemetry monitor. ❶ **The PACU nurse hurriedly calls the floor nurse on the phone and reports very briefly:** "Patient's vital signs are stable, on room air, still sleepy, stoma looks pink with no output and no urine output from the Foley catheter."

When receiving the patient, the floor nurse realizes that the PACU nurse's report is not correct. The patient's condition is unstable. Her heart rate is in the 60 s, respirations are 6–8 per minute, SpO2 is 92% on room air, blood pressure is 79/36 with repeat blood pressure being 75/41. The patient is not arousable to voice and localizes to sternal rub only.

The patient's mother is at the bedside and states: "Something is not right. My daughter should be more alert." ❷ **The floor nurse does not respond to the mother's expressed concern** because she is busy completing her exam of the patient. The floor nurse's exam reveals: delayed capillary refill, weak pulses, decreased level of consciousness, abdomen with 5 laparoscopic incisions that are clean, dry and intact, ostomy is pale pink with an output of 400 mL of bright red blood.

The mother repeats "Something is not right" and is quite anxious now. ❸ **The floor nurse still does not respond to the mother's communication** as she is focused on the patient's worsening condition.

The floor nurse pages the physician to report concerns about hypotension, decreased level of consciousness, and bloody output from the stoma. The physician calls back and gives a telephone order to "give her a bolus of 1 liter of normal saline." The nurse administers a bolus of 1 liter of normal saline. After the bolus the patient's heart rate is 61, blood pressure is 72/32. ❹ **The nurse calls the physician again**, who is attending to another patient and distractedly orders a 2nd bolus of normal saline. ❹ **The nurse pages the physician again** while the second bolus is being administered, requesting the physician come to the bedside.

Because of a lack of response by the physician and the deteriorating condition of the patient, the nurse calls the Rapid Response Team (RRT). The RRT examines the patient and calls the surgeons with their findings. The patient is rushed back to the operating room (OR). In the OR, the surgeons perform an open exploratory abdominal surgery. The surgeons discover that there is a volvulus in the colon, requiring the removal of all but 20 cm of the colon. The patient remains intubated and is sedated with an "open" abdomen for a week.

Her recovery includes a prolonged ICU stay, anxiety and fear with hospitalization, and distrust of the clinical team. She misses several months of school. She requires multiple revisions of her ostomy with removal of more and more of her colon, disturbed body image (many scars and ostomy), and TPN/lipid dependency for the rest of her life.

Communication science principles

1. Communication is contextual

The PACU nurse committed a ❶ **communication decoding error of contextualization** (error of underuse) by not taking the needed time to fully reassess (i.e. properly decode) the patient's condition immediately prior to transferring the patient to the floor, in the context of her ending shift and wanting to go home (*chronological* context).

The PACU nurse committed a ❶ **communication encoding error of contextualization** (error of underuse) by failing to contextualize her transfer communication to the floor nurse to convey that her report was based on an earlier assessment that may no longer be current or valid (*functional* context), because she did not have time to reassess the patient immediately prior to transfer given that her shift was ending and she needed to leave (*chronological* context).

The floor nurse committed two ❷❸ **communication decoding errors of contextualization** (error of underuse) by failing to interpret the mother's expressed concern in the context of the mother being close to and knowing the patient as a resource for

safer, more accurate care (*relational* context). The floor nurse did not take time to sufficiently decode the mother's expressed concern in the context of the significant time loss that was caused by another required head-to-toe assessment because the PACU nurse had already left and was no longer available for follow-up questions (*chronological* context).

The nurse and the physician committed a ❹ **transactional communication error of contextualization** (error of underuse) by failing to establish a shared understanding of the patient's critical condition requiring immediate visitation at the bedside of the patient (*chronological* context).

2. Communication is a nonsummative process

The PACU nurse committed a ❶ **transactional communication error of sufficiency** (error of underuse) by not engaging in enough communication with the floor nurse to establish a shared understanding of the patient's condition.

3. Communication entails factual and relational information

The floor nurse committed a ❷❸ **communication encoding error of interpersonal adaptation** (error of omission) by failing to react to the mother's expressed concern and anxiety about her observation that "something is not right" about her daughter's behavior.

Discussion

This case demonstrates the importance of contextualizing communication for safer patient care. Particularly the context of "time" stands out in this case. Because her shift was ending and she had to leave, the PACU nurse did not take the needed time to reassess the patient immediately prior to transferring her to the floor. She also did not take the time to mention this fact to the floor nurse in her transfer communication. Had the PACU nurse taken the time to properly assess (i.e. decode) the patient's condition (through both nonverbal and verbal information-gathering), the patient would have never left the PACU – she would have immediately been returned to the surgical team for treatment of her surgical side effect. In other words, a more skilled use of *chronological contextualization* – both in terms of *taking time* and *timeliness* – could have prevented the chain of subsequent communication errors that were triggered by the PACU nurse's initial communication insufficiency (in both decoding information from the patient and encoding inaccurate information to the floor nurse) that ultimately caused the sentinel event.

The second communication deficiency that contributed to this sentinel event was the floor nurse's and physician's failure to effectively establish a shared understanding of the urgency for the patient to be seen in person. Their transactional communi-

cation was insufficient for attaining this goal. This case evidences that a shared sense of priority must be jointly established through appropriate and effective communication, and that a shared understanding of such prioritization is crucial for the safety of patient care. In other words, patient safety is often a direct outcome of appropriate and effective communication that bridges a variety of interpersonal and structural barriers.

Another interesting feature of this case was the mother's role in promoting the safety of her child. The floor nurse was not aware that her lack of interpersonal adaptation to the mother's repeatedly expressed concerns conveyed a clear and strong message to the mother, whether or not it was intended. That message was not informational but relational in nature, discouraging the mother from trusting her daughter's care team and possibly even preventing her from ever speaking up again for the safety of her daughter in the future. Thus, the floor nurse's nonverbal response (i.e. "nonbehavior" as a form of communication) to the mother's concern that "something is not right" with her daughter *disengaged* rather than engaged the mother as an active partner for patient safety, which is considered a core safety measure.

As a result of these communication errors, the surgical side effect remained undiscovered for too long – the PACU nurse did not reassess the infant prior to transferring her to the floor and thus did not detect the volvulus in the colon; the floor nurse did not decode the mother's alert sufficiently; and the floor nurse and the physician did not successfully engage their communication to establish a shared sense of urgency for the patient to be seen at the bedside. These communication deficiencies caused severe emotional, social, psychological, and physiological consequences for the patient.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this sentinel event:

- The PACU nurse could have taken the time to properly reassess (i.e. decode and understand) the patient's condition prior to transferring the patient to the floor.
- The PACU nurse could have contextualized her transfer report to the floor nurse to make sure that the floor nurse understood that her assessment report was not current.
- The PACU nurse could have engaged in sufficient communication with the floor nurse to ensure a shared understanding of the patient's health condition.
- The floor nurse could have embraced the patient's mother as an active partner for patient safety. She could have decoded the mother's expressed concern properly in the context of the mother knowing the patient, and she could have utilized the mother's presence as a resource rather than a constraint in the context of the time loss that had been incurred by the PACU nurse's limited report and unavailability for follow-up questions.

- The nurse and the physician could have utilized their communication more successfully to co-establish a shared understanding of the urgency of the patient's condition and the need for the physician to see the patient immediately.
- The floor nurse could have responded to the mother's expressed concern and anxiety about something being unusual about her daughter.

Communication lessons for safer, higher quality care

1 ◯	2 ◯	3 ◯	4 ◯	5 ◯	6 ◯	7 ◯	8 ◯	9 ◯	10 ◯
11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
21 ◯	22 ◯	23 ◯	24 ◯	25 ◯	26 ◯	27 ◯	28 ◯	29 ◯	30 ◯

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Discussion questions and exercises

1. What environmental factors might have facilitated the communication errors in this case?

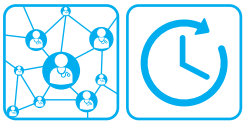
2. Describe the scope of practice and roles for each of the healthcare team members and how they might impact communication errors and patient safety.

3. What could the nurses have done differently in this case to prevent the sentinel event?

4. How could the nurses have communicated better with the patient's mother?

5. What positive action(s) did the nurse take on behalf of the patient?

6. Perform a root cause analysis of this sentinel event.



Case 35: "July syndrome"

Cross-professional interaction
Delayed postoperative treatment, Near miss

Clinical context: Acute outpatient and then inpatient visit for thoracic surgery (lung cancer)
Communication context: Interactions between an attending surgeon, two surgery fellows, a surgical intern, a nurse, an attending ICU physician, and a pharmacist on the ICU team
Incident: Communication error leading to delayed postoperative treatment (prophylaxis)
Patient safety outcome: Near miss

Case reprinted with permission of AHRQ WebM&M. Young JQ. July syndrome. AHRQ WebM&M [serial online]. June 2016. Available at: https://psnet.ahrq.gov/webmm/case/378

A 64-year-old man was seen in the thoracic surgery clinic in June after being diagnosed with a right lower lobe lung cancer. The attending surgeon saw the patient along with his fellow, who was completing his 1-year surgery fellowship. By that point in the year, the attending had supervised the fellow's operative and postoperative care of nearly 100 patients, and he trusted him completely.

The patient was a good candidate for surgery, so the surgeon ❶ **discussed the operative plan** (a right lower lobe lobectomy) briefly with the fellow and had the procedure scheduled for a few weeks later. The procedure was scheduled for the first week of July. However, by this time, the fellow who had seen the patient in clinic had graduated and ❷ **left the institution**.

The procedure itself was uneventful, and the patient was transferred to the ICU postoperatively. The initial postoperative orders were written by the new thoracic surgery fellow, who had just started his fellowship and was new to the organization. He ❸ **wrote brief orders for postoperative care**, ❹ **assuming**, as had been the case at the hospital where he did his residency, that the ICU team would write more comprehensive orders.

The patient was received in the ICU ❺ **by a surgical intern**, who was in her ❻ **first rotation** and had also graduated from medical school elsewhere. The patient's nurse noticed that there were no orders for venous thromboembolism (VTE) prophylaxis, despite the patient being at high risk for VTE. ❼ **She brought this to the intern's attention**. The intern ❽ **assumed that VTE prophylaxis was contraindicated**,

because the fellow had not ordered VTE prophylaxis; she also recalled an incident during medical school where a surgery intern had been chastised for starting VTE prophylaxis inappropriately.

Although the standard postoperative order set in the electronic health record included a prompt for a VTE prophylaxis order, ❾ **the intern found that she could easily skip this order** and complete the rest of the order set without difficulty. Therefore, ❿ **the patient was not prescribed VTE prophylaxis**.

Two days later, the pharmacist on the ICU team was reviewing orders for the patient and realized that the patient was not receiving VTE prophylaxis. She brought this to the attention of the intern, who replied that she thought it was contraindicated, so she had not ordered it.

The pharmacist conferred with the ICU attending, who agreed that VTE prophylaxis could have been started postoperatively and made sure it was started that day. Fortunately, the patient experienced no adverse consequences as a result, but the pharmacist and ICU attending wondered what could have been done to limit the risk of such an event in the future.

Communication science principles

1. Communication is contextual

The surgeon committed a ❶ **communication encoding error of contextualization** (error of misuse) by discussing the operative plan with the wrong person (*functional* context). The surgeon neglected the fact that the fellow would have left the institution by the time of the surgery which was booked after July 1 (*chronological* context).

The initial surgery fellow committed a ❶ **transactional communication error of contextualization** (error of underuse) by communicating insufficiently with the surgeon within the context that he would no longer be at the institution at the time of the planned surgery (*chronological* context).

The nurse committed a ❼ **communication encoding error of contextualization** (error of underuse) by not being assertive enough with the intern to raise the importance of the patient being at high risk for VTE (*functional* context), with the standard protocol at this hospital being VTE prophylaxis (*cultural* context).

2. Communication is a nonsummative process

The initial surgery fellow committed a ❷ **transactional communication error of sufficiency** (error of omission) by not communicating with the incoming fellow (e.g. via appropriate notation in the health record) to make sure that he had a shared understanding of the operative plan for this patient's upcoming surgery.

The new thoracic surgery fellow committed a ❸ **communication encoding error of sufficiency** (error of underuse) by merely writing *brief* orders for postoperative care.

The surgical intern and the surgery fellow committed a ❺ **transactional communication error of sufficiency** (error of omission) by not establishing a shared understanding of the complete postoperative order contents.

3. Preconceptions and perceptions vary among communicators

The new thoracic surgery fellow committed a ❹ **communication encoding error of contextualization** (error of underuse) by insufficiently framing his postoperative care orders within the context of being new to the institution and needing to adjust his communication to the institution's protocols and standards (*cultural* context).

The surgical intern committed a ❻ **communication decoding error of contextualization** (error of underuse) by insufficiently decoding the surgery fellow's order in light of her coming from a different institution with different communication standards and protocols (*cultural* context).

4. Redundancy in content and directness in channel enhance accuracy

The intern committed a ❼ **communication decoding error of sufficiency** (error of underuse) by insufficiently decoding and attending to the nurse's asserted concerns regarding the patient being at high risk for VTE and requiring prophylactic treatment.

The surgical intern committed a ❽ **transactional communication error of accuracy** (error of omission) by failing to confirm with the surgical fellow that no VTE prophylaxis was indicated for the patient.

The intern committed a ❾ **communication decoding error of clarity** (error of misuse) by ignoring her uncertainty about the patient needing a VTE prophylaxis and simply skipping over the prompt in the electronic health record.

The intern committed a ❿ **communication encoding error of sufficiency** (error of omission) by not prescribing the patient the VTE prophylaxis.

Discussion

This case demonstrates the relevance of four principles of human communication to safe and high-quality patient care:

First, the near miss resulted from the care participants' insufficient chronological and functional contextualization of their communication. The surgeon and the initial surgery fellow failed to talk about the patient's operative plan in anticipation of the fellow departing the institution at the end of the academic year, and the new fellow was never debriefed on the operative plan.

Second, the clinicians (i.e. fellows and nurse) did not recognize communication as an interactive meaning-making process. Several omitted conversations led to the insufficient establishment of a common ground and, as a direct result, inhibited a shared understanding. In fact, the participants did not even conduct the bare minimum of communication (e.g. evident in a *brief* rather than detailed information exchange on postoperative orders) that would have been required for safe patient care. Instead, the providers acted based on a common ground fallacy that could have severely harmed the patient.

Third, the clinicians did not utilize communication as a process to overcome differential perceptions that they had formed based on previous experiences during medical school and at other institutions. The initial fellow *underused* this cultural context by resorting to a bare minimum of communication instead of actively adapting his postoperative ordering to the new organization's standards. The new fellow also *underused* this cultural context by drawing inferences from her recollection of a similar medical school incident, and over-generalized that approach to her communication at this new institution. In other words, both fellows' preconceptions caused them to think and act within their own experiential frames. As a direct result, they did not establish a common ground that could have bridged their perspectives.

Fourth, this case shows the importance of appropriate redundancy in facilitating accuracy and, as a result, safer patient care. The physicians failed to engage in direct communication with one another (e.g. by phone or face-to-face) to engage in accuracy-promoting follow-up (i.e. redundancy). Instead, they remained vague and ambiguous in their encoding and decoding, which led to a degree of inaccuracy that nearly caused severe patient harm.

Interestingly, a core issue in this case was the intern's lack of response to the EHR prompt, which evidences that EHRs can work well as tools to facilitate a certain coverage of information (i.e. quantity). However, such technology does not function well to facilitate a shared understanding as a foundation for safe and high-quality patient care. In other words, **health information technology**. **can *structure* information exchange, but it does not facilitate the communication *process*** (i.e. an interpersonal meaning-making process that pursues a shared understanding of that information).

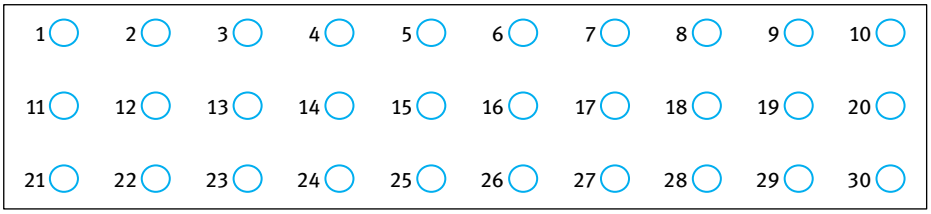
Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this near miss:

- The initial surgery fellow could have contextualized that he will no longer be at the institution at the time of the planned surgery.
- The surgeon could have discussed the operative plan with the new fellow (either in person or, if the new fellow was unknown at that point in time, via appropriate notation in the health record).

- The initial surgery fellow could have made sure that the new fellow had a shared understanding of the operative plan he had discussed with the surgeon before leaving the institution.
- The new fellow could have received more sufficient orientation information on her first shift at the new hospital, so that the fellow would know and understand the hospital's institutional standards.
- The new thoracic surgery fellow and the surgical intern could have made an effort to adjust their communication to the new institution's standards.
- The nurse could have been more assertive in her communication with the physician regarding the need for her patient to receive VTE prophylaxis, or escalated her concern via the medical chain of command.
- The new thoracic surgery fellow could have written more detailed orders for the patient's postoperative care.
- The surgical intern and the surgery fellow could have followed up with one another to make sure that they had a shared understanding of the written postoperative order contents.
- The surgical intern should not have skipped over the prompt in the EHR, but instead verified in direct conversation with the surgical fellow that no VTE prophylaxis was indicated for the patient.

Communication lessons for safer, higher quality care



Select the communication lessons from Chapter 6 that best apply to this case and mark the respective circle(s) in this graph. Explain your choices and discuss how the lessons you selected inform this particular case. Compare your choices with the responses others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

Discussion questions and exercises

1. What role did the "common ground fallacy" play in this near miss event?

2. What are two principles of human communication that illuminate the communication errors in this case?

3. Describe a policy or procedure that could be implemented to prevent these communication errors in the future.

4. Many hospitals and healthcare facilities have to deal with a major turnover of clinicians in various stages of training during this critical period in July. What role might nursing staff have during this critical time period to ensure "safe communication"?

5. What have you learned from this case that could help reduce communication errors and increase the safety and quality of care in the future?

Case 36: "Medication mix-up"

Inter-institutional interaction
Medication overuse, Harmless hit

Clinical context: Acute inpatient admission (stroke) with subsequent discharge to a residential care facility for the elderly
Communication context: Inadequate handoff between transferring hospital, patient and residential care facility (assisted living) and licensed practical nurse
Incident: Insufficient communication between institutions (acute care and residential care) regarding patient medications, leading to medication overuse and a preventable patient fall
Patient safety outcome: Harmless hit

Case written by Eileen Elenz, M.S.N., R.N. and Anne Wendt, Ph.D., M.S.N., R.N.

An 82-year-old female presents to the nurse's office in a residential care facility for the elderly, complaining of a severe headache and dizziness. The licensed practical nurse staffing the facility notices other signs and symptoms of a stroke and calls the emergency medical system to transport the resident to the hospital. ❶ **The nurse does not provide any health records**, so the patient arrives at the hospital without any documentation.

The patient is seen in the emergency department (ED) and diagnosed as having an ischemic stroke. The ED physician requests a neurology consult. The neurologist immediately administers IV tissue plasminogen activator (TPA) to prevent further damage from the clot. The patient is admitted to a medical unit.

After several days, the patient recovers with no residual deficits and the neurologist writes discharge orders that include new medications. ❷ **The discharge nurse provides the patient with paper copies of her medication instructions but does not provide verbal instructions** and ❸ **does not notify the staff at the residential care facility** of the change in medications. The family takes the patient to her residence in the residential care facility for the elderly. ❹ **Neither the family nor the patient inform the staff** at the residential care facility about the patient's new prescriptions.

The patient self-administers her new medications as well as her prior medications. One week after discharge from the hospital, the patient presents to the nurse's office again and states that she feels disoriented, tired and "does not feel good." She also tells the licensed practical nurse that ❺ **she felt "dizzy" and had fallen yesterday**,

but "did not hurt myself." The patient's vital signs are: blood pressure of 80/60, pulse of 90, and respirations of 16, and she has several bruises on her right arm. ❻ **The patient again does not tell the nurse about the new prescriptions.** During her assessment, ❼ **the nurse asks about medications and learns** that the patient is unclear about her medication regimen. The nurse asks to see all of the medications that the patient is taking, and tells the patient to "bring me all of your medication bottles." The patient returns with many bottles of medication from her recent hospitalizations and many bottles of medications prior to her recent hospitalization, several of which have similar actions and could lead to dangerous hypotension and bleeding.

After reviewing all of the medications, ❽ **the nurse calls the patient's primary physician** to confirm which medications the patient should be taking. After clarifying the prescriptions, the nurse is able to help the patient keep track of her complex medication regimen.

Communication science principles

1. Preconceptions and perceptions vary among communicators

The licensed practical nurse at a residential care facility for the elderly committed a ❶ **communication encoding error of sufficiency** (error of omission) by not sending any health records along with the patient to the hospital.

The discharge nurse at the hospital committed a ❷ **transactional communication error of sufficiency** (error of underuse) by failing to establish a shared understanding with the patient on how to self-administer her medication.

The discharge nurse at the hospital committed a ❸ **communication encoding error of sufficiency** (error of omission) by failing to inform the residential care facility staff at the long-term care facility about the patient's changed medications.

The family, the patient, and the nurse at the residential facility committed a ❹ **transactional communication error of sufficiency** (error of omission) by failing to establish a shared understanding of the patient's postdischarge medication regimen.

The patient committed a ❻ **communication encoding error of sufficiency** (error of omission) by not telling the nurse about her new prescriptions.

2. Communication is contextual

The patient committed a ❺ **communication encoding error of contextualization** (error of underuse) by waiting to inform the nurse that she has been feeling dizzy and had fallen the day before (*chronological* context).

The nurse at the residential facility committed a ❼ **transactional communication error of contextualization** (error of underuse) by waiting too long to establish a shared understanding with the patient about her medications, and thus finds out too

late that the patient is unclear about her postdischarge medication regimen (*chronological* context).

The nurse at the residential facility committed a ❽ **communication encoding error of contextualization** (error of underuse) by calling the patient's primary care physician too late to confirm which medications the patient should be taking (*chronological* context).

Discussion

This case demonstrates how care participants' failures to overcome the **common ground fallacy** through sufficient transactional communication can severely compromise the safety of patient care. In this case, all care participants assumed (rather than established or verified) a shared understanding, failing to realize that "Preconceptions and perceptions vary among communicators" and that, therefore, communication must be engaged as the pathway to establishing a shared understanding. For example, the nurse at the residential care facility *assumed* that the clinicians at the ED would figure out that the patient had a stroke, and thus did not send sufficient (what she considered evident) information along with the patient. The discharge nurse at the hospital *assumed* that the patient knew (or else would figure out) how to use the medication properly, and if not, that the patient would ask for assistance at the residential facility. The discharge nurse also *assumed* that the patient and/or her family would communicate the new medication regimen to the residential care facility staff. The residential facility staff (licensed practical nurse) *assumed* that the patient had been instructed on how to use her new medications, and that her primary care physician would be in charge of the patient. All these communication deficiencies were based on mere assumptions rather than on jointly established communication. Critical information fell through the cracks because the care participants had assumed that communication had taken place and that a shared understanding had been accomplished, but that was not the case. Throughout the entire care episode, the care participants never engaged any transactional communication to advance their individual communicative contributions to a larger shared understanding, which could have prevented the dangerous overmedication that caused the patient to fall.

Another core problem in this case was that all care participants failed to contextualize their communication with each other, which would have been critical for the safety of the patient. For example, the patient waited too long to inform the nurse about her dizziness and that she had fallen the day before; the nurse waited too long to establish a shared understanding with the patient on her medication regimen to realize that the patient was taking too many medications, several of which could have led to dangerous hypotension and bleeding; and the nurse waited too long to inform the patient's primary care physician of the patient's hospitalization, and to establish a shared understanding with the physician of what medications the patient should be

taking. If these communication episodes had taken place sooner, the physician could have prevented the medication overuse and patient fall. This demonstrates how communication is the pathway to safer patient care.

Communication strategies per Hannawa SACCIA

Several behaviors could have prevented this harmless hit:

- The staff (licensed practical nurse) at the residential care facility could have assumed **no common ground** with the ED staff and sent information along with the patient to the hospital to facilitate a shared understanding of the patient's health condition. Ideally, she could have followed up with a phone call to verify a shared understanding of the patient's history and condition.
- The discharge nurse at the hospital could have utilized more sufficient communication to establish a shared understanding with the patient on how to self-administer her medication.
- The discharge nurse at the hospital could have informed the staff at the residential care facility about the patient's changed medications.
- The family, the patient, and the nurse at the residential care facility could have engaged sufficient communication as a pathway to establishing a shared understanding of the patient's postdischarge medication regimen.
- The patient could have assumed **no common ground** with the nurse at the residential care facility and informed her about the new prescriptions.
- The patient could have informed the nurse immediately, rather than a day later, that she had been feeling dizzy and fallen.
- The nurse at the residential care facility could have engaged in direct communication with the patient to establish a shared understanding of the patient's postdischarge medications immediately upon the patient's return to the facility.
- The nurse at the residential care facility could have called the patient's primary care physician immediately after the patient's return to the long-term care facility to confirm which medications the patient should be taking.
- The nurse at the residential care facility could have immediately informed the patient's primary care physician of the patient's hospitalization, so that the physician could have contacted the hospital staff to coordinate the patient's medications.

Communication lessons for safer, higher quality care

1 ◯	2 ◯	3 ◯	4 ◯	5 ◯	6 ◯	7 ◯	8 ◯	9 ◯	10 ◯
11 ◯	12 ◯	13 ◯	14 ◯	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
21 ◯	22 ◯	23 ◯	24 ◯	25 ◯	26 ◯	27 ◯	28 ◯	29 ◯	30 ◯

Select the communication lessons from Chapter 6 that best apply to this case and mark the respective circle(s) in this graph. Explain your choices and discuss how the lessons you selected inform this particular case. Compare your choices with the responses others may have chosen. Are there any discrepancies? Discuss how any alternative lessons that you may have chosen or disregarded apply to this case.

Discussion questions and exercises

1. As a nurse working in the residential care facility, what would you have done differently to prevent this harmless hit?

2. Describe a strategy that could help residents understand the importance of medication reconciliation after medications are changed.

3. What positive actions did the nurse take to protect the safety of the patient in this case?

4. What have you learned from this case?

Concluding thoughts

Lisa J. Day, Ph.D., R.N.

Contextualizing communication in healthcare environments

Healthcare professionals do not go to work intending to engage in poor communication that puts patients at risk. Yet, as is evident in the case studies in Part II of this book, a variety of communication errors occur in clinical practice environments. The communication activities of members of the care team – encoding, decoding, and transactional sense-making – are often disrupted, and the path to establishing a common ground and a shared understanding is filled with potential misunderstandings.

Nurses are all too aware of the complexity of the environments in which they work. Successful communication is essential to safe practice in clinical encounters, but the contexts for these encounters offer many impediments to successful communication and it is important to consider this context when analyzing the cases in Part II of this book. Some of the more common impediments that are illustrated in these cases include the hierarchical nature and uneven power distribution that exists between healthcare providers and between providers, patients, and families; and the time-pressured environments in which nurses are asked to prioritize efficiency and expediency in unpredictable, rapidly changing situations while also managing multiple tasks and multiple interruptions concurrently. This concluding chapter highlights the impediments to safe communication introduced by these two important contextual features of the healthcare environment – hierarchy and the changing clinical situation – and offers suggestions as to how nurses and nurse educators can use the **Hannawa SACCIA "safe communication" model** described in Chapter 5 of this book to develop their own and their students' communication skills, and to diagnose and reduce common communication errors.

The clinical context: Two important features that impact communication

1. Status and hierarchy

As was discussed in Chapter 2, communication is contextual and entails both factual and relational information; it is also more than words. Factual messages are always accompanied by verbal and nonverbal relational messages. In healthcare, as in many other settings, these messages exist in a social context of status and hierarchy. Historically, higher status has been afforded to physicians over nurses and, within any given profession, to those with more experience over those with less. In addition, those identified as professionals (i.e. physicians and nurses) typically have higher status than nonprofessionals (i.e. patients and family members) in clinical encounters. In addi-

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tion, many intersectionalities of power and oppression exist, including race, gender, and socio-economic status (Acker, 2006; Ceci, 2004; Meleis, 2016; Van Herk, Smith, & Andrew, 2011).

As is seen in the case studies in Part II of this book, status can be conveyed and enforced through nonverbal gestures and tone rather than the content of speech. For example, a physician conveys impatience and dismissiveness through her tone of voice when a nurse questions an order; a nurse ignores a patient's mother's question by turning her back; a more experienced nurse dismisses the concerns expressed by a newer nurse by rolling his eyes and heaving a sigh. The actions of those with higher status in these situations go unchallenged due to a real or perceived power differential between the participants (Ceci, 2004; Meleis, 2016).

The status hierarchies that exist in healthcare have great potential to impede safe communication and thus increase the risk to patients. When status hierarchies are present in the social structure of a clinical setting, it is often the case that participants with lower status remain silent in the face of what they perceive as the higher authority of those with higher status. Even when those with lower status have more expertise in a particular situation, they may defer to the authority that comes with higher status. This deference of expertise to status and authority, or *hierarchical silencing*, has been identified as a risk to patient safety and healthcare performance (Weick & Sutcliffe, 2015) and is evident in many of the cases in Part II of this book.

In the hierarchical silencing that is evident in these cases, status was often conveyed in nonverbal language and resulted in clinicians making decisions based on incomplete or inaccurate information. In case 3, for example, the patient perceives the nurse's behavior as rushed and does not correct her when the nurse addresses her by the wrong name. In case 9, the nurse does not agree with the physician's order, but does not question the physician because of what the nurse perceives as his unapproachable demeanor. In case 10, a newer nurse remains silent because she does not want to question a more experienced nurse's assessment, and the more experienced nurse ignores statements made by the patient's mother. In each of these cases, one or more participants on the care team were silenced by the unspoken hierarchical social structure that existed, whether or not participants consciously supported it.

2. Changing situations, time pressure, and multitasking

Communication relies on participants' accurate encoding which is based on an interpretation of the situation and the encoder's goals for the communication. The basis for the message encoding that is required for successful communication is the encoder's interpretation of the information to be communicated – that is, the participant's assessment of the situation and formulation of goals for communication based on the data at hand. Healthcare settings such as outpatient clinics and inpatient hospital units are known to be fast-paced, constantly changing environments where clinicians often must make quick interpretations based on limited data. In addition to this time

pressure, clinicians are often required to attend to multiple sources of data and multiple unrelated events at the same time. In the context of limited time, constant change, multiple sources of data and many competing demands, the margin for clinician error in the trade-off between speed and accuracy is narrow. In the interest of speed, nurses often take shortcuts that include limiting patient and family involvement, following generic rules or responding in the same way they have in similar situations without taking time to fully examine the current situation. In the quest for expedience, nurses are led to trust decision support and data technologies without considering that these technologies at times fail. All of these tactics run the risk of compromising accuracy and conveying unintended goals when the nurse encodes the communication message.

In several of the cases described in Part II of this book, communication is disrupted in part because a clinician relied on prior knowledge of a particular patient when that patient's situation had changed, or a clinician relied on a set of rules in the absence of complete information. In case 2, for example, the nurse on a psychiatric unit relied on her knowledge of past situations when she made the incorrect assumption that a newly admitted patient was taking the antidepressant medication Paxil based on the daughter's report that her mother was taking a medication called "Plaxil." In case 24, the nurse admitting a new patient followed standard admission orders instead of taking into account information provided by the patient and suggesting additional lab tests to the care team. In case 29, an emergency department nurse responded to the patient's critical condition by implementing familiar resuscitation protocols without discussing the patient's treatment goals with the family.

Other cases demonstrate the risk incurred when nurses ignore patient and family input. Given the amount of data nurses must process, and the distracting work environment filled with multiple competing tasks and interruptions, it is not surprising that nurses at times choose to limit the amount of information they take in. In case 20, a child's mother requested water or juice for her son who was being evaluated for an injury, but emergency department staff, who had prioritized other patients during a particularly busy time, ignored her until the boy fainted. In case 25, during a busy time in the operating room, a float nurse took over care of a pre-op patient without receiving adequate information and did not to ask the patient which hip she was having replaced. In case 32, the nurse who was preparing a patient for discharge seemed not to notice that the patient's husband was overwhelmed by the information on how to care for his wife's jejunal feeding tube and did not make any effort to ensure his understanding.

In each of these examples, a nurse limited the amount of information that went into a decision and that ultimately went into what she or he encoded in a communication encounter. In each case, the nurse was under pressure to attend to what were seen as more important tasks; this led the nurse to *make assumptions*. Making assumptions based on limited data can seem like a necessary part of a nurse's work, given the underdetermined nature of the clinical environment. In this environment, it is often

the case that there are not enough data available to narrow the appropriate action to only one possibility. But in the cases discussed in this book, nurses failed to attend to all the available data by ignoring patients' and family members' voices or by assuming things about the situation without fully exploring alternative possibilities. These short-cut actions resulted in errors in communication encoding and decoding.

Diagnosing and reducing communication errors

1. Tools for clinical practice

It is important to take into account the particulars of the situation as well as the larger context when analyzing communication errors. Because it is thought to be impossible for nurses and other clinicians to practice safely within an unsafe system, the healthcare safety literature emphasizes the importance of the systems-based approaches taken by *Highly Reliable Organizations* (HROs; Institute of Medicine, 2001, 2003, 2013) to reduce medical errors. Healthcare institutions have taken important steps to implement system changes in healthcare delivery to eliminate hierarchies, promote inter-professional collaboration, and include the active participation of individuals and families seeking care. Efforts have also been made to reduce distractions and interruptions in nurses' work environments, and to better prepare nurses through education in quality and safety through projects like *Quality and Safety Education in Nursing* (QSEN, 2017). As part of these efforts, some institutions have implemented policies and procedures to standardize communication through checklists and scripts intended to promote teamwork and respect for the contributions of all members of the care team. Many institutions also have implemented team member training in communication skills using evidence-based models like the *Agency for Healthcare Research and Quality's* (AHRQ) *TeamSTEPPS* curriculum (Agency for Healthcare Research and Quality, 2014) and schools of nursing have integrated the QSEN competencies and teaching strategies into their curricula (QSEN, 2017).

Even with the many tools available to improve communication, it is evident in the discussion of the cases presented in Part II of this book that establishing a shared understanding takes time, effort, and skill on the part of all participants. Using *TeamSTEPPS* tools such as the *SBAR* communication strategy ("Situation, Background, Assessment, Recommendation") or CUS words ("I'm concerned, I'm uncomfortable, this is a safety issue") may be good ways to convey information in complex settings, but following the rules, or using checklists, algorithms, and scripts to reduce communication errors will never be sufficient (Agency for Healthcare Research and Quality, 2014; Benner, 1984; Benner et al., 2010; Benner et al., 1996; Dreyfus, 1992). As described in the introductory chapters of this book, communication skills are *relational* and are one aspect of clinical reasoning, judgment, and action. Like all other aspects of clinical practice, safe and effective communication in healthcare settings cannot be sup-

ported fully by rule-following; it requires human expertise gained through experiential learning (Benner et al., 1996; Dreyfus, 1992).

Expert practice is intuitive but, unlike the examples of nurses making assumptions without considering all the available data, expert practice in nursing is not a short-cut activity and requires the nurse to stay curious and open to all possibilities in a situation. Experts are always questioning, always asking, "What am I missing?" This thoughtful reflection in action from inside the situation is essential to sound clinical judgment and develops through engagement with clinical puzzles over time, thinking out loud, and sharing ideas with others in a community of practice (Benner et al., 1996; Tanner, 2006). Expert clinical practice includes expert communication skills that allow the nurse to encode and decode messages clearly and succinctly, and negotiate clear and accurate common understandings of clinical situations. Expert communication also allows the clinician to encode messages of ambiguity and uncertainty. Developing these skills requires engagement with experiential learning in practice and also reflection on practice. The Hannawa SACCIA typology described and demonstrated in Chapter 5 of this book gives nurses and other clinicians a method for reflecting on all aspects of communication encounters. As a common language, the Hannawa SACCIA typology offers a way to level hierarchies; as a method for reflecting in and on practice, the five SACCIA core competencies offer a way for the nurse to slow down and ensure she or he has gathered sufficient, accurate, clear data; that the data are contextualized; and that common understandings with other clinicians, the patient, and the family are accomplished through interpersonal adaptation.

2. Tools for educating nurses

It is clear that safe practice in complex healthcare settings requires clinicians to develop skills for successful communication. The method for analyzing and diagnosing communication errors presented in this book adds important elements to the healthcare safety discussion and supports the development of the communication expertise of nurses. The Hannawa SACCIA typology and the analyses and discussions of the cases in Part II of this book provide a sound method for diagnosing communication errors and give inter-professional teams a common language and strategies for making improvements that will reduce errors. The cases also provide an excellent starting point for nursing students to enter clinical practice imaginatively in classroom and lab settings and develop safe communication skills that will allow them to voice their concerns confidently.

For nurses to develop the communication skills necessary for safe practice requires more than providing them with tools like SBAR and CUS words. Safe communication requires the nurse to articulate nursing concerns effectively in a complex, hierarchically structured environment that places medicine at the top. In order to accomplish this and to overcome the hierarchical silencing evident is several of the

cases, nurses must develop a strong professional identity and confidence in the value they add to the healthcare team.

Using the cases and study questions provided in Part II of this book, nurse educators can structure learning opportunities for nursing students and nurses at all levels as well as for inter-professional teams of learners. In addition, nurse educators can use the cases as a way to encourage students to imagine themselves in the situation and to think like nurses by using reflective discussion questions (Day, 2011; Tanner, 2006): What do you notice? What are your main concerns? How will you respond to the client, patient, family, or professional colleague? How are your concerns and responses influenced by your identity as a nurse? By role modeling and coaching the students to think like nurses, the nurse educator can assist students in developing their voice and articulating nursing-specific concerns in different situations. This reflection on professional identity, combined with background readings from the introductory chapters of this book and an analysis of the communication errors that compromise safety can create powerful learning experiences for all levels of nursing education and staff development. By incorporating the case studies and the Hannawa SACCIA method into inter-professional learning activities with expert coaching and role modeling, nurse educators can assist students to further strengthen their safe communication skills and practices to overcome the hierarchical silencing present in many clinical settings.

The Hannawa SACCIA typology accounts for all aspects of communication. Its evidence-based categories of sufficiency, accuracy, clarity, contextualization, and interpersonal adaptation are not intended to replace relational or other clinical skills with another algorithm or set of rules. Instead, by developing an awareness of these categories and using this method to debrief errors, nurses will develop not only relational communication skills but also skills that allow them to reflect in and on practice, stay curious and questioning, stay present in the contextualized situation, and avoid shortcuts even in complex, time-pressured environments.

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