

SPECIAL CONTRIBUTION

Shared Decision-making in the Emergency Department: Respecting Patient Autonomy When Seconds Count

Erik P. Hess, MD, MSc, Corita R. Grudzen, MD, Richard Thomson, MD, Ali S. Raja, MD, and Christopher R. Carpenter, MD, MSc

Abstract

Shared decision-making (SDM), a collaborative process in which patients and providers make health care decisions together, taking into account the best scientific evidence available, as well as the patient's values and preferences, is being increasingly advocated as the optimal approach to decision-making for many health care decisions. The rapidly paced and often chaotic environment of the emergency department (ED), however, is a unique clinical setting that offers many practical and contextual challenges. Despite these challenges, in a recent survey emergency physicians reported there to be more than one reasonable management option for over 50% of their patients and that they take an SDM approach in 58% of such patients. SDM has also been selected as the topic on which to develop a future research agenda at the 2016 *Academic Emergency Medicine* consensus conference, "Shared Decision-making in the Emergency Department: Development of a Policy-relevant Patient-centered Research Agenda" (<http://www.saem.org/annual-meeting/education/2016-aem-consensus-conference>). In this paper the authors describe the conceptual model of SDM as originally conceived by Charles and Gafni and highlight aspects of the model relevant to the practice of emergency medicine. In addition, through the use of vignettes from the authors' clinical practices, the applicability of SDM to contemporary EM practice is illustrated and the ethical and pragmatic implications of taking an SDM approach are explored. It is hoped that this document will be read in advance of the 2016 *Academic Emergency Medicine* consensus conference, to facilitate group discussions at the conference.

ACADEMIC EMERGENCY MEDICINE 2015;22:856-864 © 2015 by the Society for Academic Emergency Medicine

In his description of the history of emergency medicine (EM), Dr. Brian Zink describes the sociopolitical forces that led to the formation of the first emergency department (ED) and first EM academic training program in the United States.¹ In the mid-1960s, with the number of specialists rising and the number of generalists declining, hospitals were quickly becoming health care delivery hubs. With declining access to outpatient general physicians, patients began to increasingly seek their health care in EDs across the United States. In 1961, three physicians in Alexandria, Virginia, led by Dr. James Mills, left their office prac-

tices, so that their clinical care was provided exclusively for staffing the Alexandria Hospital ED. As similar developments occurred in other U.S. cities, groups of emergency physicians (EPs) came together and formed the American College of Emergency Physicians. The imminent need for formal training gained momentum in Cincinnati, Ohio, where over 100,000 patients crowded the Cincinnati General Hospital grounds annually, presenting a pressing need to triage the "sick" from "not sick" patients. Hospital leadership decided something needed to be done about the "problem in the E.R." and Dr. Herbert Flessa was charged with the development

From the Department of Emergency Medicine, the Knowledge and Evaluation Research Unit, the Division of Healthcare Policy Research, Department of Health Services Research, and the Robert D. and Patricia E. Kern Center for the Science of Healthcare Delivery, Mayo Clinic (EPH), Rochester, MN; the Departments of Emergency Medicine and Population Health, New York University (CRG), New York, NY; the Institute of Health and Society, Newcastle University (RT), Newcastle upon Tyne, UK; the Department of Emergency Medicine, Brigham and Women's Hospital (ASR), Boston, MA; and the Department of Emergency Medicine, Washington University School of Medicine (CRC), St. Louis, MO.

Received October 1, 2014; revision received January 12, 2015; accepted January 21, 2015.

The authors have no relevant financial information or potential conflicts to disclose.

Supervising Editor: Gary Gaddis, MD, PhD.

Address for correspondence and reprints: Erik P. Hess, MD, MSc; e-mail: hess.erik@mayo.edu

of the first EM training program.¹ Unlike other specialties, which were based on a defined scientific body of knowledge, the genesis of EM was partly due to an urgent need—to care for any patient, anytime, anywhere. The genesis of EM also benefitted from the report, “Accidental Death and Disability: The Neglected Disease of Modern Society,” published by the National Research Council in 1966.²

Shared decision-making (SDM) shares features with the specialty of EM, in that to some degree, it emerged from a social movement. In session 356 at the Salzburg Global Seminar, an international forum convened for the purpose of reviving intellectual dialogue in post-war Europe, Valerie Billingham was credited with first coining the phrase “nothing about me without me.”³ This mantra, concisely encapsulating what it means to show respect for human dignity in the context of medical decision-making, has subsequently fueled the SDM movement and been adopted into national guidelines in the United Kingdom.⁴ The Picker Institute, in collaboration with patients and families, developed and conducted a survey that identified eight characteristics of care that, from the patient’s perspective, indicate high-quality and safe health care.⁵ These include:

1. Respect for patient’s values, preferences, and expressed needs.

Although disease processes are often described in physiological terms, illness is experienced at an individual level in a unique social and cultural context. When developing and executing a plan of care for patients, clinicians need to personalize the application of evidence-based medicine by eliciting and incorporating patients’ values and preferences into the decision-making process.

2. Coordination and integration of care.

Patients and their families are eyewitnesses to the process of health care delivery. Patients sense they are in good, competent hands if the care they receive is both effectively coordinated into coherent systems of care, and tailored to their individual needs and circumstances.

3. Information, communication, and education.

Effective communication by physicians involves the transmission of information, thoughts, and feelings in a manner that is effectively received by patients. Patients not only desire information regarding their illness, but also need the opportunity to process the information they receive.

4. Physical comfort, especially optimal pain management.

Although most people can take care of themselves under normal circumstances, both the experience of illness and interacting with the medical system can introduce physical discomfort and dependency. Clinicians need to recognize and address patients’ discomfort. Until basic human needs for physical comfort are met and pain is alleviated, humans will find it difficult to function and interact on a higher cognitive level.

5. Emotional support and alleviation of fear and anxiety.

Illness imposes an emotional burden on patients that

is often underappreciated by their clinicians. When patients’ emotions are acknowledged and fear and anxiety are addressed, their suffering is eased and they recover more quickly.

6. Involvement of friends and family, where appropriate.

7. Family members and close friends can have a substantially greater effect on a patient’s experience of illness than any health care professional.

They are the eyes and ears that watch over the patient and report what they see to doctors and nurses. During the crisis of a serious illness, families place the highest priority on timely, accurate, and honest information about the patient’s condition, changes in clinical status, and prognosis.

8. Continuity of care, including care transitions.

No single health care provider is responsible for all aspects of care, and health care services are fragmented. Coordination of care is essential to ensure that patients receive needed information and access to services with as little inconvenience as possible.

9. Timely access to care.

Patients need access to health care in a timely fashion. The timeliness of care access should be tailored to the severity of the patient’s disease and symptom burden and be minimally disruptive to his or her personal and professional obligations.

The Institute of Medicine report “Crossing the Quality Chasm: A New Health System for the 21st Century” expanded these themes further by defining patient-centered care as care that is not only “respectful of and responsive to individual patient preferences, needs, and values,” but also ensures that “patient values guide all clinical decisions.”⁶ This report also proposed 10 rules for system redesign, recommending not only that systems be designed to meet the most common types of patient needs, but also that they should be able to accommodate differences in patient preferences and encourage SDM.

The principles of patient-centered care and SDM have also emerged within the EM community. A recent article summarizing the breakout session on patient-centered care published in the proceedings of the 2011 *Academic Emergency Medicine (AEM)* consensus conference “Interventions to Assure Quality in the Crowded Emergency Department” identified patient involvement as one of three key domains of patient-centered care and called for research to optimize patient involvement and engagement in medical decision-making.⁷

Since the 2011 *AEM* consensus conference, there has been additional research on SDM in EM. A systematic review identified five decision support interventions designed to facilitate patient engagement in the ED setting. The evidence generated from this review indicated that patients may benefit from involvement in decision-making and found no empirical evidence to suggest that SDM is not feasible in the ED.⁸ One of the few trials of a decision aid in the ED focused on cardiac stress testing in patients at low risk for acute coronary syndrome and found that patients randomized to SDM facilitated by use of the *Chest Pain Choice* decision aid,⁹ compared to usual care, had increased knowledge and engagement in decision-making, a lower rate of observation unit admission

for stress testing, and a lower rate of cardiac stress testing within 30 days of the index ED visit.

Although SDM has been proposed as the “pinnacle of patient-centered care,”¹⁰ and the optimal approach to decision-making for many health care decisions, the rapidly paced and often chaotic ED environment is a unique clinical setting that offers many contextual challenges. In a recent survey, EPs reported the most common perceived barriers to SDM to be, “many patients prefer that the physician decides,” “when offered a choice, many patients opt for more aggressive care than they need,” and “it is too complicated for patients to know how to choose.”¹¹ Despite these perceived barriers, EPs reported there to be more than one reasonable

management option in over 50% of their patients and that they attempt to adopt an SDM approach in 58% of these patients. The contemporary relevance of SDM to EM practice is also highlighted by the selection of SDM as the focus for the 2016 *AEM* consensus conference, “Shared Decision-making in the Emergency Department: Development of a Policy-relevant Patient-centered Research Agenda” (<http://www.saem.org/annual-meeting/education/2016-aem-consensus-conference>). Table 1 shows the proposed breakout sessions for the conference around which original research submissions will be solicited.

To set the stage for the 2016 *AEM* consensus conference, we describe the conceptual model of SDM

Table 1
Proposed Breakout Session Topics at the 2016 *Academic Emergency Medicine* Consensus Conference, “Shared Decision-making in the Emergency Department: Development of a Policy-relevant Patient-centered Research Agenda,” Around Which Original Research Submissions Will Be Solicited

Breakout Topic	Questions for Discussion and Consensus-building
Testing of shared decision-making (SDM) in practice	<ul style="list-style-type: none"> • What are the priority ED presenting conditions for which ED-based SDM should be most urgently developed? • At what point in the care continuum should decision support instruments be introduced? • What impacts upon patients, emergency physicians, and ED processes are envisioned as consequences of implementation of SDM? • What are the “deliverables”? What outcomes will be tracked, and how will the outcomes be measured? (How can one establish general outcome criteria by which SDM can be assessed or measured, so that different modes of SDM can be compared?) • Provide current experience/examples
Implementation	<ul style="list-style-type: none"> • What decision support instruments will be employed to enable SDM? Which of these instruments currently exist, and what types of instruments need to be developed? • What are general barriers and facilitators to implementation of SDM in EM? • What are the foreseeable barriers and facilitators to implementation of SDM instruments in the ED? • What contextual factors specific to the ED may hinder or facilitate the use of SDM? • How can SDM be best supported in the acute setting? • How can EMRs be better designed to facilitate SDM? What barriers exist to the use of SDM among providers? • What are the key elements of evaluation and treatment for SDM?
Policy	<ul style="list-style-type: none"> • What state and/or federal policies have been leveraged to facilitate SDM? What are the current policy barriers? • What state and/or federal policies should be instituted to facilitate SDM? • Can any best practices for SDM be identified for dissemination?
Diagnostic testing	<ul style="list-style-type: none"> • How can the evidence-based medicine paradigm evolve to put patients at the center of decision-making? • What are the priority diagnostic tests for ED-based SDM?
Palliative care and geriatrics	<ul style="list-style-type: none"> • How can patients with palliative care needs be rapidly identified for SDM in the ED? • Under what circumstances can and should patients and/or surrogate decision makers be engaged in SDM around end of life care? • What decisions should be prioritized for SDM in the ED for patients who are in the last few months of life? • How can current patient attributes and priorities for important outcomes for older adults (e.g., functional status) be incorporated into ED-based SDM instruments? • How can and should individual risk profiles be adjusted for SDM when it occurs with older adults with multiple chronic conditions? • Can a list of priority chronic conditions for which acute exacerbations of the said chronic condition would be best managed through SDM be developed? (for instance might, congestive heart failure be an appropriate topic for SDM?).
Vulnerable populations	<ul style="list-style-type: none"> • What special populations (and the challenges they implicitly pose) need to be considered when developing SDM instruments for use with those special populations in the ED? (Examples could include minority, homeless, poor, or limited English proficiency patients). • What minimal requirements should be in place to enable SDM tools? (e.g., reading level, language) Which of these should always be present, and which should ideally be present? • How might SDM tools be evaluated differently in vulnerable populations?

as originally conceived by Charles et al.¹² and highlight some aspects of the model relevant to the practice of EM. In addition, through use of clinical vignettes from the authors' clinical practices, we describe scenarios in which SDM might be applicable to EM practice and then probe the ethical and pragmatic implications of SDM in these cases.

Shared Decision-making: The Charles et al. Model

Charles et al. developed a conceptual framework for SDM in the context of a potentially life-threatening disease with key treatment decisions that occur only once early on in the course of the disease and have major trade-offs for the patient.¹² For example, women with early-stage breast cancer are often faced with the decisions of breast-conserving surgery versus mastectomy and, after surgery, whether to undergo adjuvant chemotherapy or radiation.¹³ These decisions must be reached within weeks or months to avoid increasing the risk of deleterious outcome. In contrast, many time-dependent ED diagnostic and therapeutic decisions must be reached in a matter of seconds or minutes. In each case, several treatment options exist with a range of different possible outcomes, and there is uncertainty involved in the choice. In addition, each decision has the potential to positively or negatively affect the patient's physical and psychological well-being.

For cancers, patient decision-making typically occurs in an outpatient setting but away from a hospital. In distinction, decisions made in the ED must not only be executed quickly; they also are executed within a hospital, away from the familiar confines of a patient's home. Whether decisions must be made relatively quickly or nearly immediately, Charles et al.¹² proposed and subsequently refined¹⁴ three distinct but dynamically related models of decision-making: paternalistic, shared, and informed (Table 2). In each of these models there are three analytical stages of the decision-making process that, although separate, may occur together and/or iteratively: information exchange, deliberation, and choice. In the paternalistic model, information transfer is largely one way (from the clinician to the patient) and limited to biomedical information. The clinician, alone or in collaboration with other clinicians, makes any deliberations about the treatment, and the clinician decides which treatment to implement. A number of assumptions underlie the paternalistic model of decision-making: for most illnesses, there is only one best treatment to implement; clinicians not only have the greatest technical expertise and experience to make these decisions, but also consistently apply this knowledge to their patients; and clinicians are in the best position to weigh the benefits and trade-offs between different treatments.

The credibility of these assumptions began to be challenged starting in the 1960s as it became more widely accepted that there was more than one reasonable option for most treatment decisions and that these options frequently involved various tradeoffs between benefits and risks.¹⁵ More recent evidence has demonstrated that the rates of surgical procedures for specific diseases vary across geographic regions and that this degree of regional variation is not adequately explained

Table 2
Three Distinct but Dynamically Related Models of Medical Decision-making*

Analytical Stages	Models	Paternalistic	(In-between Approaches)	Shared	(In-between Approaches)	Informed
Information exchange	Flow Direction Type Amount	One-way Physician → patient Medical Minimum legally required Physician alone or with other physicians		Two-way physician ↔ patient Medical and personal All relevant for decision-making Physician and patient (plus potential others) Physician and patient		One-way Physician → patient Medical All relevant for decision-making Patient (plus potential others) Patient
Deliberation						
Decision			Provider-led and patient opinion sought/offered; patient acknowledges and agrees		Patient-led and provider opinion sought/ offered; provider acknowledges and agrees	

*Taken from Lin and Fagerlin,²³ which was adapted with permission from Charles et al.¹⁴

by the health status of the respective populations. For example, the Dartmouth Atlas of Healthcare (<http://www.dartmouthatlas.org/>) documents more than two-fold regional variation for 11 common surgical procedures across hospital service areas among Medicare enrollees, and this variation is thought to be more likely explained by differences in practice styles adopted during residency training than differences in disease severity or prevalence rates between regions.¹⁶ Additionally, since the patient rather than the clinician must live with the outcomes and trade-offs associated with a particular treatment decision, the assumption that the clinician is in the best position to weigh the benefits and tradeoffs for the patient when making treatment decisions has increasingly been called into question.¹⁵ Finally, research evidence suggests that when clinicians infer rather than explicitly elicit patients' preferences, clinicians' inferences are often inaccurate.¹⁷ The frequency with which this occurs cannot be quantified with certainty. In one study, clinicians inferred that 71% of patients with breast cancer rated keeping their breasts as a top priority, but the figure reported by patients was just 7%.¹⁸ In another study of patients with dementia, patients placed substantially less value than clinicians believed on the continuation of life with severely declining cognitive function.¹⁹ In the informed model, information transferred is again largely one-way from the clinician to the patient and limited to biomedical information. In this case, however, deliberation is by the patient alone, who then makes decisions about his or her own health care. The SDM model lies between these two extremes. In the SDM model, information transfer is two-way, with the clinician providing medical information needed for decision-making, the patient providing information about his or her preferences, and both the clinician and the patient deliberating and deciding together on the best treatment to implement.

Based on this conceptual model, Charles et al. propose minimum or necessary criteria that must be met for a given interaction between a clinician and a patient to be classified as SDM: 1) it must involve at least two participants, the clinician and the patient (or the patient's designated representative); 2) both parties must share information; 3) both parties must take steps to build consensus on the preferred treatment; and 4) an agreement on which treatment to implement must be reached.¹²

Applicability of the Charles et al. Model to EM

Although the Charles et al. model of SDM was initially conceptualized for deployment in an out-of-hospital context for a patient with recently diagnosed breast cancer, the model has some characteristics that fit well within an EM context. Emergency clinicians frequently provide care for patients with acute, life-threatening illnesses, and the emphasis on one-time irreversible decisions with trade-offs frequently experienced by the patient is applicable. The framework, which emphasizes a dynamic view of decision-making by highlighting that movements across models is possible in a single interaction, is also quite applicable to EM practice. An emergency clinician, for example, might start with a paternalistic model of decision-making when obtaining

initial low-risk, noninterventional diagnostics, and managing acute renal colic pain, before later adapting his or her style of decision-making to more closely resemble a shared or informed model as the patient's pain is better controlled and the patient begins to express specific management preferences based on past experience with the disease. Finally, the model highlights three primary approaches to decision-making: paternalistic, shared, and informed. Although there are additional decision-making approaches that lie in between these anchor points, labeling them runs the risk of implying normative judgments about "good" and "bad" approaches to decision-making. Deciding not to label additional decision-making approaches enables us to shift our focus to the specific situational contexts for which one approach might be more appropriate than another. This also fits well with EM practice, as the ED is a fast-paced, rapidly changing environment that requires a flexible approach to decision-making to provide high-quality care. The discussion that follows describes three cases from the authors' experiences that highlight key aspects influencing the approach clinicians take to medical decision-making in the ED setting.

Case 1: A 7-year-old Male With Minor Head Trauma

A 7-year-old male has been brought by his parents to the ED 3 hours after he fell from monkey bars and hit his head on the ground while playing in the park. His parents note that he struck his head on the ground first, followed by his arms and torso. There was an immediate witnessed loss of consciousness that lasted for approximately 30 seconds. He cried upon awakening but, after being consoled by his father, got up shortly thereafter and resumed playing with his friends. One hour after the injury, he spontaneously vomited, increasing his parents' concern and prompting the ED visit. There was no bile or blood noted in the emesis.

On examination in the ED, the child is sitting up and appears tired but is interactive and playful. There is no external evidence of trauma, no scalp hematoma, and no midline cervical tenderness. His mother and father appear appropriately anxious, are wondering whether their child has a concussion, and ask whether there will be any long-term complications from the head injury. While you are contemplating next steps on this case, you hear an alert overhead announcing the anticipated arrival of a severe trauma in the next 5 minutes. You quickly apologize to the parents for the interruption and leave the treatment room to prepare for the incoming trauma.

Case Discussion. This case highlights several key contextual opportunities and challenges of applying SDM in the emergency setting. First, although the parents raise several concerns, including the likelihood of concussion and potential long-term sequelae related to the head trauma, the primary decision at hand is one of diagnosis: should a head computed tomography (CT) be obtained now, or should the child be further observed in the ED and/or at home? This focus upon diagnosis, rather than treatment, which is common in EM, is unique in contrast to much of the SDM literature, which seeks to engage patients in treatment decisions, as is

the case in the Charles et al. model. Second, to attend to the most immediate imaging decision at hand, the clinician must simultaneously address the parents' questions and assess the child, while reframing the focus of the conversation on the child's risk for clinically important brain injury and the long-term risks posed by the radiation exposure of a head CT. Third, robustly validated prediction rules exist to inform decision-making in this patient, the Pediatric Emergency Care Applied Research Network (PECARN) prediction rules for head CT.²⁰ The presence of validated rules makes possible the task of precise risk assessment for clinically important conditions like brain injury or cranial injury requiring neurosurgical intervention, although many such instruments are underutilized.^{21,22} The mere existence of validated rules is insufficient to ensure accurate and explicit risk estimates, since the need to communicate risk information to the parents must employ an approach and terms they understand to ensure that their perception of their child's risk is accurate.²³ Fourth, given data that suggest that patients frequently feel compelled to conform to socially sanctioned roles and defer to clinicians during clinical consultations, the clinician needs to proactively create a safe and open environment for communication so the parents do not feel that asking questions will threaten the doctor-patient relationship and put the future quality of their child's care at risk.²⁴ Finally, in this case a higher-acuity patient interrupts the EP and diverts the clinician's immediate attention, emphasizing the responsibilities of an EP both for individual patients and for the safety of the entire population of patients in the ED at any moment in time. This population responsibility imposes external constraints on the EP that need to be acknowledged in the decision-making process and taken into consideration as we seek to develop an approach to communicating with patients and engaging them in the decision-making process.

Case Closure. After assessing and stabilizing the trauma patient, the clinician reinitiates a conversation with the child's parents. Using a recently developed decision aid designed to facilitate risk communication and decision-making with parents of children with minor head trauma, *Head CT Choice* (Data Supplement S1, available as supporting information in the online version of this paper),²⁵ the clinician explains to the parents that their child does indeed have a concussion (which the clinician diagnosed from the history and physical examination alone)²⁶ and that his symptoms may take several days to a few months to resolve. The clinician then reframes the conversation to focus on the child's risk for bleeding in or around the brain, which may require a stay in the hospital or a surgical procedure and can be excluded with a head CT. The child has two PECARN risk factors for serious brain injury—loss of consciousness and vomiting—and a well-conducted, large study of children with minor head trauma indicates that the child's risk of serious brain injury is between 1 and 3 in 100 (from the PECARN data, 3 of 321; 0.9%, 95% confidence interval [CI] = 0.2% to 2.7%).²⁰ The clinician shows the parents a visual depiction of a CT scanner to give them a better idea what

undergoing a CT would be like for their child and describe the specific symptoms they would need to watch for should they opt to further observe their child at home after ED discharge rather than undergo head CT. Finally, the clinician highlights the key benefits and trade-offs²⁷ associated with head CT versus home observation: speed of diagnosis, radiation exposure,²⁸ possible need for sedation, cost, potential to identify incidental or irrelevant abnormalities on the CT scan, and the anticipated wait in the ED.

The parents determine that they prefer to observe their child first in the ED, and then at home, in lieu of a head CT. Given that there is no external evidence of trauma and that the child looks well and is interactive, the clinician's clinical gestalt for clinically important brain injury coincides with the low (0.9%) risk generated from the PECARN database, and the clinician therefore is comfortable sending the child home, provided that the child's symptoms do not worsen in the next 2 hours. The final clinical assessment is communicated to the parents, at which time they are reassured and agree with the plan. The child is discharged 2 hours later and has an uneventful recovery.

Case 2: A 54-year-old Male With Palpitations and Fatigue

A 54-year-old male with a history of hypertension presents to the ED at 9 p.m. describing sudden-onset palpitations that began 12 hours earlier. He denies feeling short of breath or dizzy but acknowledges that he has "no energy." He has a history of paroxysmal atrial fibrillation for which he takes daily sotalol and aspirin. While reviewing his medical records, the clinician comes across an outpatient consult note in which the patient's electrophysiologist recommends that the patient first double his dose of sotalol should he experience palpitations and then wait to see if his symptoms resolve. The patient did take a double dose of sotalol 8 hours prior to arrival, but his palpitations and fatigue persisted. There is also documentation of a discussion regarding possible ablation if the patient's atrial fibrillation continues despite the additional sotalol.

The patient's initial electrocardiogram (ECG) demonstrates atrial fibrillation with a rapid ventricular response of 125 beats/min, and his most recent baseline ECG documents a normal sinus rhythm. The patient's vital signs are stable, his breathing is unlabored, and he is nontoxic appearing. His CHA₂DS₂-VASc score is 1, which is associated with a 2% annual stroke risk and for which he takes daily aspirin.²⁹

The EP explains to the patient that temporarily controlling his heart rate with intravenous medications will likely improve his symptoms and provide sufficient time to obtain results of blood tests and speak with his cardiologist. The patient agrees and rate control with diltiazem is initiated; a complete blood count, an electrolyte panel, and a serum thyroid-stimulating hormone level are obtained; and a call is placed to his cardiologist.

The patient's heart rate is well controlled with the diltiazem bolus and infusion, and blood testing reveals no significant abnormalities. On speaking with the patient's cardiologist, it is recommended that the EP initiate anti-

coagulation with low-molecular-weight heparin and admit the patient to the ED observation unit. The cardiologist agrees to come by in the morning to assess the patient and determine next steps. By this time, there are over 20 patients in the waiting room and the EP needs to evaluate the next patient. Without further discussion with the patient, the EP quickly speaks with the patient's nurse, writes orders, and admits the patient to the observation unit.

Just before signout at the end of the shift, the ED observation nurse contacts the EP and communicates that the patient with atrial fibrillation is upset and wants to leave the observation unit. The EP becomes frustrated as to why the patient is upset, especially given the effort that had been invested to carefully consider and develop the management plan in collaboration with his cardiologist, safely avoid an unnecessary hospital admission, and arrange the most expedient option available—cardiology consultation in less than 12 hours. Breathing deeply, the EP internalizes the frustration and speaks with the patient. The first thing the patient states is that he is worried for his safety, he has not seen a doctor for several hours, he feels “like a fly on the wall,” and he wonders why the recommendation has been made that he is to be sent to the observation unit. The EP reassures the patient that although he has atrial fibrillation he is safe: his vital signs are stable, his heart rate is well controlled, he is on a cardiac monitoring system with carefully preprogrammed limits that will trigger alarms should there be any abnormalities, and his nurse will promptly attend to him and notify the on-call clinician, if necessary. The EP also outlines to the patient the three clinical options that had been considered: 1) hospital admission, which would likely be less efficient and introduce more disruption in his life than an overnight stay in the ED observation unit; 2) discharge from the ED, which the EP did not feel was safe for the patient; or 3) ED observation unit admission, which, given the available options in this health care system, the EP thought was the safest and most efficient option available.

The patient (now feeling safe and reassured) tells the EP that he now understands the rationale for his management plan, all of his options, and why a well-meaning—but admittedly imperfect—clinician in the context of a full waiting room chose the option that was selected on his behalf. He thanks the EP for taking the time to speak with him and looks forward to speaking with his cardiologist in the morning.

Case Discussion. In this case, the EP has been caring for a hemodynamically stable patient with symptomatic recent-onset paroxysmal atrial fibrillation. The patient has had prior episodes of atrial fibrillation and has discussed the long-term treatment options with his electrophysiologist. Given the patient's prior discussions and his clinical stability, the EP's decision-making role is primarily supportive and should focus on making treatment decisions in line with the patient's prior decisions and long-term care plan. Discussing immediate cardioversion with the patient without including his electrophysiologist in the decision-making process would be disrespectful of the

patient's autonomy, his prior relationship with his cardiologist, and the long-term treatment plan that had been previously established.

Another issue highlighted by this case—which occurred in the first author's practice and would not meet criteria for SDM given the failure to educate and engage the patient in the decision to be admitted to the ED observation unit—is the need to educate patients regarding their management options and to consistently engage them in the decision-making process, regardless of the time and resources necessary to do so. In the end this patient was not involved in the decision-making process, but also did not express dissatisfaction with his degree of noninvolvement. Nevertheless, his preference for involvement in decision-making was not elicited, he was not educated regarding his options, he did not understand the rationale for ED observation unit admission, and his anxiety and frustration were an appropriate response to the lack of teaching and engagement. As EPs work together with their patients to consider approaches and interventions inclusively and humanely, while consistently showing respect to the patient, the time and resource limitations of the ED context require careful consideration.

Case 3: An 83-year-old Woman With Advanced Dementia and a Broken Hip After a Fall

A frail, elderly woman with advanced dementia presents from home with right hip pain after a fall. She rose from a chair and was walking to the kitchen without the assistance of her walker before she slipped and fell onto the kitchen floor. The patient's daughter, her health care power of attorney, witnessed the event and says that her mother never lost consciousness and did not strike her head on the floor. The patient's right hip appears shortened and internally rotated, and she moans with any manipulation of her right leg. There are no breaks in the skin, the limb is neurovascularly intact, and there is no other external evidence of trauma. The patient's daughter is tearful and appears overwhelmed after you tell her, “her hip is broken and your mother will need surgery.” The nurse hands you an ECG for another patient that shows ST elevation in the anterior leads so you tell the patient and her daughter that you will be back in a few minutes.

Case Discussion. A key principle of SDM is the assessment of a patient's capacity to understand the potential harms and benefits of various options.³⁰ While most patients with mild dementia will be able to provide informed consent and/or engage in SDM, those with advanced dementia usually cannot.³¹ In many of these instances, the surrogate decision-maker will be a clearly appointed health care proxy, although at other times the health care team may need to ascertain who best to engage in important health care decisions being made for the patient. Appropriate steps to identify a surrogate decision-maker include reviewing the medical record and contacting the primary care clinician, next of kin, and/or emergency contact. In this particular case, the daughter is the appointed health care proxy and thus able to make decisions based on what she believes to be her mother's wishes.

Table 3
Factors Influencing Degree to Which Clinicians Engage Patients in Shared Decision-making in the ED

<p>Patient factors</p> <ul style="list-style-type: none"> Acuity of illness Decision-making capacity Willingness to engage in the decision-making process Health literacy Socioeconomic, ethnic, and educational status <p>Provider factors</p> <ul style="list-style-type: none"> Patterns of practice/defaults developed over time Willingness to engage patients in shared decision-making Perceived medicolegal risk Cognitive load at that moment in time Perceived equipoise of the decision Understanding of the evidence relevant to the decision at hand Ability to rapidly and succinctly recall and communicate the benefits and trade-offs of the decision from a patient-centered perspective Ability to create a safe environment so patients feel comfortable asking questions regarding their management options <p>System and health care delivery context factors</p> <ul style="list-style-type: none"> Population responsibility Undifferentiated symptoms: focus on diagnosis and disposition Lack of continuity of care Availability of follow-up structures Time available to communicate with patients Number and nature of interruptions of physician tasks (e.g., does the interruption change the task being executed by the physician?) <p>Strengths and limitations of the scientific evidence base</p> <ul style="list-style-type: none"> Strength of the evidence establishing the benefits and trade-offs of the management options Is the evidence base established on outcomes that matter to patients? Availability of robust risk prediction tools to guide decision-making Availability of patient-targeted decision support interventions to facilitate shared decision-making Approaches to risk communication that best facilitate knowledge transfer and accurate risk perception
--

Case Closure. When the EP returns to the bedside, the daughter remains tearful. The EP apologizes for having to step away and asks if the daughter has any concerns. She explains that her mother never wanted to “be hooked up to a machine” or “have her chest pumped” and that the anesthesia team had told her that is a possibility. She was considering declining surgery for this reason, although she feared that this would confine her mother to bed for the rest of her life. After reviewing the risks and benefits of surgical versus non-surgical management options, including postoperative management and rehabilitation objectives within the context of the patient’s predementia self-stated goals of care, the EP explains that the patient can still have the surgery with “do not attempt resuscitation” and “do not intubate” orders in place. The daughter is relieved and thanks the EP for explaining these details. The EP pages the surgical team, whose members are likewise relieved that the patient has consented to the surgery.

These three cases highlight several aspects unique to the EM context that influence clinicians’ approaches to decision-making. Table 3 summarizes selected patient, clinician, and system factors influencing decision-making

in this article, as well as aspects of the scientific evidence base necessary to support SDM.

CONCLUSIONS

Although the path before us holds many challenges, the history and foundation of emergency medicine are fundamentally patient-centered. Emergency medicine arose out of a sociopolitical context driven by the need for patients to access high quality acute health care and by the need to improve time-critical trauma care. The modern context calls for a different kind of revolution, one that advocates for maximizing respect for patients’ autonomy, despite the contextual challenges. As those who have gone before us, practitioners of emergency medicine need to remain radically patient-centered.

You are cordially invited to contribute to the consensus-making process that is envisioned for the 2016 *AEM* consensus conference, “Shared Decision-making in the Emergency Department: Development of a Policy-relevant Patient-centered Research Agenda.” See you in 2016!

References

1. Zink BJ. *Anyone, Anything, Anytime: A History of Emergency Medicine*. Philadelphia, PA: Mosby Elsevier, 2005.
2. Committee on Trauma and Committee on Shock, National Research Council. *Accidental Death and Disability: The Neglected Disease of Modern Society*. Washington, DC: National Academies Press, 1966.
3. Delbanco T, Berwick DM, Boufford JI, et al. Health-care in a land called peopower: nothing about me without me. *Health Expectations* 2001;4:144–50.
4. National Health Service. *Equity and Excellence: Liberating the NHS*. Available at: <https://www.gov.uk/government/publications/liberating-the-nhs-white-paper>. April 9, 2015.
5. Jenkinson C, Coulter A, Bruster S, Richards N, Chandola T. Patients’ experiences and satisfaction with health care: results of a questionnaire study of specific aspects of care. *Qual Safe Health Care* 2002;11:335–9.
6. Institute of Medicine: Committee on Quality of Healthcare in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academies Press, 2001.
7. Pham JC, Trueger NS, Hilton J, Khare RK, Smith JP, Bernstein SL. Interventions to improve patient-centered care during times of emergency department crowding. *Acad Emerg Med* 2011;18:1289–94.
8. Flynn D, Knoedler MA, Hess EP, et al. Engaging patients in health care decisions in the emergency department through shared decision-making: a systematic review. *Acad Emerg Med* 2012;19:959–67.
9. Hess EP, Knoedler MA, Shah ND, et al. The chest pain choice decision aid: a randomized trial. *Circulation* 2012;125:251–9.
10. Barry MJ, Edgman-Levitan S. Shared decision making—pinnacle of patient-centered care. *N Engl J Med* 2012;366:780–1.

11. Kanzaria HK, Brook RH, Probst MA, Harris D, Berry SH, Hoffman JR. Emergency physician perceptions of shared decision-making. *Acad Emerg Med* 2015;22:399–405.
12. Charles C, Gafni A, Whelan T. Shared decision-making in the medical encounter: what does it mean? (or it takes at least two to tango). *Soc Sci Med* 1997;44:681–92.
13. Seror V, Cortaredona S, Bouhnik AD, et al. Young breast cancer patients' involvement in treatment decisions: the major role played by decision-making about surgery. *Psychooncology* 2013;22:2546–56.
14. Charles C, Gafni A, Whelan T. Decision-making in the physician-patient encounter: revisiting the shared treatment decision-making model. *Soc Sci Med* 1982;1999(49):651–61.
15. Rothman DJ. *Strangers at the Bedside: A History of How Law and Bioethics Transformed Medical Decision Making*. New York, NY: Basic Books, 1991.
16. Souba WC, Wennberg JE, Goodman DC. What kind of physician will you be? Variation in health care and its importance for residency training. *The Dartmouth Atlas of Healthcare*. Available at: <http://www.dartmouthatlas.org/pages/residency>. Accessed Apr 16, 2015.
17. Mulley AG, Trimble C, Elwyn G. Stop the silent misdiagnosis: patients' preferences matter. *BMJ* 2012;345:e6572.
18. Lee CN, Hultman CS, Sepucha K. Do patients and providers agree about the most important facts and goals for breast reconstruction decisions? *Ann Plastic Surg* 2010;64:563–6.
19. Volandes AE, Paasche-Orlow MK, Barry MJ, et al. Video decision support tool for advance care planning in dementia: randomised controlled trial. *BMJ* 2009;338:b2159.
20. Kuppermann N, Holmes JF, Dayan PS, et al. Identification of children at very low risk of clinically-important brain injuries after head trauma: a prospective cohort study. *Lancet* 2009;374:1160–70.
21. Corwin MT, Donohoo JH, Partridge R, Egglin TK, Mayo-Smith WW. Do emergency physicians use serum D-dimer effectively to determine the need for CT when evaluating patients for pulmonary embolism? Review of 5,344 consecutive patients. *AJR. Am J Roentgenol* 2009;192:1319–23.
22. Smith C, Mensah A, Mal S, Worster A. Is pretest probability assessment on emergency department patients with suspected venous thromboembolism documented before SimpliRED d-dimer testing? *CJEM* 2008;10:519–23.
23. Lin GA, Fagerlin A. Shared decision making: state of the science. *Circ Cardiovasc Qual Outcomes* 2014;7:328–34.
24. Frosch DL, May SG, Rendle KA, Tietbohl C, Elwyn G. Authoritarian physicians and patients' fear of being labeled 'difficult' among key obstacles to shared decision making. *Health Aff (Millwood)* 2012;31:1030–8.
25. Hess EP, Wyatt KD, Kharbanda AB, et al. Effectiveness of the head CT choice decision aid in parents of children with minor head trauma: study protocol for a multicenter randomized trial. *Trials* 2014;15:253.
26. Wing R, James C. Pediatric head injury and concussion. *Emerg Med Clin N Am* 2013;31:653–75.
27. Karpas A, Finkelstein M, Reid S. Which management strategy do parents prefer for their head-injured child: immediate computed tomography scan or observation? *Pediatr Emerg Care* 2013;29:30–5.
28. Boutis K, Cogollo W, Fischer J, Freedman SB, Ben David G, Thomas KE. Parental knowledge of potential cancer risks from exposure to computed tomography. *Pediatrics* 2013;132:305–11.
29. Lip GY, Nieuwlaat R, Pisters R, Lane DA, Crijns HJ. Refining clinical risk stratification for predicting stroke and thromboembolism in atrial fibrillation using a novel risk factor-based approach: the euro heart survey on atrial fibrillation. *Chest* 2010;137:263–72.
30. Sessums LL, Zembrzuska H, Jackson JL. Does this patient have medical decision-making capacity? *JAMA* 2011;306:420–7.
31. Buckles VD, Powlishta KK, Palmer JL, et al. Understanding of informed consent by demented individuals. *Neurology* 2003;61:1662–6.

Supporting Information

The following supporting information is available in the online version of this paper:

Data Supplement S1. Let's talk about concussion and your child's risk for more serious injury such as bleeding in or around the brain.