Improving Diagnosis Through Research into the Physician's Mind and the Patient's Experience

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BCM Baylor College of Medicine

Research into the Physician's Mind

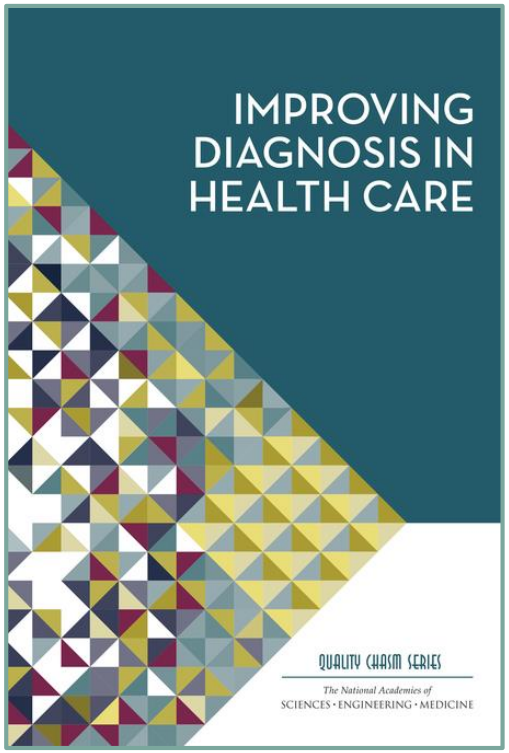
Ashley N.D. Meyer, PhD

Outline

- Overview of diagnostic error
- Cognitive vulnerabilities that affect diagnosis
- Potential interventions to improve diagnosis

NAM Definition of Diagnostic Error

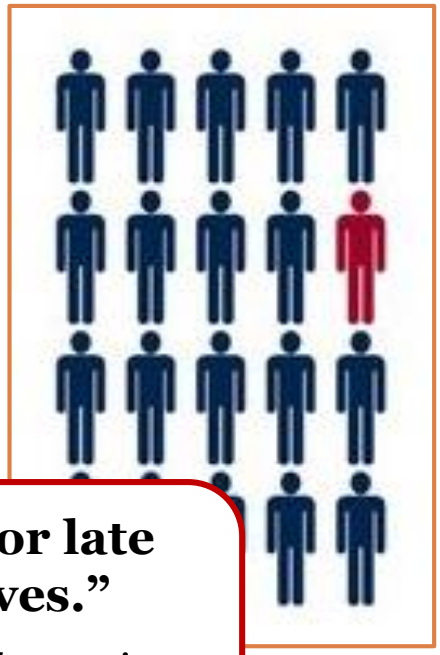
- The failure to
  - establish an accurate and timely explanation of the patient's health problem(s) or
  - communicate that explanation to the patient



National Academies of Sciences, Engineering, and Medicine. 2015. Improving diagnosis in health care. Washington, DC: The National Academies Press.

Diagnostic Errors are Pervasive

- ~5% of all US adults (~12 million people) have a diagnostic error every year.



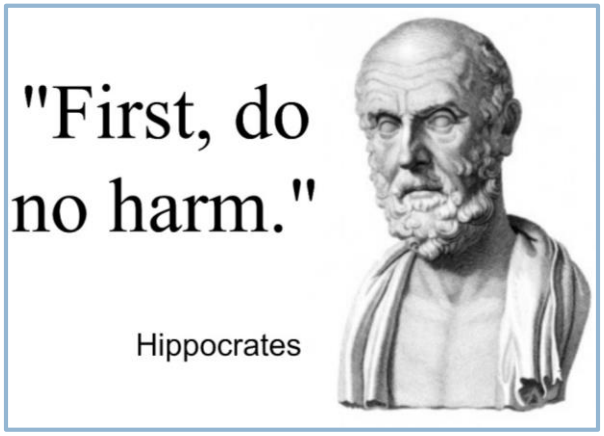
"Most Americans will get a wrong or late diagnosis at least once in their lives."

~National Academy of Medicine in their report, *Improving Diagnosis in Health Care*

Singh, H., Meyer, A.N.D., & Thomas, E. (2014). The frequency of diagnostic errors in outpatient care: estimations from three large observational studies involving US adult populations. BMJ Qual Saf, 23(9), 727-31.

Diagnostic Errors are Harmful

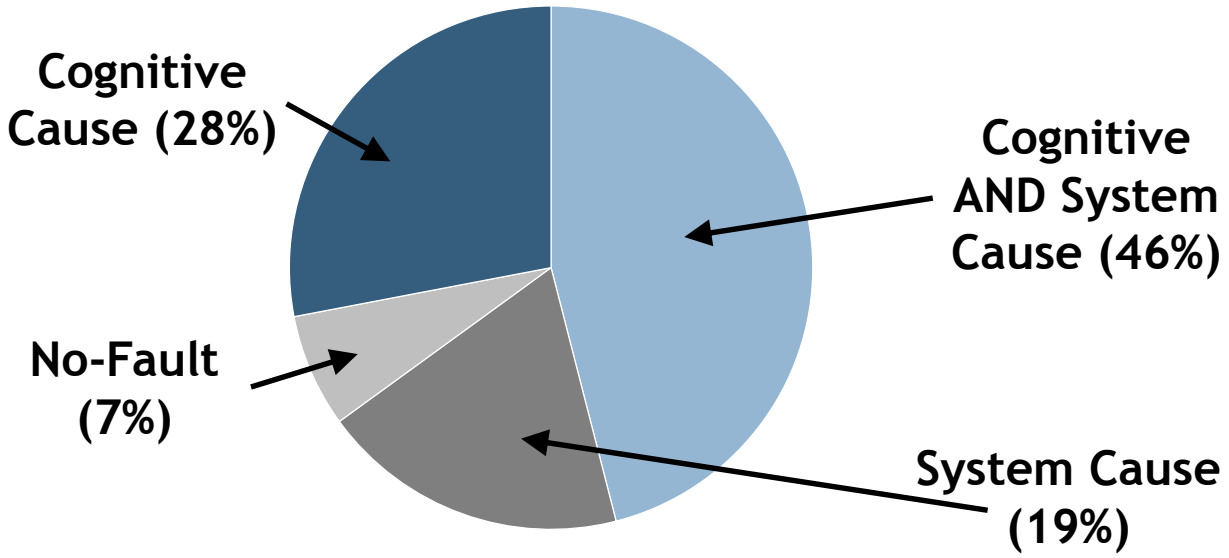
- ~2.5% of US adults will experience severe or permanent harm.[1]
- 40,000-80,000 people die every year as a result of diagnostic errors.[2]



Singh, H., Meyer, A.N.D., & Thomas, E. (2014). The frequency of diagnostic errors in outpatient care: estimations from three large observational studies involving US adult populations. BMJ Qual Saf, 23(9), 727-31.
Leape LL, Berwick DM, Bates DW. Counting deaths due to medical errors [letter]. JAMA 2002;288(19):2405.

Contributing Factors in Diagnostic Error

- About 3/4 of diagnostic errors have a cognitive cause.



Graber, M.L., Franklin, N., & Gordon, R. (2005). Diagnostic error in internal medicine. *Arch Intern Med*, 165:1493-1499.

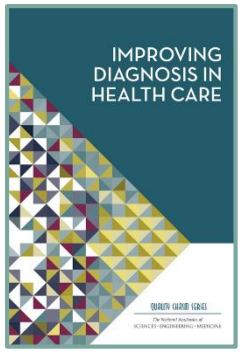
"Impact" of Cognitive Errors May be Higher

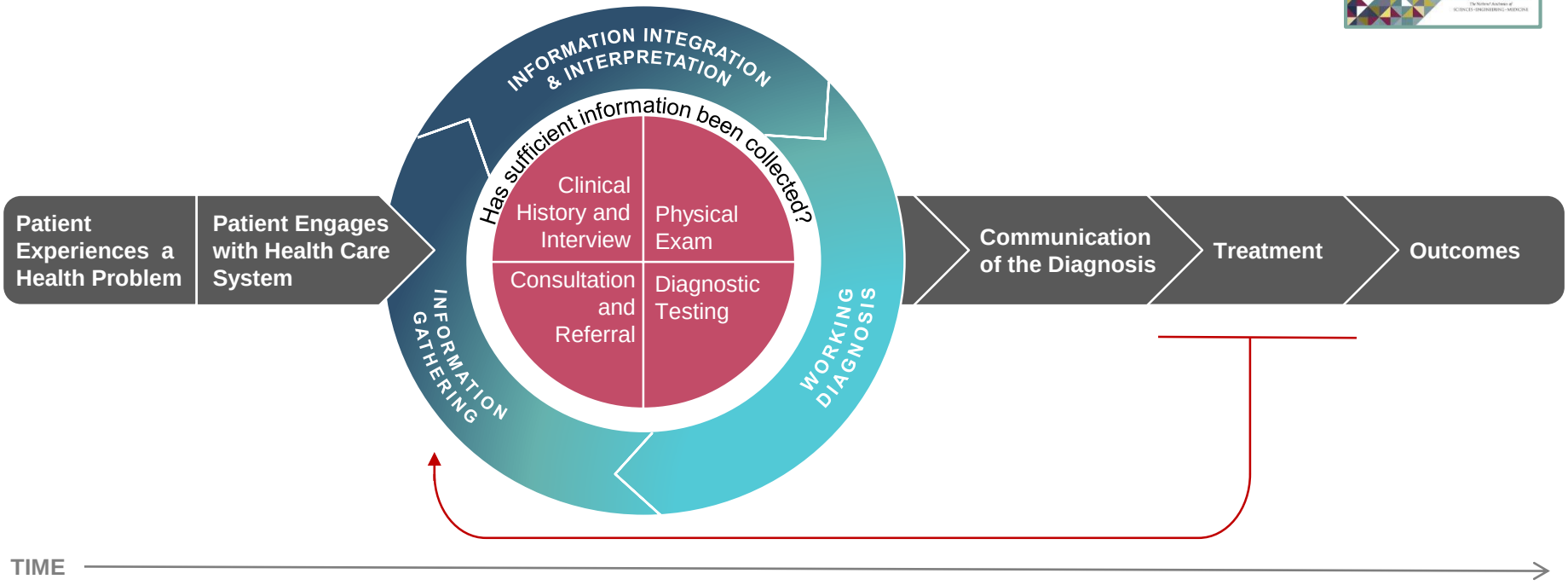
- "Impact" higher with cognitive etiologies *(VHA scale where likelihood of occurrence [1-remote to 4-frequent] X severity of harm [1-minor injury to 4-catastrophic injury])*

Etiology	Mean Impact (SEM)
Cognition	4.11 (0.46)
Cognition + System	4.27 (0.47)
System	2.54 (0.55)

Graber, M.L., Franklin, N., & Gordon, R. (2005). Diagnostic error in internal medicine. *Arch Intern Med*, 165:1493-1499.

Model of the Diagnostic Process

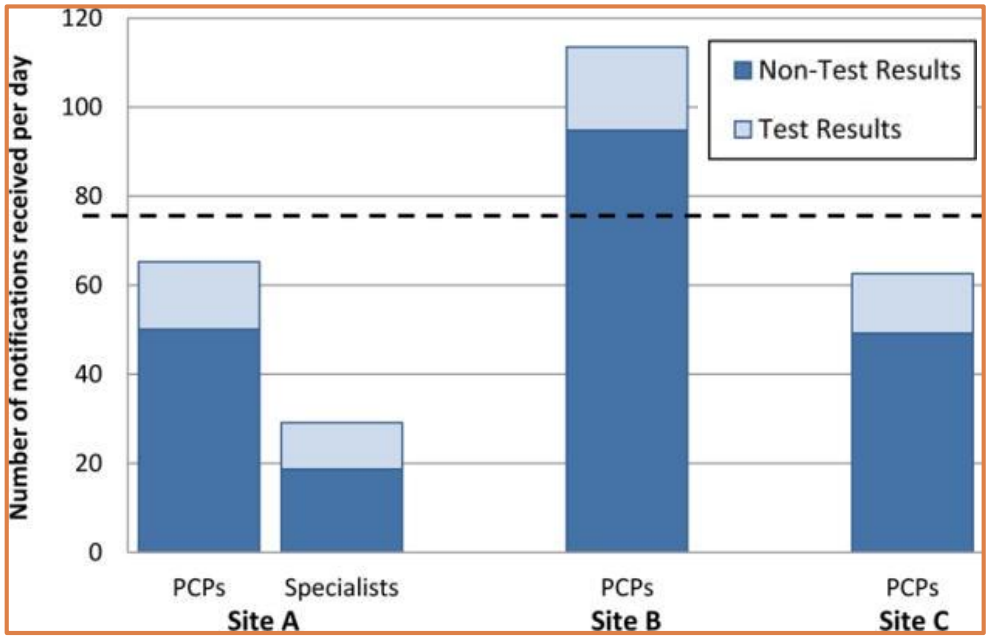




National Academies of Sciences, Engineering, and Medicine. 2015. Improving diagnosis in health care. Washington, DC: The National Academies Press.

Vulnerabilities Related to Perception and Attention

- We can only attend to so much information at once and attention heavily influences perception.
- Attention can be directed both internally and externally.
  - Internal: focusing on one thing at the expense of others
  - External: EHRs, alerts, notifications, interruptions, etc.



*Primary care providers (PCPs) received a mean of 76.9 notifications/day.

Murphy, D.R., Meyer, A.N.D., Russo, E., Sittig, D.F., Wei, L., & Singh, H. (2016). The burden of inbox notifications in commercial electronic health records. *JAMA Internal Medicine*, 176(4), 559-60.

Vulnerabilities Related to Memory

- We can only keep 5±2 chunks of information active in memory at any one time.
- There's an increasing number of diseases and diagnostic tests.

Vulnerabilities Related to Memory

- Medical knowledge and electronic data are expanding exponentially …

Potential Solution: Checklists

DE GRUYTER

Diagnosis 2014; 1(3): 223–231

Original Article

Open Access

Mark L. Graber*, Asta V. Sorensen, Jon Biswas, Varsha Modi, Andrew Wackett, Scott Johnson, Nancy Lenfestey, Ashley N.D. Meyer and Hardeep Singh

Developing checklists to prevent diagnostic error in Emergency Room settings

Abstract

Background: Checklists have been shown to improve performance of complex, error-prone processes. To develop a checklist with potential to reduce the likelihood of diagnostic error for patients presenting to the Emergency Room (ER) with undiagnosed conditions.

the physicians used the checklists in collaboration with the patient, despite being encouraged to do so. Checklist use did not prompt large changes in test ordering or consultation.

Conclusions: In the ER setting, checklists for diagnosis are helpful in considering additional diagnostic possibilities, thus having potential to prevent diagnostic errors. Incon-

Potential Solution: Checklists

HIGH RISK SITUATIONS FOR DIAGNOSTIC ERROR

- ☐ Have I ruled out must-not-miss diagnoses ?
- ☐ Did I just accept the first diagnosis that came to mind?
- ☐ Was the diagnosis suggested to me by the patient, nurse or another MD ?
- ☐ Did I consider other organ systems besides the obvious one ?
- ☐ Is there data about this patient I haven't obtained and reviewed ?
  Old records? Family? Primary care provider ?
- ☐ Are there any pieces that don't fit ?
- ☐ Did I read the X-ray myself ?
- ☐ Was this patient handed off to me from a previous shift ?
- ☐ Was this patient seen in the ER or clinic recently for the same problem ?
- ☐ Was I interrupted/distracted excessively while evaluating this patient ?
- ☐ Am I feeling fatigued right now, or cognitively overloaded ?
- ☐ Is this a patient I don't like for some reason ? Or like too much ? (friend, relative)

What to Do in High Risk Situations:

1. Pause to reflect -Take a diagnostic "time out"
2. Consider the universal antidote: What else could this be ?
3. Make sure the patient knows when and how to get back to you if necessary (eg, if their symptoms change or worsen)

Dizziness, ill-defined (1/21/12)

Vasovagal
Benign paroxysmal positional vertigo
Hyperventilation
*Drugs (antihypertensives, antidepressants, gentamicin, furosemide
Panic attack
Elderly multifactorial
Orthostatic hypotension
Autonomic insufficiency
Meniere's disease
Vestibular neuronitis, acute labyrinthitis
Valsalva
♠*Anemia
Idiopathic
♠Arrhythmias
♠Hypoglycemia
Psychiatric
♠Seizure, pseudoseizure
♠GI bleeding
♠Valvular heart disease, aortic stenosis
♠*Pulmonary embolus
♠*Myocardial infarction
♠Hypoxia
♠Aortic dissection
♠Acoustic neuroma
Post-concussion syndrome
Parkinson disease
♠Otitis media
Barotrauma, ruptured oval window, perilymph leak
Migrainous vertigo
♠Adrenal insufficiency, Addison's disease
Otosclerosis
Carotid hypersensitivity
♠Vertebral artery dissection
♠*Brain stem stroke
Cough, micturition, defecation
♠Hypertrophic cardiomyopathy
♠Cardiac tamponade
Subclavian steal
Atrial myxoma
♠Multiple sclerosis

Prevalence

♠ Don't miss
* Commonly missed

Potential Solution: Triggers Using Big Data as a Safety Net

- Triggers: "Signals for detecting likely adverse events" *AHRQ PSNet*
- Electronic triggers "look for" potential adverse events using EHR data
  - Example: suspicious chest-x ray with no follow-up CT scan in 30 days

NARRATIVE REVIEW

OPEN ACCESS

Application of electronic trigger tools to identify targets for improving diagnostic safety

Daniel R Murphy,[1,2] Ashley ND Meyer,[1,2] Dean F Sittig,[1,3,4] Derek W Meeks,[1,2] Eric J Thomas,[4] Hardeep Singh[1,2]

ORIGINAL ARTICLE CLINICAL PRACTICE MANAGEMENT

SA-CME

Electronic Triggers to Identify Delays in Follow-Up of Mammography: Harnessing the Power of Big Data in Health Care

Daniel R. Murphy, MD, MBA[a,b], Ashley N. D. Meyer, PhD[a,b], Viralkumar Vaghani, MBBS[a,b], Elise Russo, MPH[a,b], Dean F. Sittig, PhD[c], Li Wei, MS[a,b], Louis Wu, PA[a], Hardeep Singh, MD, MPH[a,b]

Electronic Detection of Delayed Test Result Follow-Up in Patients with Hypothyroidism

Ashley N. D. Meyer, PhD[1], Daniel R. Murphy, MD, MBA[1], Aymer Al-Mutairi, MD[2], Dean F. Sittig, PhD[3], Li Wei, MS[1], Elise Russo, MPH[1], and Hardeep Singh, MD, MPH[1]

JOURNAL OF CLINICAL ONCOLOGY ORIGINAL REPORT

Electronic Trigger-Based Intervention to Reduce Delays in Diagnostic Evaluation for Cancer: A Cluster Randomized Controlled Trial

Daniel R. Murphy, Louis Wu, Eric J. Thomas, Samuel N. Forjuoh, Ashley N.D. Meyer, and Hardeep Singh

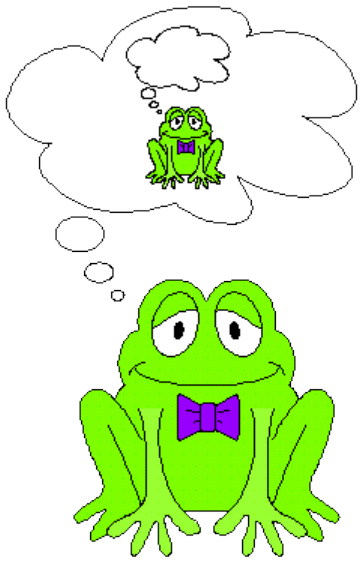
Clinical Gastroenterology and Hepatology 2018;16:90–98

Development and Validation of Trigger Algorithms to Identify Delays in Diagnostic Evaluation of Gastroenterological Cancer

Daniel R. Murphy,[*,‡] Ashley N. D. Meyer,[*,‡] Viralkumar Vaghani,[*,‡] Elise Russo,[*,‡] Dean F. Sittig,[§] Li Wei,[*,‡] Louis Wu,[*] and Hardeep Singh[*,‡]

Vulnerabilities Related to Metacognition

- Metacognition = thinking about your thinking.
- If metacognition is accurate, you can plan accordingly.
- Unfortunately, physicians don't always know what they don't know.



Diagnostic Accuracy and Confidence

Research

Original Investigation

Physicians' Diagnostic Accuracy, Confidence, and Resource Requests

A Vignette Study

Ashley N. D. Meyer, PhD; Velma L. Payne, PhD, MBA; Derek W. Meeks, MD; Radha Rao, MD; Hardeep Singh, MD, MPH

IMPORTANCE Little is known about the relationship between physicians' diagnostic accuracy and their confidence in that accuracy.

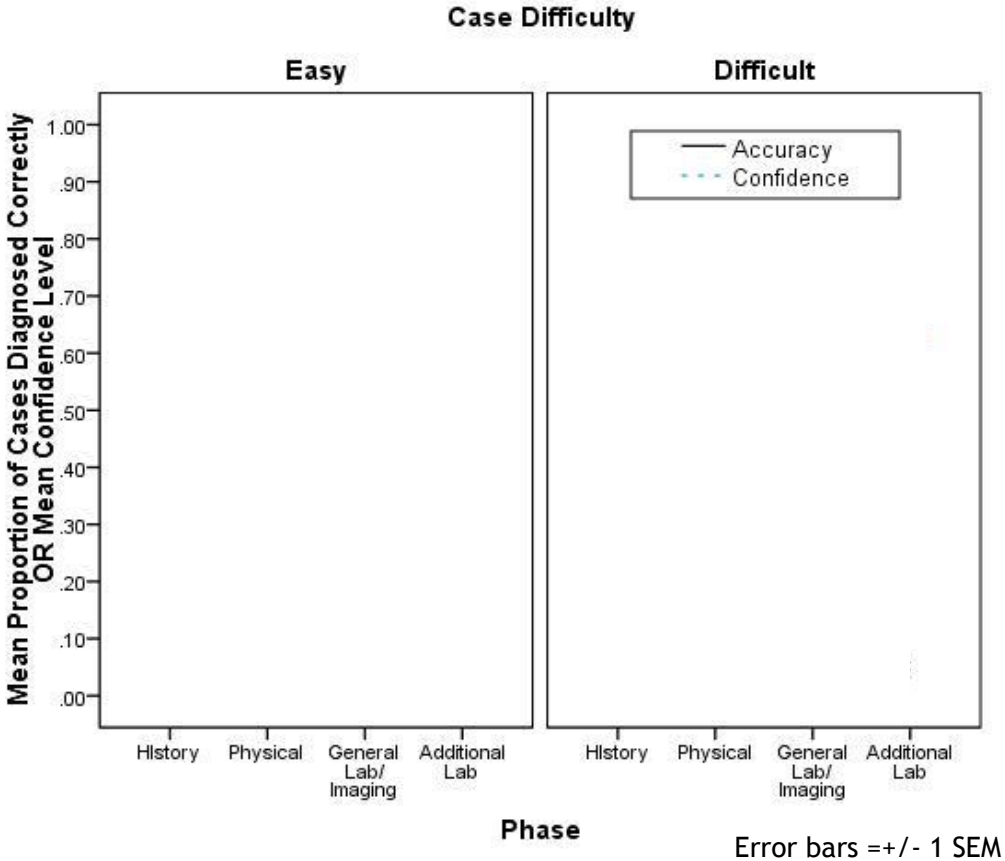
OBJECTIVE To evaluate how physicians' *diagnostic calibration*, defined as the relationship between diagnostic accuracy and confidence in that accuracy, changes with evolution of the diagnostic process and with increasing diagnostic difficulty of clinical case vignettes.

Invited Commentary page 1959

Supplemental content at jamainternalmedicine.com

Meyer et al JAMA Intern Med 2013

Results: Accuracy and Confidence

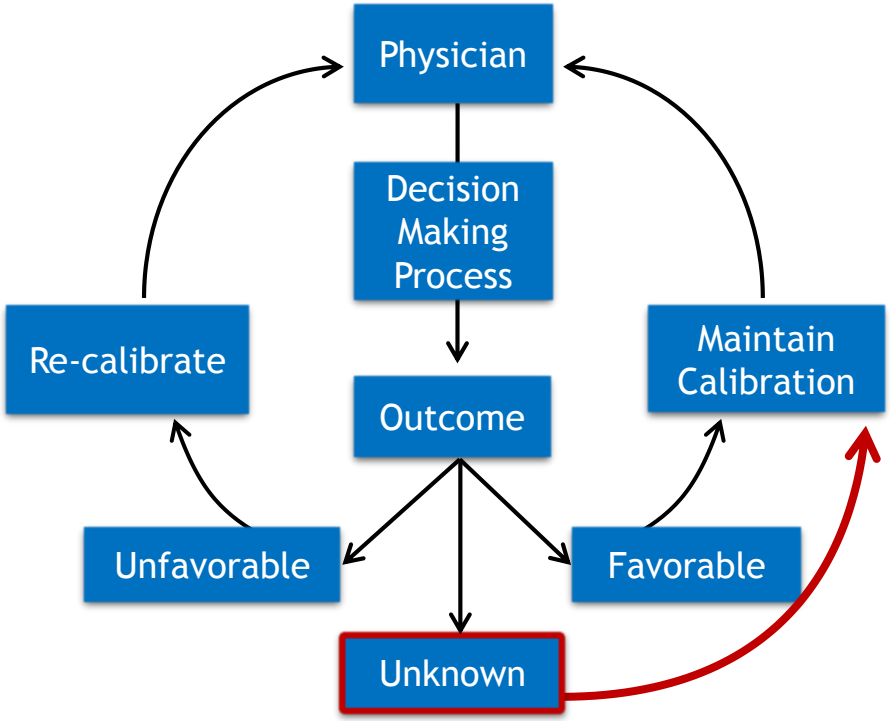


Error bars =+/- 1 SEM

More Results and Significance

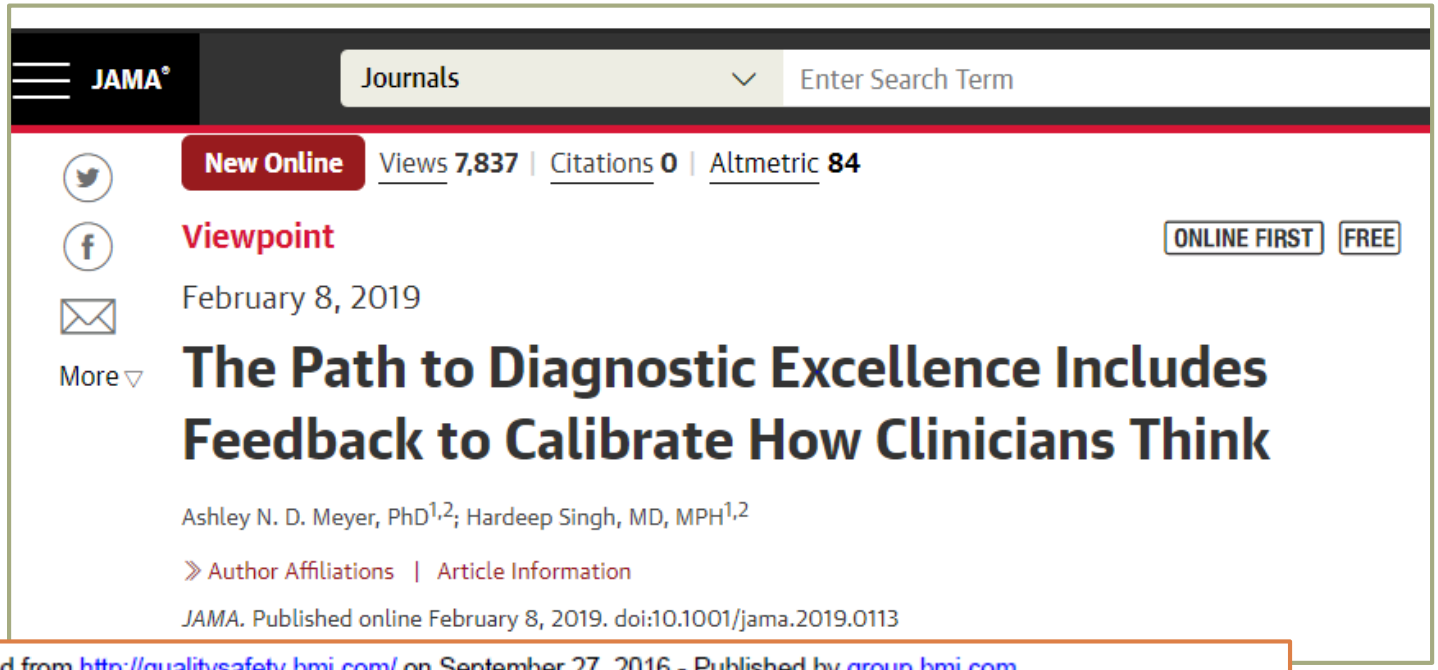
- Higher confidence related to decreased requests for additional diagnostic tests.
- But, since physicians' diagnostic accuracy and confidence were not aligned, physicians did not seek help when they most needed it.

Potential Solution: Feedback



Croskerry P. The feedback sanction. *Academic Emergency Med 2000.*

Potential Solution: Feedback



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The Path to Diagnostic Excellence Includes Feedback to Calibrate How Clinicians Think

Ashley N. D. Meyer, PhD[1,2]; Hardeep Singh, MD, MPH[1,2]

» Author Affiliations | Article Information

JAMA. Published online February 8, 2019. doi:10.1001/jama.2019.0113

BMJ Quality & Safety Online First, published on 26 September 2016 as 10.1136/bmjqs-2016-006071

EDITORIAL

Calibrating how doctors think and seek information to minimise errors in diagnosis

Ashley N D Meyer,[1,2] Hardeep Singh[1,2]

Other Potential Solutions

- Second Opinions
- Crowdsourcing
- Better Technology

CLINICAL RESEARCH STUDY

Evaluation of Outcomes From a National Patient-initiated Second-opinion Program

Ashley N.D. Meyer, PhD,[a,b] Hardeep Singh, MD, MPH,[a,b] Mark L. Graber, MD, FACP[c,d]

[a]Houston Veterans Affairs Center for Innovations in Quality, Effectiv
Tex; [b]Section of Health Services Research, Department of Medicine, B
Triangle Park, NC; [d]SUNY Stony Brook School of Medicine, New Yo

THE AMERICAN JOURNAL of MEDICINE®

JOURNAL OF MEDICAL INTERNET RESEARCH Meyer et al

Original Paper

Crowdsourcing Diagnosis for Patients With Undiagnosed Illnesses: An Evaluation of CrowdMed

Ashley N.D Meyer[1,2], PhD; Christopher A Longhurst[3], MD, MS; Hardeep Singh[1,2], MD, MPH

Cognitive Wrap-Up

- Many cognitive vulnerabilities affect diagnostic decision-making, but potential solutions are being developed.
- Potential solutions need to be tested and much more research needs to be done.

Narrative review

Cognitive interventions to reduce diagnostic error: a narrative review

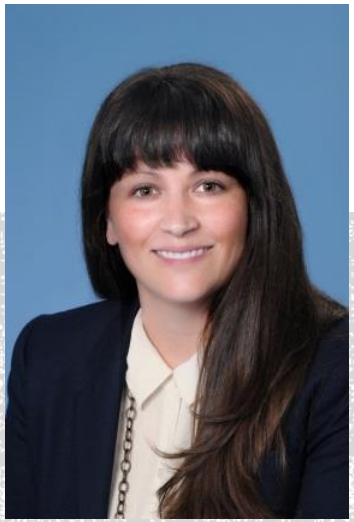
Mark L Graber,[1,2,3] Stephanie Kissam,[3] Velma L Payne,[4,5] Ashley N D Meyer,[6,7] Asta Sorensen,[3] Nancy Lenfestey,[3] Elizabeth Tant,[3] Kerm Henriksen,[8] Kenneth LaBresh,[3] Hardeep Singh[6,7]

System-related interventions to reduce diagnostic errors: a narrative review

Hardeep Singh,[1,2] Mark L Graber,[3] Stephanie M Kissam,[3] Asta V Sorensen,[3] Nancy F Lenfestey,[3] Elizabeth M Tant,[3] Kerm Henriksen,[4] Kenneth A LaBresh[3]

Capturing the Patient Experience

Traber D. Giardina, PhD, MSW



"Patients can be very satisfied and be dead an hour later."

Patient experiences are underutilized

Relegated to the notion of satisfaction

Huerta TR, et.al. *J Healthc Qual*. 2016;38(1):17-23.

Error Reporting

Error data are typically collected via

- medical-record reviews,
- autopsies,
- malpractice claims,
- electronic triggers, and
- incident reporting.

Incident reporting:

- Engage clinicians and healthcare workers
- Capture events that have significant consequences
- Under reporting of near misses (volunteer reporting)

Patient Safety Lens

Favors learning

Patient complaints as adverse events

- Human factors approach
- Reporting and responding
- Transparency

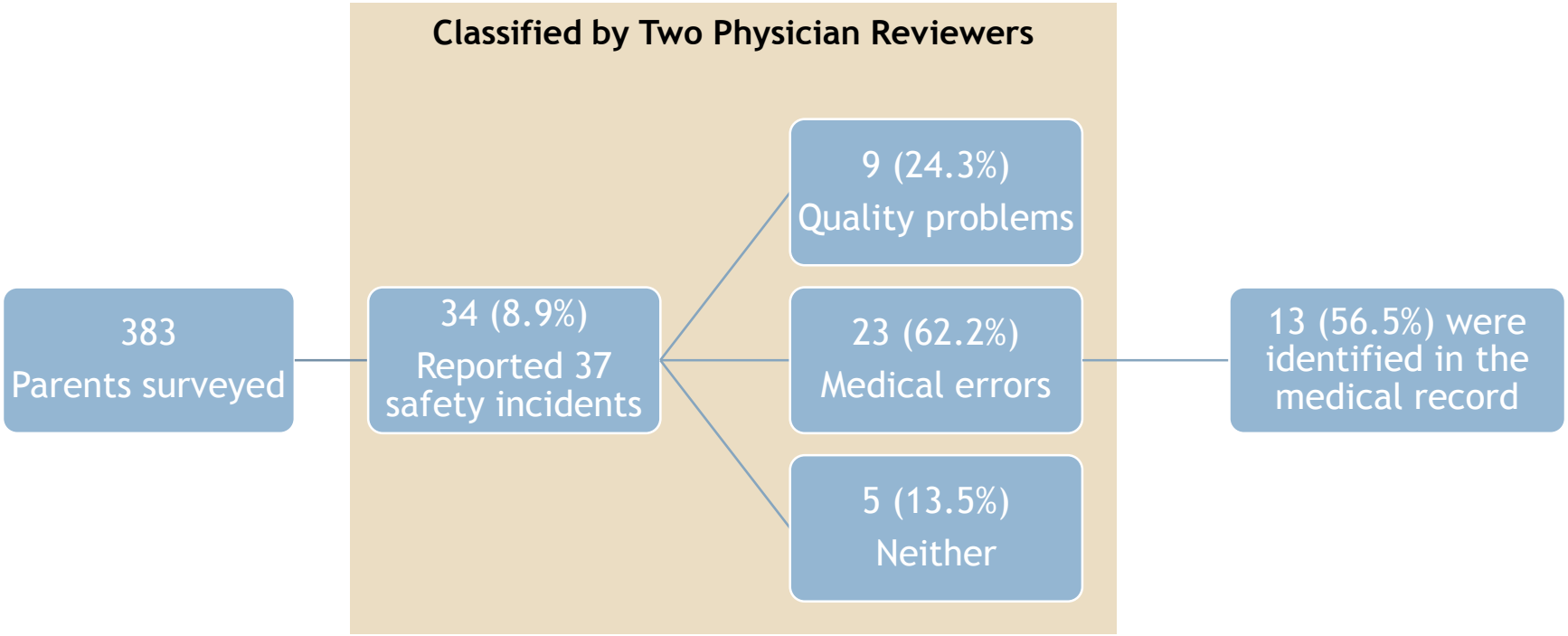
Gallagher TH, Mazor KM. BMJ Qual Saf. 2015;24(6):352-355.

Patients provide valuable information

- Information missing in incident reports or medical records
- Contributory factors: Communication and coordination failures

Kinnunen & Sarantob. Stud Health Technol Inform. 2013;192:92-6.
Southwick FS, et. al. BMJ Qual Saf. 2015;24(10):620-629.
Weingart SN,, et al.. J Gen Intern Med. 2005;20(9):830-836.

Parent-Reported Errors and Adverse Events



Khan A, et al. JAMA Pediatr. 2016;170(4):e154608.

Patients are motivated to report

- To avoid repeated incidents
- To identify cause
- Patients need:
  - feedback
  - opportunities closer to real-time

Kinnunen & Sarantob. Stud Health Technol Inform. 2013;192:92-6.

Background - Patient Experiences

ORIGINAL RESEARCH

OPEN ACCESS

A patient-initiated voluntary online survey of the persp patients a

Frederick S Southw

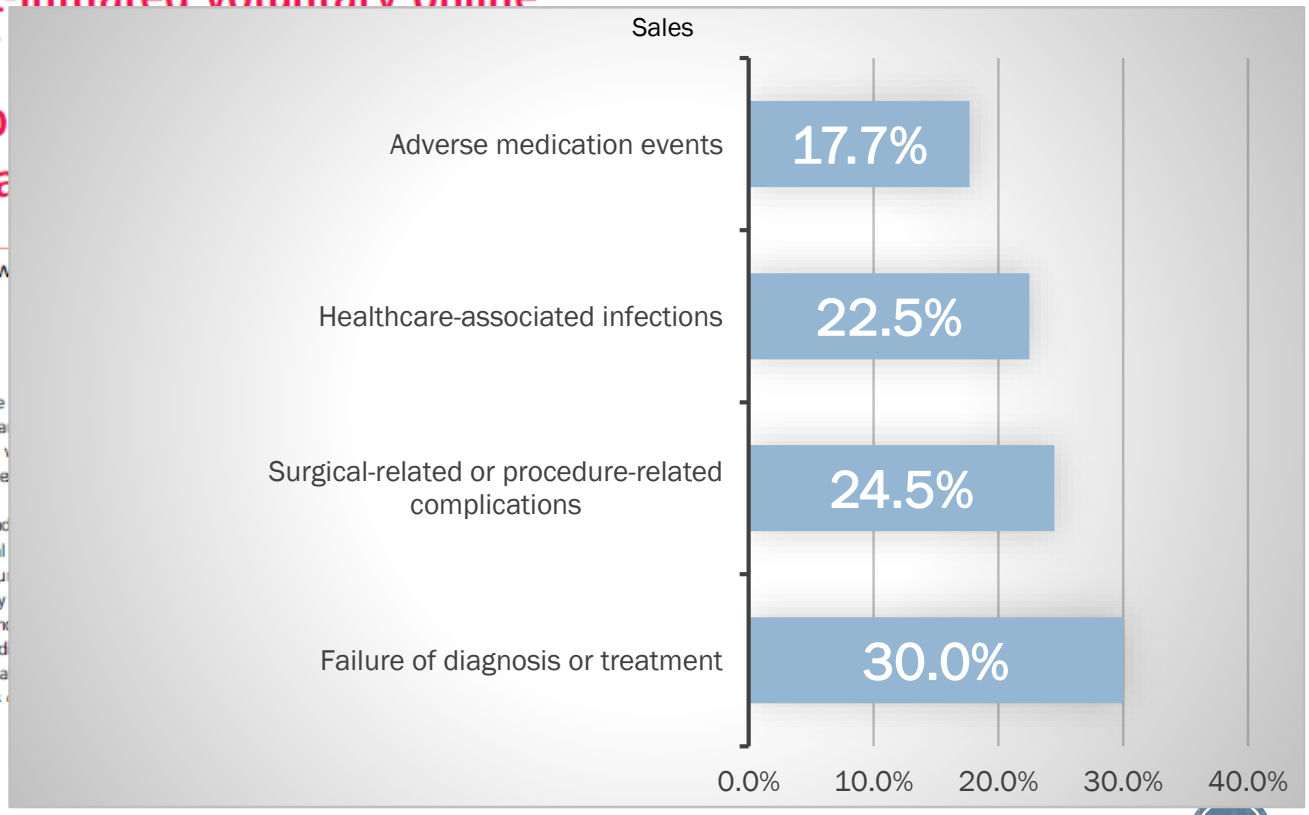
► Additional material is published online only. To view please visit the journal online (http://dx.doi.org/10.1136/bmjqs-2015-003980).

[1]Department of Medicine, University of Florida, Gainesville, Florida, USA
[2]Department of Behavioral Science and Community Health, College of Public Health and Health Professionals, University of Florida, Gainesville, Florida, USA
[3]Empowered Patient Coalition, San Francisco, California, USA

ABSTRACT

Background Preventable continue to be a major ca USA and throughout the have written about their e and in published books.

Methods As patients and have experienced medical a nationwide voluntary su broadly and systematically perspective of patients an experiencing adverse med used quantitative and qua summarise the responses



Southwick FS, et al. BMJ Qual Saf. 2015;24(10):620-629.

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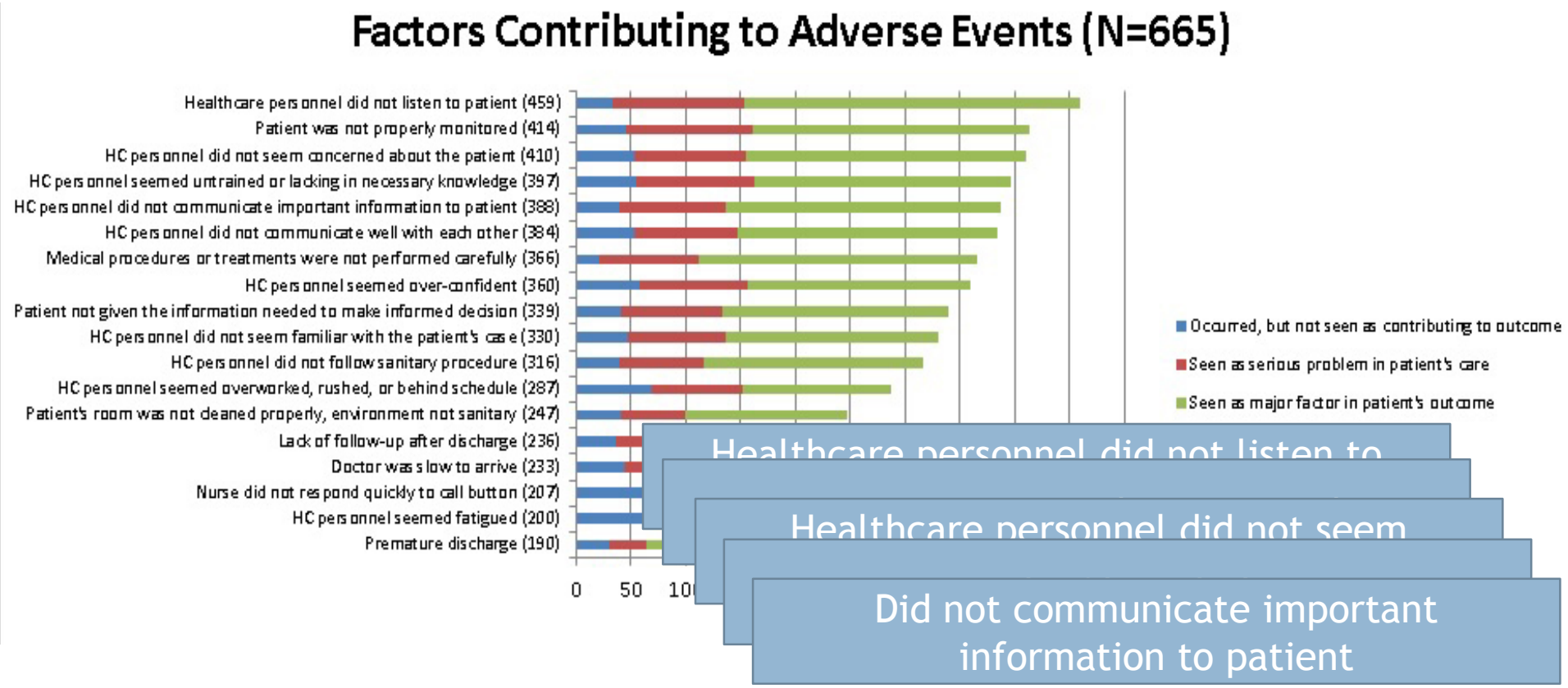
The Empowered Patient Coalition

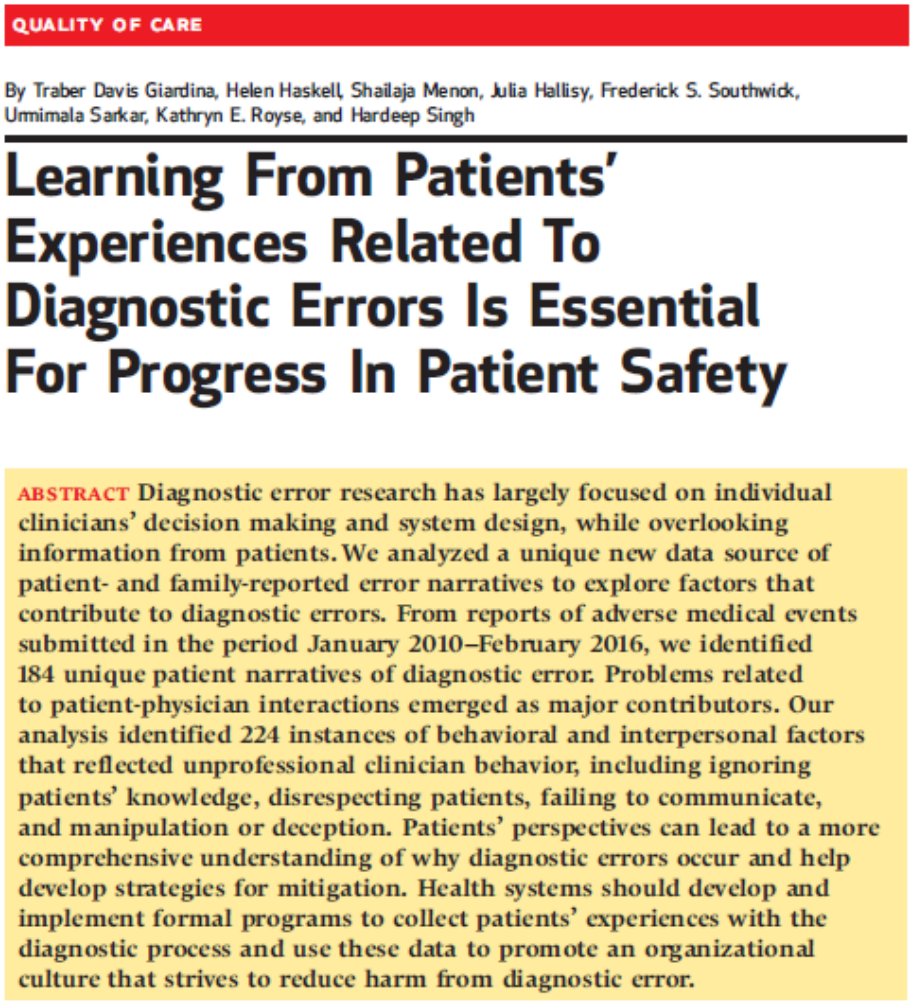
Capturing the Patient Experience



http://empoweredpatientcoalition.org/report-a-medical-event/view-reporting-data/

Learning from Patients

- Objective: To better understand behavioral and interpersonal factors that contribute to diagnostic errors, we conducted a secondary data analysis of patient- and family-reported diagnostic error narratives.



QUALITY OF CARE

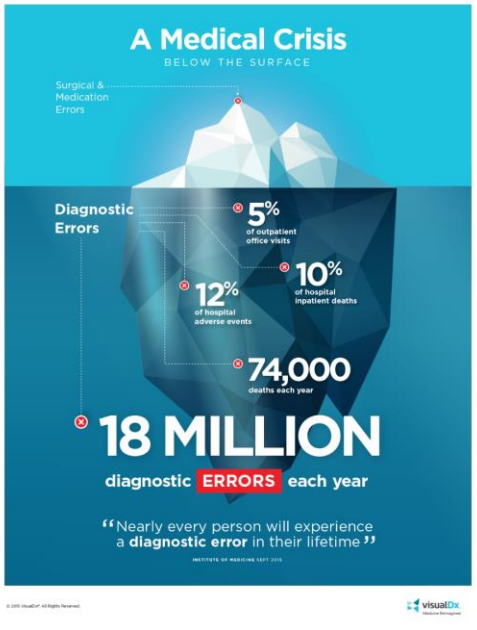
By Traber Davis Giardina, Helen Haskell, Shailaja Menon, Julia Hallisy, Frederick S. Southwick, Urmimala Sarkar, Kathryn E. Royse, and Hardeep Singh

Learning From Patients' Experiences Related To Diagnostic Errors Is Essential For Progress In Patient Safety

ABSTRACT Diagnostic error research has largely focused on individual clinicians' decision making and system design, while overlooking information from patients. We analyzed a unique new data source of patient- and family-reported error narratives to explore factors that contribute to diagnostic errors. From reports of adverse medical events submitted in the period January 2010–February 2016, we identified 184 unique patient narratives of diagnostic error. Problems related to patient-physician interactions emerged as major contributors. Our analysis identified 224 instances of behavioral and interpersonal factors that reflected unprofessional clinician behavior, including ignoring patients' knowledge, disrespecting patients, failing to communicate, and manipulation or deception. Patients' perspectives can lead to a more comprehensive understanding of why diagnostic errors occur and help develop strategies for mitigation. Health systems should develop and implement formal programs to collect patients' experiences with the diagnostic process and use these data to promote an organizational culture that strives to reduce harm from diagnostic error.

Diagnostic errors are often underreported

- Patients' experiences missing
- Underlying causes are often hidden



Diagnostic error research has focused on:

- individual clinicians' decision making
- system design

The Empowered Patient Coalition provides resources enabling patients to take control of their medical treatments and safety.

Search this website ... Search

The Empowered Patient Coalition

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Report A Medical Event

The goal of this effort by Empowered Patient Coalition is to capture a snapshot of the impact of medical events from the patient's point of view.

This survey is designed to answer questions that are important to patients. We want the public to know that they can and must be the cornerstone to improving health care quality and safety and that their experiences are being counted.

The survey is divided into sections covering various categories of medical adverse events. Boxes simply can be checked but we encourage you to use the narrative sections to share vital details, observations and suggestions.

Your contact information will remai

share it. With the understanding that this is a voluntary survey containing subjective
website.

Sharing your story will ensure that your experiences will assist us in collecting data t
ways to keep patients safe in the future by reporting our findings in research papers a
survey and thank you for your time.

Complete A Survey

The Empowered Patient Coalition

The Empowered Patient Coalition is a non-profit organization promoting patient advocates and

Have you, or someone you
love had an adverse medica
experience with a product,
procedure, or medication?
Learn How Reportin

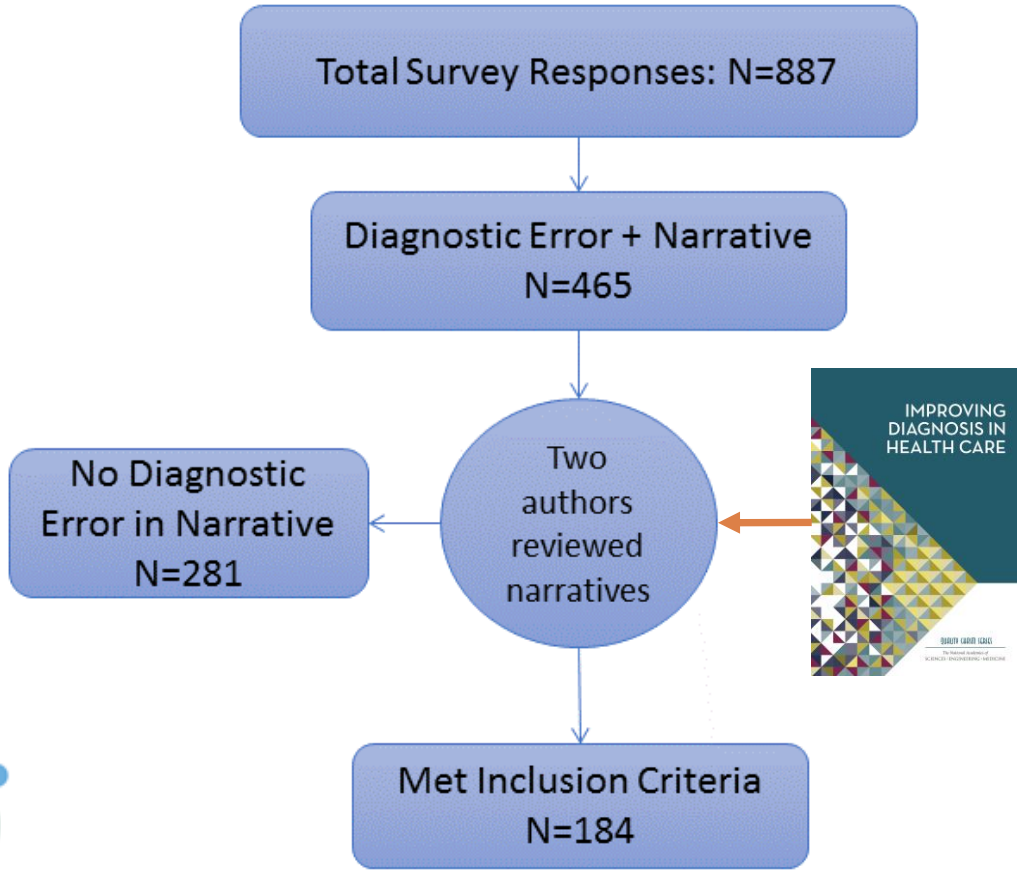
48. NARRATIVE (Please give a brief description of the incident and any additional comments or suggestions you have for how the incident might have been prevented.)

NARRATIVE:

Comments

Learning from Patients

- Data Source
- Patient- and family-reported adverse medical events
- January 2010 - February 2016
- Data Analysis
- Thematic Analysis



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Learning from Patients

Patient characteristics	
Age	52.4 years (SD19.7)
Sex	n(%)
Female	125(67.9%)
Male	59 (32.1%)
Setting	n(%)
Hospital	147 (79.9%)
Emergency Room	29(15.8%)
Outpatient	46 (25.0%)
Other	33 (17.9%)
Other Types of Errors Experienced	n(%)
Adverse medication event	103 (56.0%)
Surgical/procedure-related errors	100 (54.3%)
Hospital Infection	85 (46.2)
Number of Errors	n(%)
1 error	23 (12.5%)
2 errors	67(36.4%)
3 errors	61 (33.2%)
4 errors	33(17.9%)

- 134 (72.8%) discussed unprofessional behavior
- 224 instances of problematic clinician behavior during the diagnostic process
  - *Behaviors not consistent with patient-centered care*

Learning from Patients

Themes

- Ignoring patient knowledge (n=92)
- Disrespecting patients (n=63)
- Failure to communicate (n=54)
- Manipulation or deception (n=15)

Themes

- **Ignoring patient knowledge** (n=92)
- Disrespecting patients (n=63)
- Failure to communicate (n=54)
- Manipulation or deception (n=15)

After five days post op, my husband was getting worse. ***We told the doctor for the next [three] days that something was wrong.*** *The doctor thought it was an ileus, was always rushed, always arrogant, and always brushed us off."* When the oncologist rounded: *"He saw the stats, he called for an ICU stat team. My husband's blood pressure was almost nothing, heart rate was off the charts, and he had a temperature."*

Themes

- Ignoring patient knowledge (n=92)
- **Disrespecting patients** (n=63)
- Failure to communicate (n=54)
- Manipulation or deception (n=15)

*"One physician even had the audacity to "listen" to her chest with his stethoscope and NOT put the ear pieces in his ears...**they were around his neck and then he patted her on the shoulder and told her she was fine** and walked out of the room..."*

Themes

- Ignoring patient knowledge (n=92)
- Disrespecting patients (n=63)
- **Failure to communicate** (n=54)
- Manipulation or deception (n=15)

"…Pressure, urinary problems, pain, stomach distention. All complaints were reasoned away…. "For an additional nine days, I was in excruciating pain. Narcotics kept being ordered. My surgeon never saw me or called me during the nine days of hell and numerous calls day and night to their office. I was admitted for pain on a Friday night.""

Learning from Patients - Themes

- Ignoring patient knowledge (n=92)
- Disrespecting patients (n=63)
- Failure to communicate (n=54)
- **Manipulation or deception** (n=15)

"When the surgeon showed up. He too used scare tactics and told me I would die any minute. I begged and pleaded for them to do more tests but all they wanted to do was operate."

Learning from Patients

Our review of a large number of patient- and family-reported diagnostic error narratives revealed clinician behavioral and interpersonal factors that contributed to diagnostic errors.

Learning from Patients

There are no current policy or practice initiatives to supplement patient safety data using patient-reported experience and patient information and feedback.

Learning from Patients

Interpersonal and behavioral issues threaten patient safety

- Negative impact on diagnostic and procedural performance
- Detrimental effect on task performance and teamwork

Rosenstein AH, *World J Clin Cases*. 2015
Leape LL, *Acad Med*. 2012
Riskin A, *Pediatrics*. 2015

Learning from Patients

Well documented among clinicians

- *Trainees report witnessing unprofessional behavior more frequently than traditional patient safety breaches*

Martinez W, *BMJ Qual Saf*. 2017

Learning from Patients

Healthcare systems should use proactive approaches to identify and address clinician behaviors that harm patients

- Creating a culture that prioritizes safe diagnosis
- Facilitate and encourage patient and clinician reporting

Learning from Patients

Medical curriculum

- Ongoing communication training
  - Respectfully elicit and respond to patients' input in the context of diagnosis
  - Manage expectations

Learning from Patients

Conclusion

- Patients' and families' experiences are a valuable source of information
  - Unprofessional behaviors contribute to diagnostic errors
- Healthcare systems should be formally collecting patients' experiences

Benefits of Patient Reporting

- Offers health systems and providers a new learning opportunity.
- Engages patients as partners to improve the quality of health care.
- Engagement in safety efforts:
  - Empowers,
  - Promotes the healing process, and
  - Mitigates feelings of guilt and isolation.

Tools for Patients

20 Tips To Help Prevent Medical Errors

One in seven Medicare patients in hospitals experience a medical error. But medical errors can occur anywhere in the health care system: In hospitals, clinics, surgery centers, doctors' offices, nursing homes, pharmacies, and patients' homes. Errors can involve medicines, surgery, diagnosis, equipment, or lab reports. They can happen during even the most routine tasks, such as when a hospital patient on a salt-free diet is given a high-salt meal.

Most errors result from problems created by today's complex health care system. But errors also happen when doctors* and patients have problems communicating. These tips tell what you can do to get safer care.

What You Can Do to Stay Safe

The best way you can help to prevent errors is to be an active member of your health care team. That means taking part in every decision about your health care. Research shows that patients who are more involved with their care tend to get better results.

* The term "doctor" is used in this flier to refer to the person who helps you manage your health care.

Medicines

1. Make sure that all of your doctors know abou every medicine you are taking. This includes prescription and over-the-counter medicines dietary supplements, such as vitamins and he

2. Bring all of your medicines and supplements your doctor visits. "Brown bagging" your medicines can help you and your doctor talk about them and find out if there are any problems. It can also help your doctor keep y records up to date and help you get better quality care.
3. Make sure your doctor knows about any allergies and adverse reactions you have had medicines. This can help you to avoid getting medicine that could harm you.
4. When your doctor writes a prescription for y make sure you can read it. If you cannot read your doctor's handwriting, your pharmacist might not be able to either.

AHRQ Agency for Healthcare Research and Quality
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PATIENT SAFETY

Five Steps to Safer Health Care

1 Ask questions if you have doubts or concerns.
Ask questions and make sure you understand the answers. Choose a doctor you feel comfortable talking to. Take a relative or friend with you to help you ask questions and understand the answers.

2 Keep and bring a list of ALL the medicines you take.
Give your doctor and pharmacist a list of all the medicines that you take, including non-prescription medicines. Tell them about any drug allergies you have. Ask about side effects and what to avoid while taking the medicine. Read the label when you get your medicine, including all warnings. Make sure your medicine is what the doctor ordered and know how to use it. Ask the pharmacist about your medicine if it looks different than you expected.

3 Get the results of any test or procedure.
Ask when and how you will get the results of tests or procedures. Don't assume the results are fine if you do not get them when expected, be it in person, by phone, or by mail. Call your doctor and ask for your results. Ask what the results mean for your care.

4 Talk to your doctor about which hospital is best for your health needs.
Ask your doctor about which hospital has the best care and results for your condition if you have more than one hospital to choose from. Be sure you understand the instructions you get about follow-up care when you leave the hospital.

5 Make sure you understand what will happen if you need surgery.
Make sure you, your doctor, and your surgeon all agree on exactly what will be done during the operation. Ask your doctor, "Who will manage my care when I am in the hospital?" Ask your surgeon: Exactly what will you be doing? About how long will it take? What will happen after the surgery? How can I expect to feel during recovery? Tell the surgeon, anesthesiologist, and nurses about any allergies, bad reaction to anesthesia, and any medications you are taking.

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Get More Involved With Your Health Care
Do You Know ? the Right Questions to Ask

1. What is the test for?
2. How many times have you done this procedure?
3. When will I get the results?
4. Why do I need this treatment?
5. Are there any alternatives?
6. What are the possible complications?
7. Which hospital is best for my needs?
8. How do you spell the name of that drug?
9. Are there any side effects?
10. Will this medicine interact with medicines that I'm already taking?

For more questions:
www.ahrq.gov/questionsaretheanswer

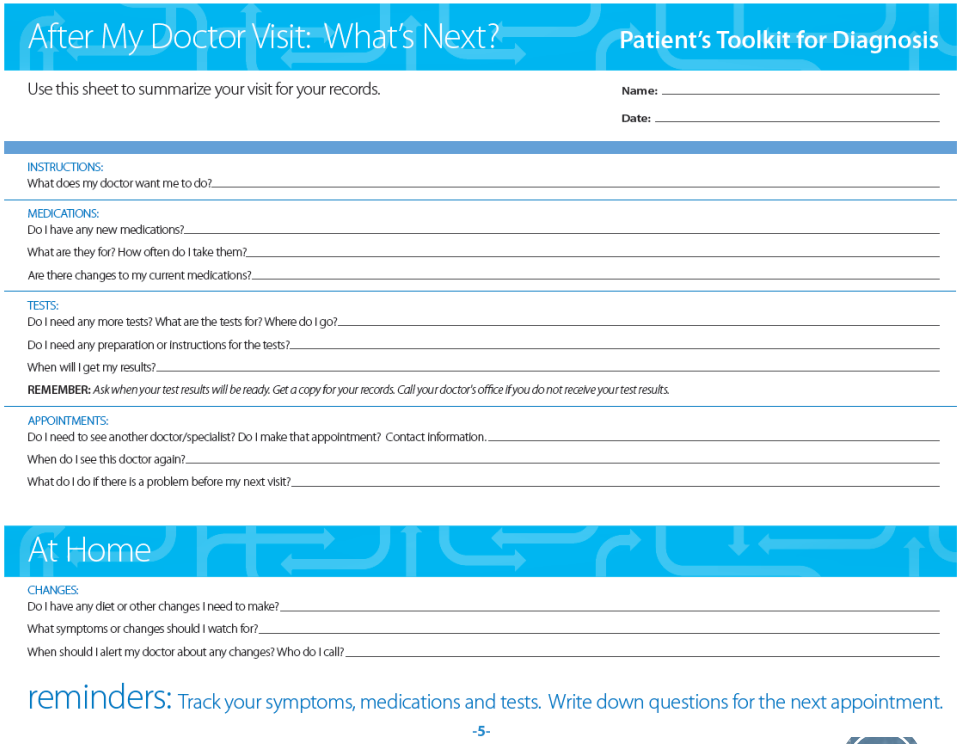
The Patient's Toolkit for Diagnosis

The Toolkit has four parts:

- Prepare for My Appointment
- My Symptoms or Pain
- My Medications
- After My Doctor's Visit: What's Next?

SOCIETY to IMPROVE DIAGNOSIS in MEDICINE

Better Outcomes Through Better Diagnosis



After My Doctor Visit: What's Next?

Patient's Toolkit for Diagnosis

Use this sheet to summarize your visit for your records.

Name: _____

Date: _____

INSTRUCTIONS:

What does my doctor want me to do? _____

MEDICATIONS:

Do I have any new medications? _____

What are they for? How often do I take them? _____

Are there changes to my current medications? _____

TESTS:

Do I need any more tests? What are the tests for? Where do I go? _____

Do I need any preparation or instructions for the tests? _____

When will I get my results? _____

REMEMBER: *Ask when your test results will be ready. Get a copy for your records. Call your doctor's office if you do not receive your test results.*

APPOINTMENTS:

Do I need to see another doctor/specialist? Do I make that appointment? Contact information. _____

When do I see this doctor again? _____

What do I do if there is a problem before my next visit? _____

At Home

CHANGES:

Do I have any diet or other changes I need to make? _____

What symptoms or changes should I watch for? _____

When should I alert my doctor about any changes? Who do I call? _____

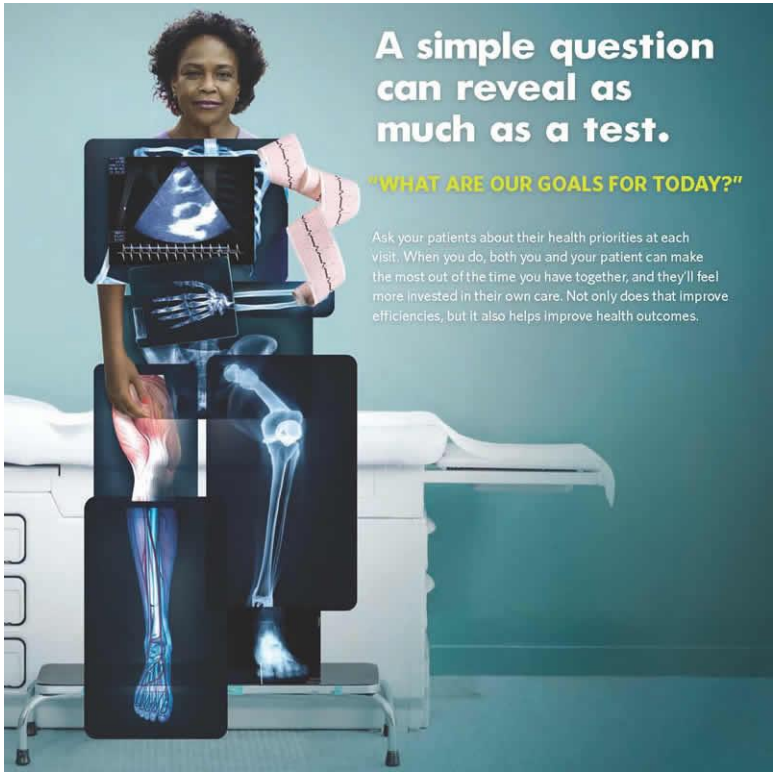
reminders: Track your symptoms, medications and tests. Write down questions for the next appointment.

-5-

http://www.improvediagnosis.org/page/PatientToolkit

Tools for Clinicians

- Communication
  - Use plain language
  - Reassure patient and caregivers by giving information
  - Invite patients and caregivers to continue asking questions
    - Suggest questions patients should ask
    - Thank patient or family for calling attention to any issue raised



Patient and Family Engagement. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/professionals/education/curriculum-tools/cusptoolkit/modules/patfamilyengagement/index.html

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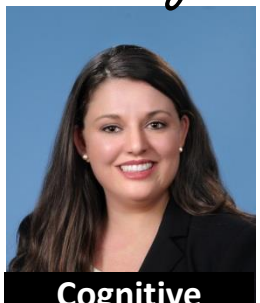

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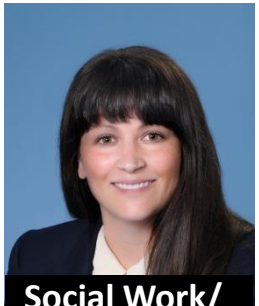

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