

Resources and Strategies to Improve the Safety and Quality of Diagnosis in Hospitals

Diagnostic Safety and Quality Webinar Series:
Overview and Implications for Hospitals

November 28, 2023

Webinar Reminders

Accessing the Audio

- If you are using computer audio, please select that option in the audio options pop up.
- If you are joining by phone, please dial in using the Toll Free 800 number provided. Then enter the Meeting ID when prompted, then your Participant ID.
 - The Meeting ID can be found in the confirmation email or in the Zoom meeting by clicking the audio button in the bottom left-hand corner.
 - The Participant ID can be found in the audio options in the bottom left-hand corner.
 - If you forgot to enter the Participant ID when dialing in, please dial # then your Participant ID again followed by #.

Use of the Zoom Chat Function

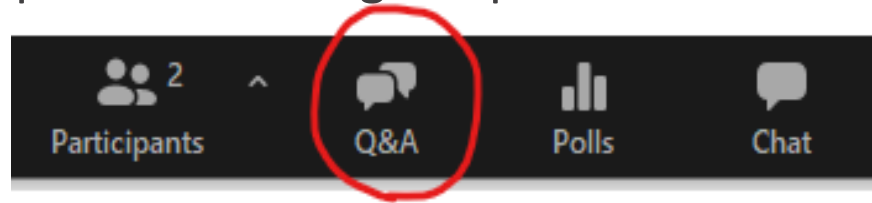
- The Town Hall Call includes a live Q&A during the presentation; therefore, we do not monitor the chat for questions. **Please reserve the Zoom Chat Function for reporting technical issues only.**

Accessing the Slides & Recording

- Following each session, a copy of the slides and recording will be posted and available for download on the Leapfrog website here: <https://www.leapfroggroup.org/survey-materials/town-hall-calls>

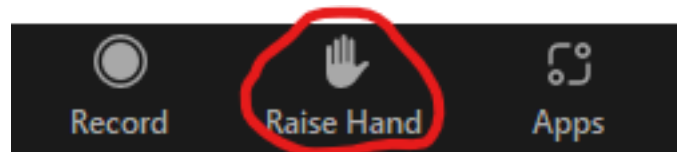
Q & A

Participants will be able to ask questions during the presentation. Please select the Q&A icon at the bottom of your screen:



- Once the icon has been selected a Q&A box will appear for you to type your questions.
- All participants will be able to view the questions and answers during the duration of the webinar.
 - You will be receiving responses in real time from a member of our team.
 - We will include a transcript of the Q&A on the Leapfrog website here: <https://www.leapfroggroup.org/survey-materials/town-hall-calls>
 - Some questions may be answered live – please pay close attention.

Following the presentation we will have a live Q&A session. Please use the Raise Hand icon at the bottom of your screen:



- Once the icon has been selected you will be placed in the que. When it is your turn to ask your question, you will receive a prompt from the host asking you to unmute yourself.

Introductions



**Jill Dykstra-Nykanen, RN, MSN,
CPHQ**
Assistant Vice President Orlando
Health

Chief Quality Officer, Orlando
Health Arnold Palmer Hospital for
Children



**Divvy Upadhyay, MD,
MPH**
Program Leader – Diagnostic
Safety
Geisinger



**Jean-Luc Tilly, MPA,
PMP**
Program Manager
The Leapfrog Group



Mark Graber, MD, FACP
Founder and President Emeritus
Society to Improve
Diagnosis in Medicine

Leapfrog's New National Initiative for Hospitals

A national initiative to publicly report and recognize hospitals for preventing patient harm due to diagnostic errors.

Progress:

- Published Recommended Practices Report describing 29 options for hospitals looking to reduce diagnostic errors
- Measured implementation progress in pilot survey of 95 hospitals across the country

This fall:

- Introducing new process and measures for inclusion in the 2024 Leapfrog Hospital Survey – **not scored or publicly reported**



**Recognizing
Excellence in
Diagnosis**

A Program of The Leapfrog Group

Leapfrog

Webinar #3: Case Study in Improving the Safety and Quality of Diagnosis in Hospitals

Presented by

Jill Dykstra-Nykanen, RN, MSN, CPHQ

Assistant Vice President Orlando Health

Chief Quality Officer, Orlando Health Arnold Palmer

Hospital for Children

ORLANDO HEALTH

“

**To improve the
health and quality
of life of the
individuals and
communities
we serve.**

”

The Orlando Health Way



Embrace
Quality & Safety



Earn Physician
Loyalty



Be Your Best
Place To Work



Drive Growth
& Innovation



Strengthen
Economics



Serve Our
Customers Well

At-A-Glance

29
Hospitals
and ERs

15 Hospitals
9 Free-Standing ERs
+
Coming Soon
4 Hospitals
1 Free-Standing ERs

4,750+
Physicians



100+
Medical
Specialties



100+
Primary Care
Practices



9
Specialty
Institutes

\$9.2
Billion
of Assets
Under Management

27,000+
Team Members
Plus 1,200 Employed Physicians



3,850+
Bed
System



155,000+
Inpatient Visits



3.9 Million+
Outpatient Visits
Including ER



15
Urgent
Care
Centers

Central Florida's Only
Level One
Trauma Center

9 Medical
Pavilions



Pinellas County's Only
Level Two
Trauma Center

60+ Outpatient
Centers



\$782 Million+
In Total Value to the
Local Communities (FY21)



Awards and Recognitions

<p>BEST REGIONAL HOSPITALS USNews ORLANDO METRO RECOGNIZED IN 10 TYPES OF CARE 2023-2024</p>	<p>BEST HOSPITALS HEART & VASCULAR 2023-2024</p> <ul style="list-style-type: none"> AORTIC VALVE SURGERY COLON CANCER SURGERY COPO DIABETES GASTROENTEROLOGY & SURGERY HEART ATTACK HEART BYPASS SURGERY HEART FAILURE KIDNEY FAILURE KNEE REPLACEMENT LEUKEMIA, LYMPHOMA & MYELOMA SURGERY LUNG CANCER SURGERY PULMONOLOGY & LUNG SURGERY STROKE UROLOGY 	<p>BEST CHILDREN'S HOSPITALS USNews RANKED IN 4 SPECIALTIES 2023-2024</p>	<ul style="list-style-type: none"> ORTHOPEDICS DIABETES & ENDOCRINOLOGY PULMONOLOGY 	<p>BEST CHILDREN'S HOSPITALS USNews NEONATOLOGY 2023-2024</p> <p>Orlando Health Winnie Palmer Hospital for Women and Babies</p> <ul style="list-style-type: none"> DIABETES HEART ATTACK HEART FAILURE 	<ul style="list-style-type: none"> DIABETES STROKE 	<ul style="list-style-type: none"> COPO DIABETES HEART ATTACK HEART FAILURE KIDNEY FAILURE PNEUMONIA STROKE 	<p>BEST REGIONAL HOSPITALS USNews ORLANDO METRO RECOGNIZED IN 7 TYPES OF CARE 2023-2024</p>
<p>Orlando Health Orlando Regional Medical Center (ORMC) Orlando Health Dr. P. Phillips Hospital Orlando Health South Seminole Hospital</p>		<p>Orlando Health Arnold Palmer Hospital for Children</p>	<p>Orlando Health - Health Central Hospital</p>	<p>Bayfront Health</p>	<p>Orlando Health South Lake Hospital</p>		

<p>MAGNET RECOGNIZED AMERICAN NURSES CREDENTIALING CENTER</p>	<p>AACN BEACON AWARD FOR EXCELLENCE</p>	<p>LANTERN AWARD 2023-2024</p>	<p>CRIBS FOR KIDS SAFE SLEEP HOSPITAL CERTIFIED</p>	<p>RECOGNIZED NCQA DIABETES</p>	<p>NATIONALLY RECOGNIZED LEAPFROG HOSPITAL SAFETY GRADE STRAIGHT A+ 2023-2023</p>	<p>THE LEAPFROG GROUP TOP CHILDREN'S HOSPITAL 2022</p>	<p>THE LEAPFROG GROUP TOP TEACHING HOSPITAL 2022</p>	<p>THE LEAPFROG GROUP TOP TEACHING HOSPITAL 2022</p>	<p>NATIONALLY RECOGNIZED LEAPFROG HOSPITAL SAFETY GRADE SPRING 2023</p>	<p>EISO SILVER LEVEL CENTER</p>	<p>MRS QIP ACCREDITED CENTER QUALITY PROGRAM</p>	<p>VERIFIED AMERICAN BURN ASSOCIATION BURN CENTER</p>	<p>THE JOINT COMMISSION NATIONAL QUALITY AWARD</p>
<p>Orlando Health South Lake Hospital</p>	<p>Orlando Health Arnold Palmer</p>	<p>Orlando Health Winnie Palmer</p>	<p>Orlando Health ORMC</p>										

<p>Commission on Cancer ACCREDITED PROGRAM A QUALITY PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS</p>	<p>NAPBC NATIONAL ACCREDITATION PROGRAM FOR BREAST CENTERS ACCREDITED BREAST CENTER A QUALITY PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS</p>	<p>FACT ACCREDITED</p>	<p>ACR RADIOLOGY ACCREDITED FACILITY</p>	<p>STS National Database Trusted. Transformed. Real-Time.</p>	<p>2023 GET WITH THE GUIDELINES GOLD PLUS STROKE</p>	<p>2023 GET WITH THE GUIDELINES GOLD PLUS STROKE</p>	<p>2022 GET WITH THE GUIDELINES GOLD AFIB</p>	<p>2023 GET WITH THE GUIDELINES SILVER HEART FAILURE</p>	<p>2023 GET WITH THE GUIDELINES SILVER RESUSCITATION</p>	<p>DNY CERTIFIED Comprehensive Stroke Center Quality & Patient Safety</p>	<p>2023 Becker's Healthcare 100 Hospitals with Great Heart Programs</p>
--	---	------------------------	--	---	--	--	---	--	--	---	---

<p>Accredited by Commission on Cancer National Accreditation Program for Rectal Cancer</p>	<p>QCP QOPI Certification Program Quality Cancer Care: Recognizing Excellence</p>	<p>THE COMMITTEE ON TRAUMA VERIFIED TRAUMA CENTER</p>	<p>OLIVER'S SUPPLY VERIFICATION VERIFIED CENTER</p>	<p>Forbes 2022 America's Best-in-State Employers</p>	<p>TOP WORK PLACES 2022 Orlando Sentinel</p>	<p>Modern Healthcare Best Places to Work 2023 Orlando Health South Lake Hospital Orlando Health St. Cloud Hospital</p>	<p>Great Place To Work Certified AUG 2022-AUG 2023 USA</p>
<p>2023 Becker's Healthcare 60 Top Oncology Hospitals</p>	<p>NAEC LEVEL 4 EPILEPSY CENTER</p>	<p>HEALTHCARE EQUALITY INDEX LGBTQ+ HEALTHCARE EQUALITY TOP PERFORMER</p>	<p>2022 Orlando Business Journal's Diversity in Business</p>	<p>2022 PEOPLE Companies that Care® Becker's Top 150 Places to Work in Healthcare 2023</p>			

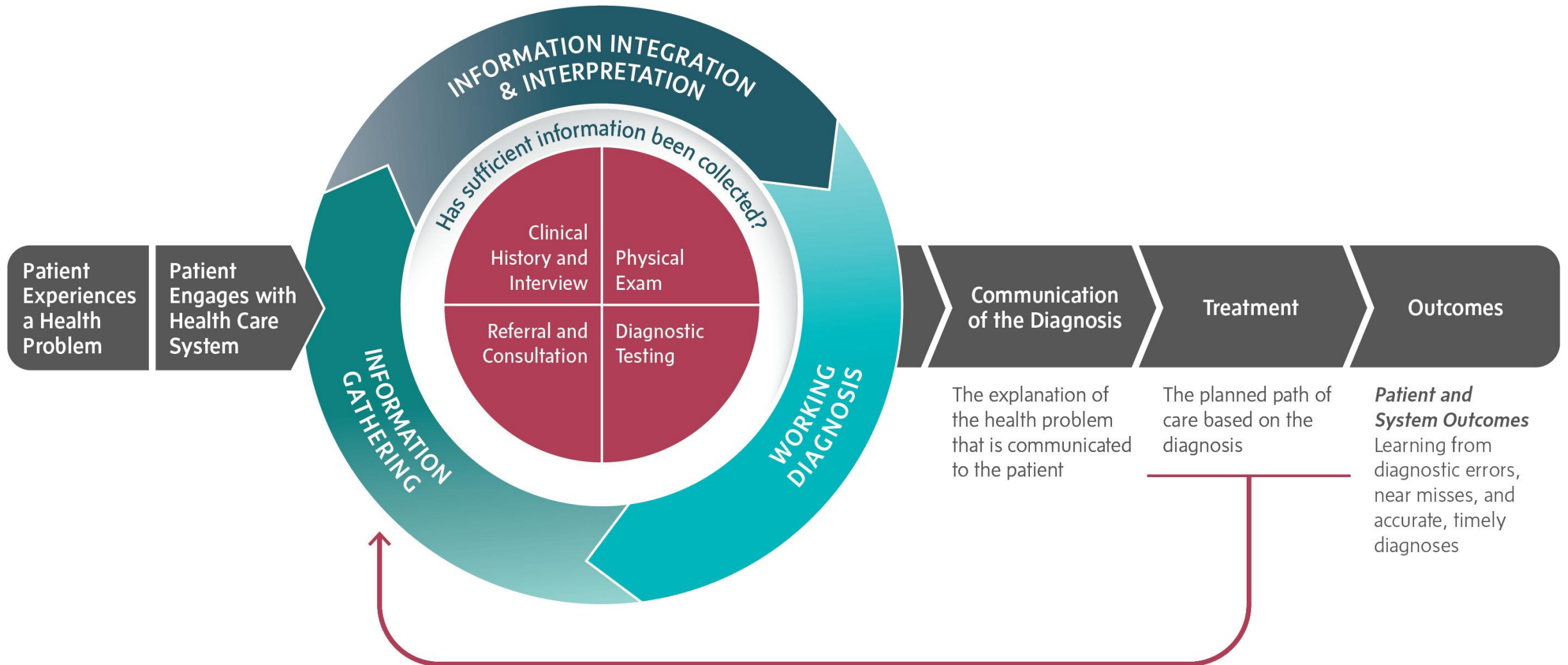
Orlando Health Arnold Palmer Hospital for Children

- **Orlando Health Arnold Palmer Hospital** is a 156-bed free standing Pediatric facility
 - Region's only **Pediatric Level One Trauma Center** and the first American College of Surgeons' **Level One Children's Surgery Center**
 - Approximately 60,000 ED Visit annually
 - Approximately 1,300 Trauma admissions annually
 - Approximately 6,200 OR procedures annually
 - Connected via a bridge to OHWPH and their 149-bed, Level IV NICU



Recognizing Excellence in Diagnosis

The Diagnostic Process



Implementation Scale



Not under consideration

No discussions about implementing this practice



Exploring and Preparing

Discussions have started and additional staff being recruited



Planning and Resourcing

Implementation strategy formed; resources in place



Implementing and Operationalizing

Recent implementation of some or all the elements of this practice in one or more units



Fulling Implemented and Evaluating Impact

House wide implementation of all elements

Practice 1.4B – Measure and monitor diagnostic safety outcomes

Senior administrative leaders put processes and structures in place to identify, track, and analyze diagnostic errors, including errors that result in harm or death, with a focus on high-risk areas of the hospital (e.g., EDs, labor and delivery units, critical care units), and regularly communicate performance and progress on improvement initiatives with their board of directors

Resources and strategies for implementation



Electronic Trigger Tools

Measurement
Monitoring
Outcomes



Safe and Easy to use reporting

Team Members and
Patients
Psychological Safety is
key!



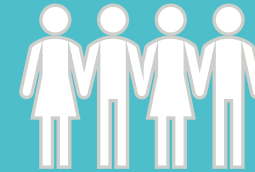
Ensure data from various sources are used to identify diagnosis related harm

Case reviews
RCA, M&M
conferences, PIPS
reporting

Practice 1.2C – Target training and education to nurses, pharmacists, and allied health professionals



Targeted training specific to the diagnostic process



Targeted training to nurses, pharmacists, and allied health professionals through interprofessional patient rounds

Education

National Collaborative Learning Session
“Watch Parties”

Roaming clinics to review bundle elements and diagnostic testing process

Annual presentation to new Residents/Fellows

Peer-to-Peer collaboration

Tools/Pathways

Sepsis-focused webinars

Monthly compliance and outcomes results distributed to all units for targeted QI support and retraining

Unique Patients: 500

Discharges: 500

Discharge Date: 7/10/2021

8/31/2023

Last Updated: 11/12/2023 7:04:53 PM

Lactate

% result within 48 hr of TZ

73%

Blood Culture

% collect between 48 hr prior to admit and 72 hr after TZ

92%

Antibiotics

% admin within 1 hr of TZ

52%

Fluids

% Bolus1 admin within 20 min of TZ

71%

Filters applied to this page

Blood Collection



92%

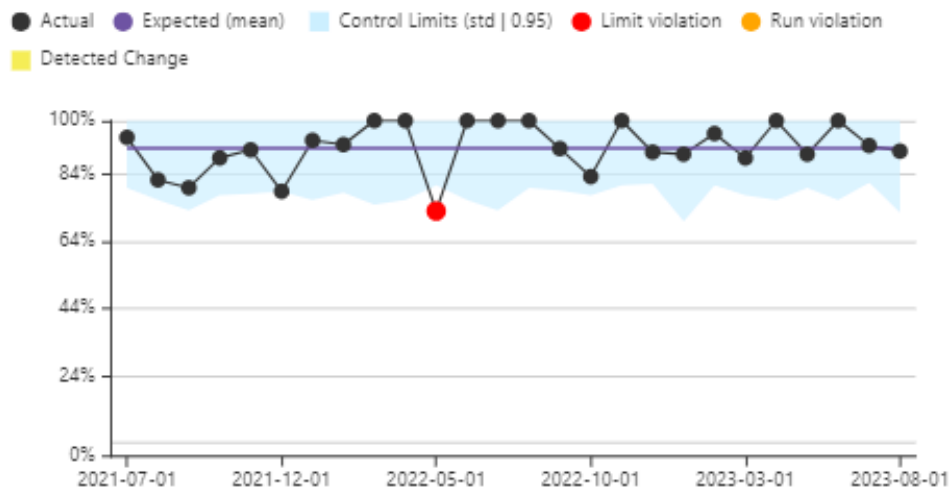
Sepsis Severity	Compliance %
Severe Sepsis	89.49%
Septic Shock	91.30%
Sepsis	100.00%

Cohort	Compliance %
UNDETERMINED	96.91%
ED-POA	93.57%
Not POA	88.89%
IP-POA	55.81%

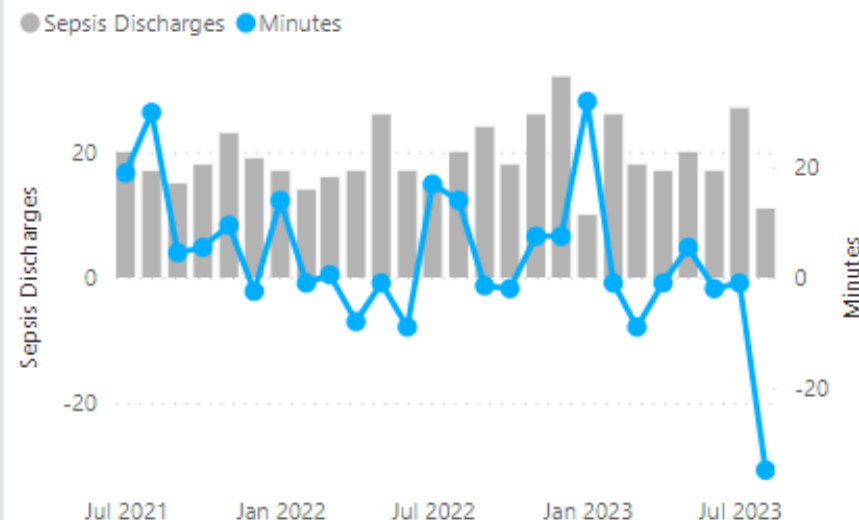
Minutes from Time Zero to:

1st Blood Culture Order	-14
1st Blood Culture Collect	2
1st Abx Order	-5
1st Abx Admin	21

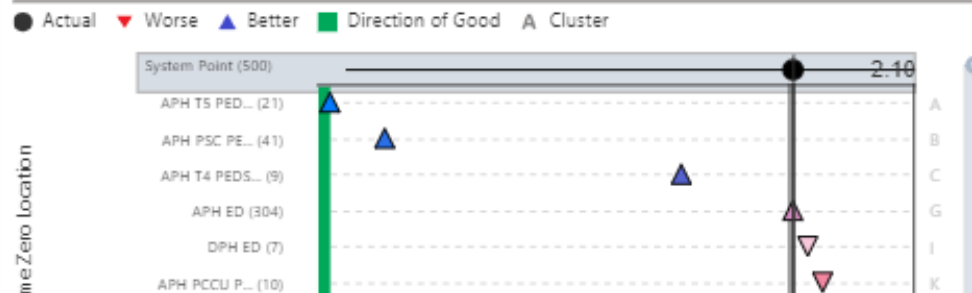
Blood Collection



Minutes: Time Zero to Blood Collection



Minutes: Time Zero to Blood Collection

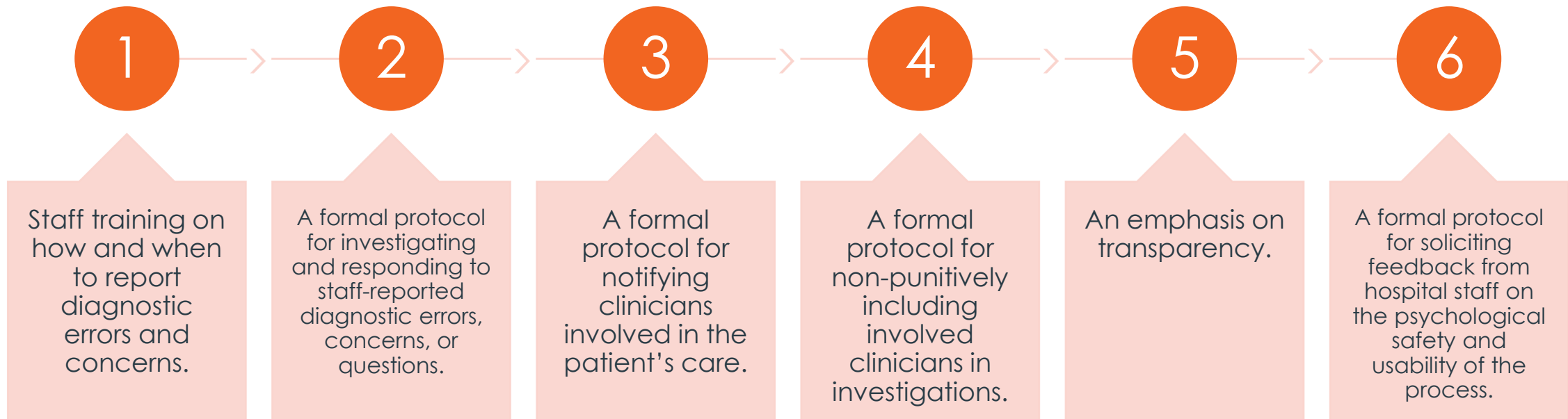


Minutes: Time Zero to Blood Culture Order

Order Provider	TZ to BC Order (Mins)	Instances
[Redacted]	13	4
[Redacted]	-255	4
[Redacted]	-58	19
[Redacted]	-9	14
[Redacted]	-19	7
[Redacted]	-17	10
[Redacted]	-5	8

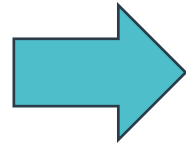
Practice 1.2D – Make it easy for hospital staff to report diagnostic errors and concerns

The hospital has a formal process in place for staff to **report diagnostic errors and concerns** (e.g., breakdowns in communication, breakdowns in the diagnostic process). The process encourages **psychological safety** and staff adoption (the process is safe and easy to use) and should include all the following:



Strategies to implement

Resources



Easy to use system to facilitate timely reporting

Senior administrative leader review; retraining where indicated

Risk reporting + CQO Champion =
SUCCESS!

Training for Medical Residents and Fellows

Thank you!

Jill Dykstra-Nykanen, RN, MSN, CPHQ
AVP, OH & CQO, OHAPH

Jill.Dykstra-Nykanen@orlandohealth.com



Implementing Diagnostic Safety

Divvy K. Upadhyay, MD MPH

Geisinger

Twitter: @Divvykant

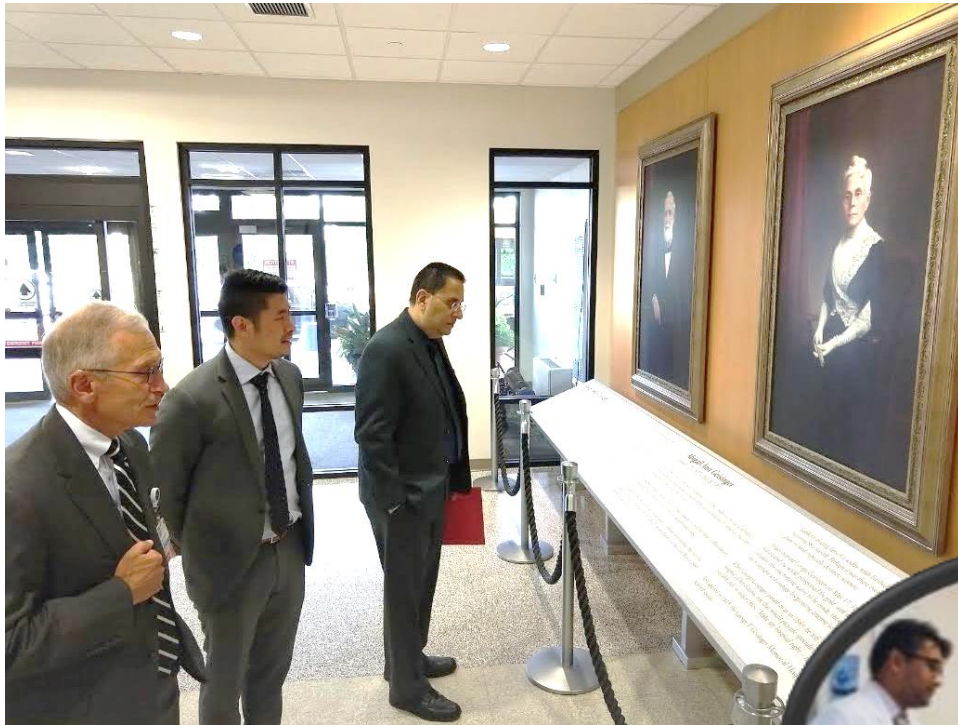
Email: dkupadhyay@geisinger.edu

Acknowledgements

- Takes a village – always.

Geisinger

Predominantly rural
1 Million + patients
Integrated
100+ years old



This Hospital's Grade



Geisinger Medical Center

100 N. Academy Avenue
Danville, PA 17822-2201
[Map and Directions](#)

[View this hospital's Leapfrog Hospital](#)

Divy K Upadhyay MD MPH for Leapfrog Dx Excellence National
Town Hall 11-28-23

Who are we? What do we do?

Slido.com; [#1739541](#)

Risk Manager? Patient Safety officer/liaison? Patient advocate, Quality team member, CMO, C-suite professional, patient, clinician, nurse, payor, insurance professional?

What are diagnostic errors?

slido

Join at
slido.com
#1739 541





Divvy K Upadhyay MD MPH for Leapfrog Dx Excellence National
Town Hall 11-28-23

CASE #1

- A healthy 12-year-old boy, Rory, cut his arm during a basketball game in school (Day 1).
- The next day (Day 2), he woke up with symptoms of vomiting and leg pain. Visited pediatrician - mottling. Sent to ED for GI bug/dehydration.





NYU Hospitals Center
Test Result Summary
NYUMC

Patient: STAUNTON, RORY
DOB: 05/13/1999 **Age:** 12y
Attending: [REDACTED]
Admit Date: 03/29/2012
Location: EMERG-TH

MR #: 8979937
Gender: M
Visit #: 489040745

This report contains documentation entered between 03/29/2012 and 03/29/2012

03/29/2012 20:00 CBC				
White Blood Cells	14.7	H	[3.7-11.4 K/uL]	Final
Nucleated RBCs	0		[0 /100WBC]	Final
Red Blood Cells	4.94		[4.20-5.60 M/uL]	Final
Hemoglobin	14.3		[12.5-16.1 g/dL]	Final
Hematocrit	42.4		[36.0-47.0 %]	Final
MCV	85.7		[78-95 FL]	Final
MCH	28.9		[26-32 pg]	Final
MCHC	33.7		[32-36 g/dL]	Final
RDW	13.1		[11.5-14.5 %]	Final
Platelet Count	117	L	[150-400 K/uL]	Final
MPV	9.03		[6.0-11.0 FL]	Final

03/29/2012 20:00 Differential Count				
Segs	39		[33-63 %]	Final
Bands	53	H	[5-15 %]	Final
Lymphocytes	3	L	[28-48 %]	Final
Monocytes	5		[3-12 %]	Final
Absolute Neutrophils	13.5	H	[1.5-8.2 K/uL]	Final
Absolute Segs	5.7		[1.3-6.6 K/uL]	Final
Absolute Bands	7.8	H	[0.2-1.7 K/uL]	Final
Absolute Lymphs	0.4	L	[0.8-4.2 K/uL]	Final
Absolute Monocytes	0.7		[0.1-1.1 K/uL]	Final

03/29/2012 20:00 Basic Metabolic				
Sodium	131	L	[134-146 mmol/L]	Final
Potassium	3.9		[3.6-5.2 mmol/L]	Final
Chloride	96	L	[98-108 mmol/L]	Final
CO2	24		[22-31 mmol/L]	Final
Urea Nitrogen	13		[10-26 mg/dL]	Final
Creatinine	0.7		[0.7-1.3 mg/dL]	Final
Glucose, Random	118	H	[70-100 mg/dL]	Final
Calcium	8.6		[8.3-10.3 mg/dL]	Final
GFR Estimate (MDRD)Non-African			[>60 mL/min/1.73m^2]	Final

- Rory continued to worsen and was again taken to the ED again (Day 3), after which he was admitted to the ICU.
- Diagnosed with streptococcal sepsis and multi-organ failure the following day (Day 4).

ENDSEPSIS
The Legacy of Rory Staunton

[WHAT IS SEPSIS?](#) [TAKE ACTION](#) [DONATE](#)



Where were the opportunities missed?

- Patient – provider encounter (elicitation of history, inadequate physical exam, or the actual clinical assessment – joining the dots to make the diagnosis)
- Diagnostic test interpretation or the testing process (diagnosis or interpretation by a pathologist or radiologist + how specimens or images are processed)
- Follow-up and tracking issues (delayed or missed follow-up of abnormal lab or radiology findings)
- Issues attributable to patient non-compliance or other patient factors
- Issues attributable to missed or dropped referrals

Case # 2

- 47-year-old woman, presented with persistent cough at an ED in October 2006. Her physician ordered a chest X-ray to rule out pneumonia. Physician determined that it was normal, and he diagnosed the patient with an upper respiratory infection.
- Barely a year later, the patient returned to the same hospital after her symptoms worsened. CT scan revealed signs of advanced stages of lung cancer. Within seven months, the cancer spread- ultimately led to the patient's death in August 2008.
- 2006 X-ray clearly identified a 1.5 cm nodule in the upper right lung of the patient – which was missed.

Family members awarded \$16.7 million after radiologist missed evidence of lung cancer

October 1, 2014

Untitled Document

REPRINTS

Related Articles

[Integrating Reproductive History Could Help Postmenopausal Women's](#)

Family members awarded \$16.7 million after radiologist missed evidence of lung cancer



Kreisman Law Offices

<https://www.robertkreisman.com> › 1-95-million-settle... ⋮

\$1.95 Million Settlement Reached in Late Diagnosis of ...

Feb 23, 2021 — \$1.95 **Million Settlement** Reached in Late Diagnosis of **Lung Cancer Lawsuit** ...
\$950,000 **Settlement** Reached in Medical **Malpractice** Case for Failure ...



Miller & Zois

<https://www.millerandzois.com> › medical-malpractice ⋮

Lung Cancer Misdiagnosis Lawsuits

The case settled for \$1 **million**. 2016, Illinois: \$2,500,000 **Settlement**. A 79-year-old woman goes to the ER after a fall while at church. She is admitted ...



Miller & Zois

<https://www.millerandzois.com> › medical-malpractice ⋮

Cancer Misdiagnosis Lawsuits and Settlements

The median **malpractice** verdict in **cancer-related malpractice cases** is \$1.75 **million**. The average verdict is much higher but we do not have the exact statistics.

Where were the opportunities missed?

- Patient – provider encounter (elicitation of history, inadequate physical exam, or the actual clinical assessment – joining the dots to make the diagnosis)
- Diagnostic test interpretation or the testing process (diagnosis or interpretation by a pathologist or radiologist + how specimens or images are processed)
- Follow-up and tracking issues (delayed or missed follow-up of abnormal lab or radiology findings)
- Issues attributable to patient non-compliance or other patient factors
- Issues attributable to missed or dropped referrals

CASE#3

- On Sept 25, 20xx, late evening the 41-year-old male patient presents to ED with:
 - Temperature of 100.1°F
 - Dizziness
 - Nausea
 - Abdominal pain
 - Sharp headache
 - Decreased urination
- 3.5 hours into the patient's visit at the ED, temperature spiked to 103 F, which later dropped to 101.2°F.
- Patient rated his "severe headache" at 8 on a scale of 1 to 10
- Nurse recorded patient's recent travel to Africa



CASE#3

- Investigations: CT scans of “head and abdomen” ordered during the ED visit showed no evidence of sinusitis or other conditions such as stroke or appendicitis
- Discharge diagnosis “included sinusitis”
- Patient was prescribed antibiotics, told to take Tylenol, and discharged after 4 hours in the ED.
- Two days later, the patient worsened and returned to the same ED and was subsequently admitted to the hospital.

[Diagnosis \(Berl\)](#). Author manuscript; available in PMC 2015 Dec 22.

Published in final edited form as:

[Diagnosis \(Berl\)](#). 2014; 1(4): 283.

Published online 2014 Oct 23. doi: [10.1515/dx-2014-0064](https://doi.org/10.1515/dx-2014-0064)

PMCID: PMC4687403

NIHMSID: NIHMS729539

PMID: [26705511](https://pubmed.ncbi.nlm.nih.gov/26705511/)

Ebola US Patient Zero: lessons on misdiagnosis and effective use of electronic health records

[Divvy K. Upadhyay](#), [Dean F. Sittig](#), and [Hardeep Singh](#), MD, MPH[✉]

▶ [Author information](#) ▶ [Copyright and License information](#) [Disclaimer](#)



US Ebola Patient Zero

When a misdiagnosis led to full page apologies in newspapers and a testimony in Congress.



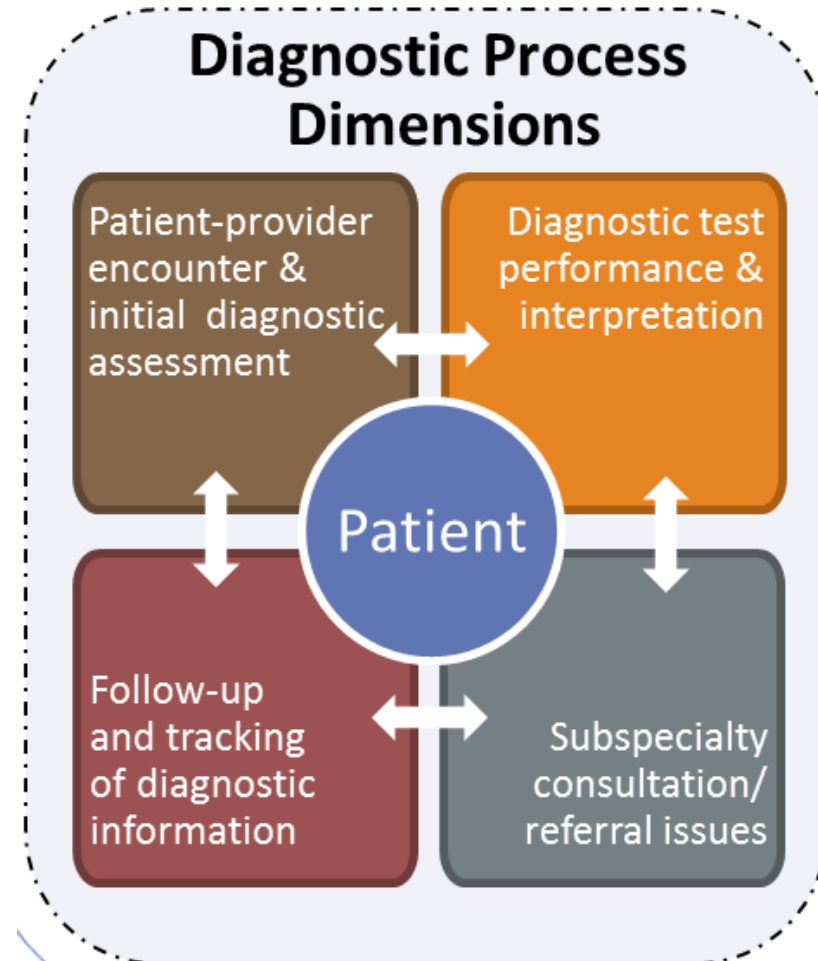
- *“The fact that Mr. Duncan had traveled to Africa was not communicated effectively among the care team, though it was in his medical chart,” -Texas Presbyterian Health System CEO Berdan*
- **“On that visit to the Emergency Department, we did not correctly diagnose his symptoms as those of Ebola. For this we are deeply sorry.”**

Where were the opportunities missed?

- Patient – provider encounter (elicitation of history, inadequate physical exam, or the actual clinical assessment – joining the dots to make the diagnosis)
- Diagnostic test interpretation or the testing process (diagnosis or interpretation by a pathologist or radiologist + how specimens or images are processed)
- Follow-up and tracking issues (delayed or missed follow-up of abnormal lab or radiology findings)
- Issues attributable to patient non-compliance or other patient factors
- Issues attributable to missed or dropped referrals

So why these cases? “The Dx Safety Lens”

Safer Dx Framework: Five Dimensions

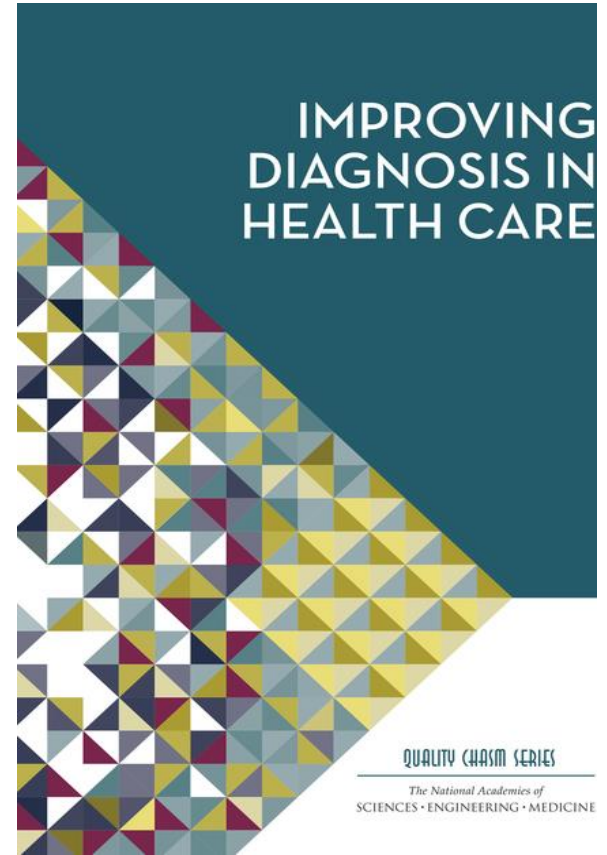


So these 3 cases take place at your organization.
You are the CEO/CMO/CQO – what do you do?
(Coincidentally all took place in the ED)

- Summon your ED chief/ team and ask them to explain how they messed up
- Ask Risk management to handle the case as they routinely handle all incident reports i.e. send for PEER REVIEW, check boxes for TJC + CMS + DOH
- Quick safety huddle, reach out to family – empathize and establish communication; + make sure clinician(s)/ team involved have the resources/support they need
- Task a multi-disciplinary group to review/analyze the case; provide feedback to the clinician(s)/team, create learning opportunities and identify quality improvement tasks. Disseminate lessons. Close the loop with hospital leadership/Board

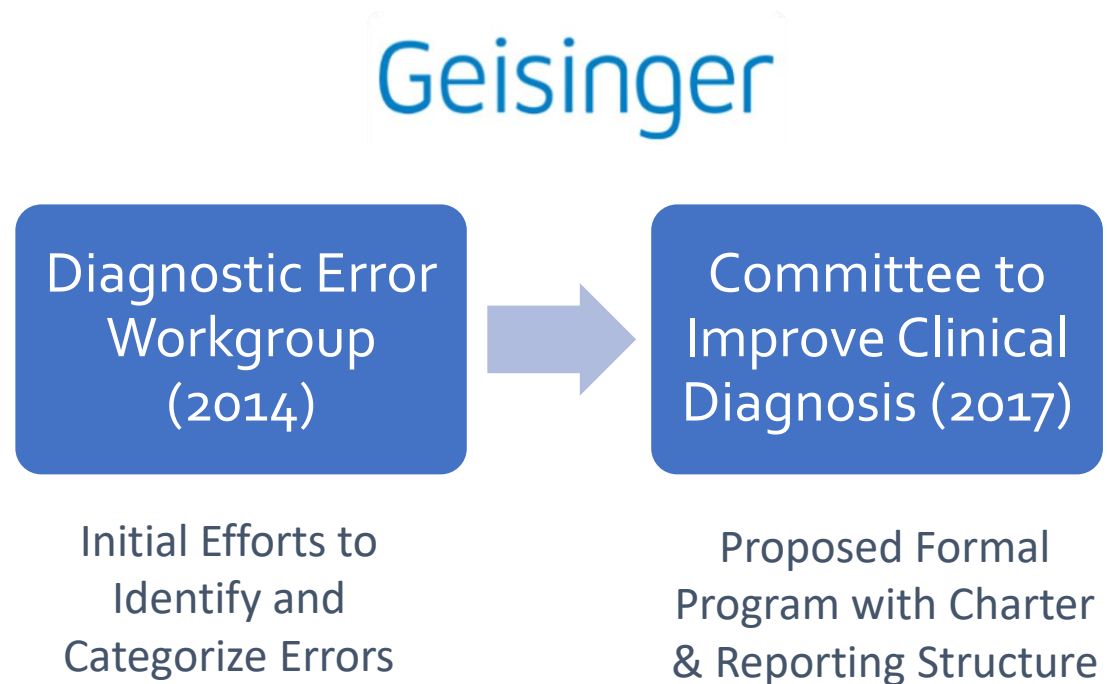
2015 IOM Report on “Improving Diagnosis in HealthCare” Recommendations

- “few health care organizations have processes in place to identify diagnostic errors and near misses in clinical practice...but collecting this information, learning from these experiences, and implementing changes are critical for achieving progress”
- “health care organizations should promote a non-punitive culture that values feedback on diagnostic performance...”



Geisinger Committee to Improve Clinical Diagnosis (CICD)

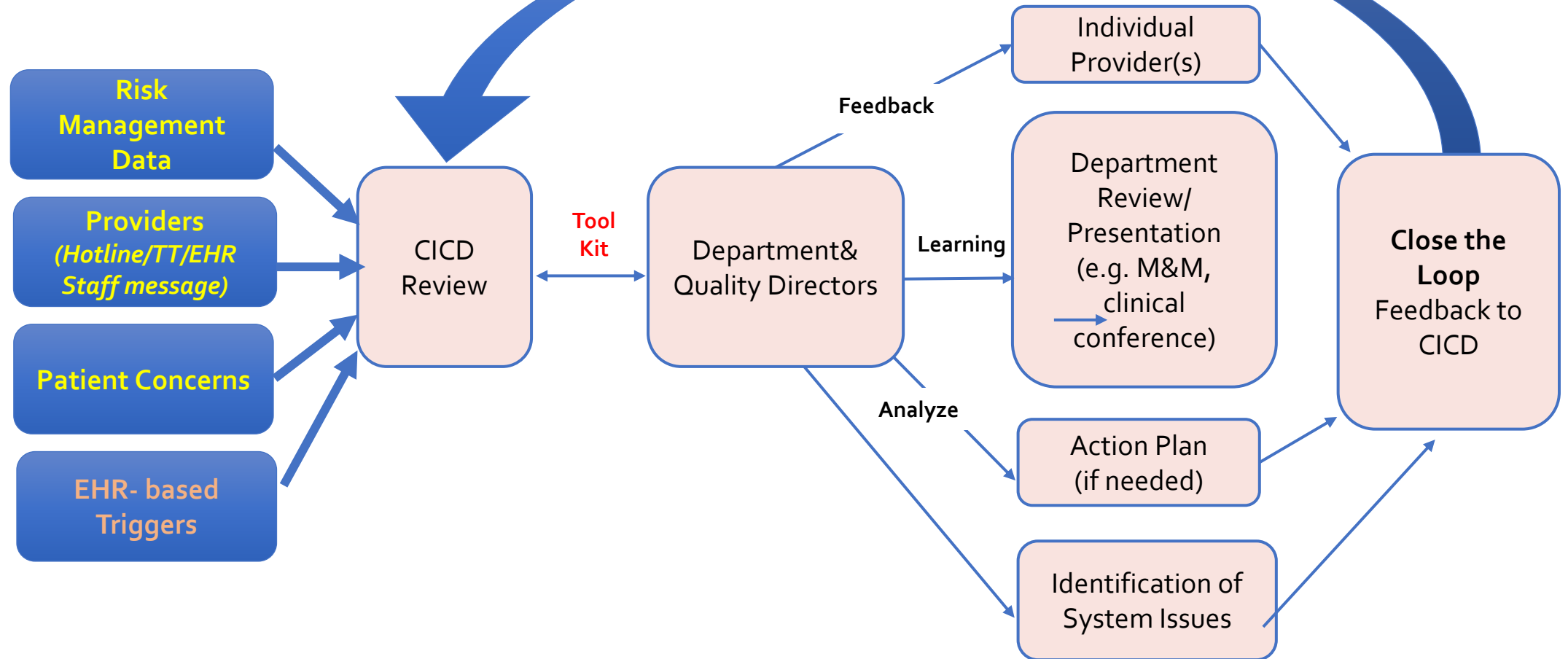
- Identify clinical champions/leaders
- Adopt working definition of diagnostic error
- Prioritize areas of opportunity
- Define program goals



Program Development

C-Suite Support + multi-stakeholder group

Geisinger CICD – Creating Learning Opportunities



Sharing Diagnostic Opportunities with the Committee to Improve Clinical Diagnosis

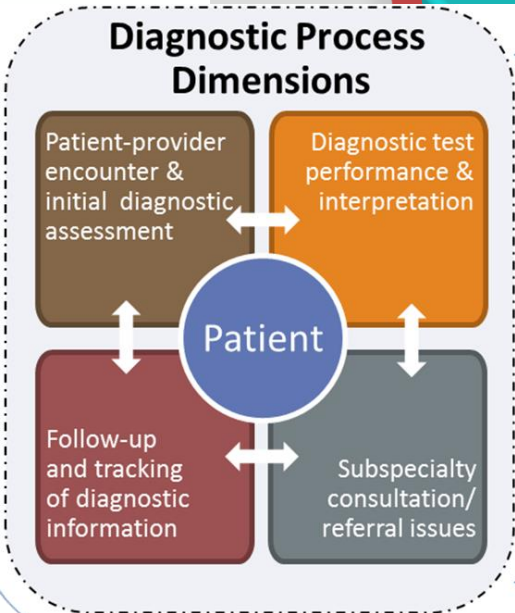
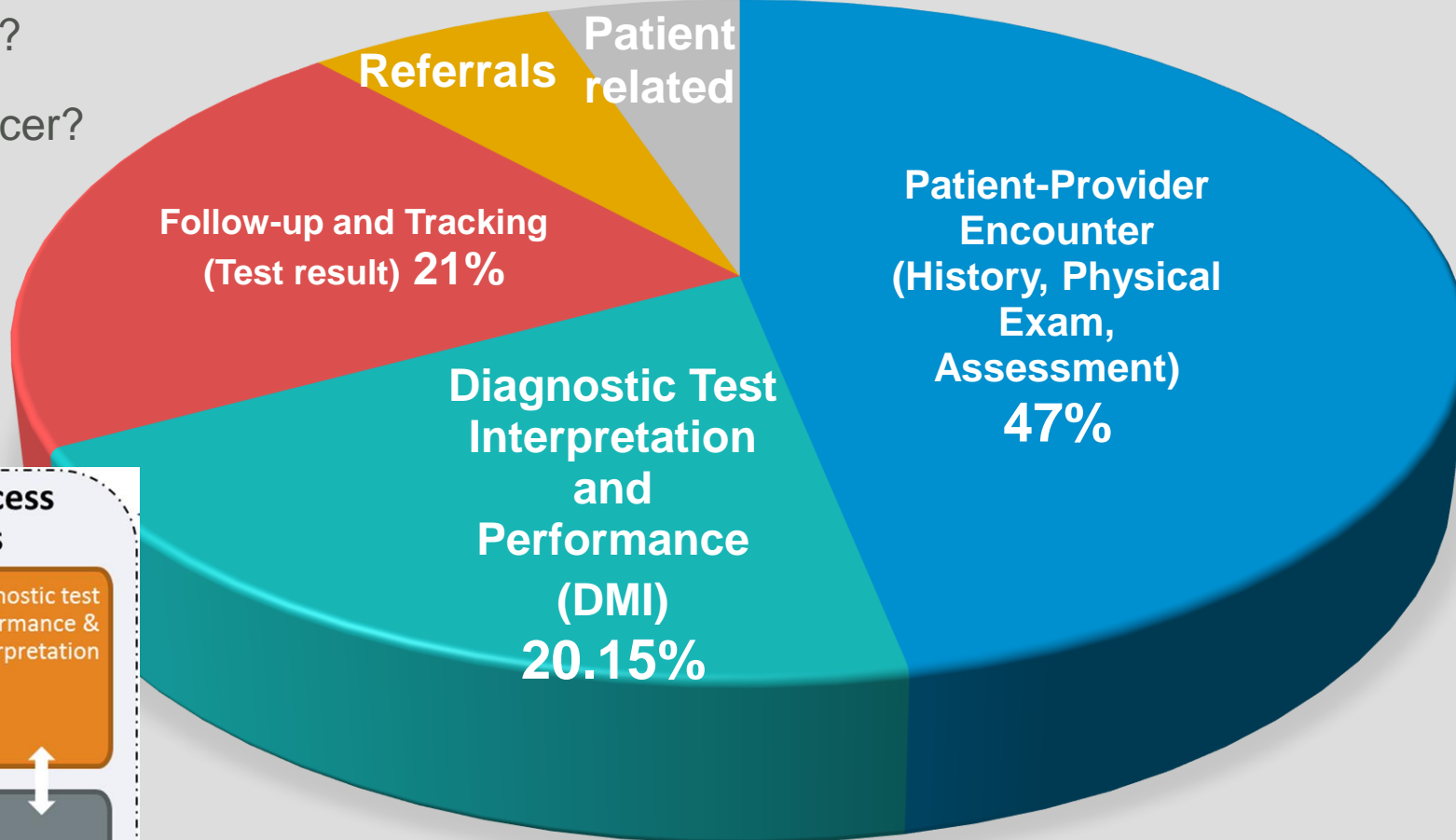
- Call **Pt Safety Hotline** leave voicemail.
- Send **Staff Message** via EMR to POOL: “Diagnostic Opportunities”
- **Page** the group: “Diagnostic Opportunities”



DIAGNOSTIC PROCESS BREAKDOWNS - EXAMPLE

Patterns, Trends?

Cancer?



Taxonomy

Dimensions (select all that apply)	
1) Patient Related	<input type="checkbox"/> Delay in seeking care <input type="checkbox"/> Lack of adherence to appointments <input type="checkbox"/> Other, please specify:
2) Patient-Provider Encounter	<input type="checkbox"/> Problems with history <input type="checkbox"/> Problems with physical exam <input type="checkbox"/> Problems ordering diagnostic tests for further work up <input type="checkbox"/> Failure to review previous documentation <input type="checkbox"/> Problems with data integration and interpretation <input type="checkbox"/> Other, please specify:
3) Diagnostic Tests	<input type="checkbox"/> Ordered test not performed at all <input type="checkbox"/> Ordered tests not performed correctly <input type="checkbox"/> Performed tests not interpreted correctly <input type="checkbox"/> Misidentification <input type="checkbox"/> Other, please specify:

<p>4) Follow-Up & Tracking</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Problems with timely follow-up of abnormal diagnostic test results <input type="checkbox"/> Problems with scheduling of appropriate and/or timely follow-up visits <input type="checkbox"/> Problems with diagnostic specialties returning test results to clinicians <input type="checkbox"/> Problems with clinicians reviewing test results <input type="checkbox"/> Problems with clinicians documenting action or response to test results <input type="checkbox"/> Problems with notifying patients of test results <input type="checkbox"/> Problems with monitoring patients through follow-up <input type="checkbox"/> Other, please specify:
<p>5) Referrals</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Problem initiating referral <input type="checkbox"/> Lack of appropriate actions on requested consultation <input type="checkbox"/> Communication breakdown from consultant to referring provider <input type="checkbox"/> Other, please specify:

Reprinted with permission from Singh H, Khanna A, Spitzmueller C, Meyer AND. Recommendations for using the Revised Safer Dx Instrument to help measure and improve diagnostic safety. Diagnosis 2019;6(4):315-23. <https://doi.org/10.1007/s12026-019-0958-4>

DEER Taxonomy

This Issue

Citations 403



PDF



More ▾



Cite



Permissions

Original Investigation | Health Care Reform

FREE

November 9, 2009

Diagnostic Error in Medicine Analysis of 583 Physician-Reported Errors

Gordon D. Schiff, MD; Omar Hasan, MD; Seijeoung Kim, RN, PhD; et al

» Author Affiliations | Article Information

Arch Intern Med. 2009;169(20):1881-1887. doi:10.1001/archinternmed.2009.333

Where in diagnostic process

1. Access/Presentation

2. History

3. Physical Exam

4. Tests (Lab/Radiology)

5. Assessment

6. Referral/Consultation

7. Follow-up

What went wrong

- A Failure/delay in presentation
- B Failure/denied care access
- A Failure/delay in eliciting critical piece of history data
- B Inaccurate/misinterpretation
- C Failure in weighing
- D Failure/delay to follow-up
- A Failure/delay in eliciting critical physical exam finding
- B Inaccurate/misinterpreted
- C Failure in weighing
- D Failure/delay to follow-up

Ordering

- A Failure/delay in ordering needed test(s)
- B Failure/delay in performing ordered test(s)
- C Error in test sequencing
- D Ordering of wrong test(s)
- E Test ordered wrong way

Performance

- F Sample mixup/mislabeled (eg, wrong patient/test)
- G Technical errors/poor processing of specimen/test
- H Erroneous lab/radiology reading of test
- I Failed/delayed reporting of result to clinician

Clinician Processing

- J Failed/delayed follow-up of (abnormal) test result
- K Error in clinician interpretation of test

Hypothesis Generation

- A Failure/delay in considering the diagnosis
- Suboptimal Weighing/Prioritizing
- B Too little consideration/weight given to the diagnosis
- C Too much weight on competing/coexisting diagnosis
- Recognizing Urgency/Complications

- D Failure/delay to recognize/weigh urgency
- E Failure/delay to recognize/weigh complication(s)
- A Failure/delay in ordering referral
- B Failure/delay obtaining/scheduling ordered referral
- C Error in diagnostic consultation performance
- D Failure/delayed communication/follow-up of consultation

- A Failure to refer patient to close/safe setting/monitoring
- B Failure/delay in timely follow-up/rechecking of patient

Measure DX:

A Resource to Identify, Analyze, and Learn From Diagnostic Safety Events

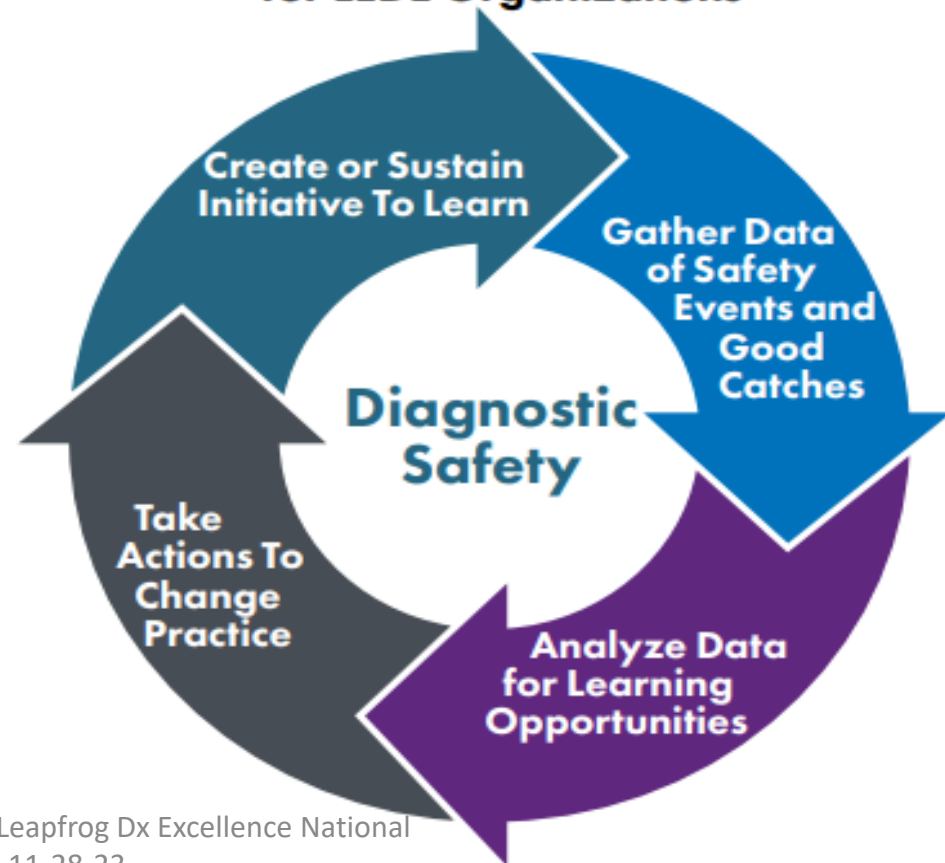


An Action Plan for Developing LEDE Organizations

LEDE = Learning & Exploration of Diagnostic Excellence

Singh H, Upadhyay DK, & Torretti D. **Developing health care organizations that pursue learning and exploration of diagnostic excellence: An action plan.** *Acad Med.* 2020 Aug;95(8):1172-1178

Figure 1. Learning and Feedback System for LEDE Organizations



The Joint Commission Journal on Quality and Patient Safety 2022; 000:1-10

Developing the Safer Dx Checklist of Ten Safety Recommendations for Health Care Organizations to Address Diagnostic Errors

Hardeep Singh, MD, MPH; Umair Mushtaq, MBBS, MS; Abigail Martinez, MPH; Umber Shabid, DrPH; Joellen Huebner, MPH; Patricia McGaffigan, RN, MS, CPPS; Divvy K. Upadhyay, MD, MPH

Divvy K Upadhyay MD MPH for Leapfrog Dx Excellence National
Town Hall 11-28-23

A Program to Provide Clinicians with Feedback on Their Diagnostic Performance in a Learning Health System

Ashley N.D. Meyer, PhD * • Divvy K. Upadhyay, MD, MPH * • Charlotte A. Collins, PhD •
Michael H. Fitzpatrick, MD • Maria Kobylinski, MD • Amit B. Bansal, MD, MBA • Dennis Torretti, MD •
Hardeep Singh, MD, MPH ✉ • [Show less](#) • [Show footnotes](#)

[Open Access](#) • Published: September 23, 2020 • DOI: <https://doi.org/10.1016/j.jcjq.2020.08.014>

A GUIDE TO GIVING FEEDBACK TO CLINICIANS

Providing Feedback on Diagnostic Performance

1) SCHEDULE THE DEBRIEFING IN A TIMELY MANNER

- Ensure that the debriefing occurs soon after the event to promote a learning environment rather than a punitive one



2) PLAN AND PREPARE FOR THE DEBRIEFING

- Encourage the recipient(s) to review the case before the debriefing.
- Consider including more than one person (e.g. care team) as recipients



3) SET A FLEXIBLE TIME FRAME

- Schedule 10-20 minutes for debriefing
- Allow for more time with a larger group



4) SET THE STAGE FOR A LEARNING ENVIRONMENT

- Take a non-judgmental stance
- Explain the context, including goals and objectives
- Be aware of non-verbal cues



5) SEEK INPUT AND ALLOW FOR EXPLANATION

- Discuss specific actions or decisions
- Do not infer motives
- Explore unclear issues with curiosity
- Include what went well



6) HAVE RECIPIENT(S) IDENTIFY LEARNING OBJECTIVES

- Emphasize learning for the individuals, the care team, the department, and the system



7) END WITH APPRECIATION

- For their input
- For their time
- For their willingness to help improve clinical decision making at the facility/system.



Variety of work on diagnostic safety possible - Feedback to frontline clinicians To AI-enabled disease management and population health programs

Divvy K Upadhyay MD MPH for Leapfrog Dx Excellence National Town Hall 11-28-23

NEJM

Catalyst

Innovations in Care Delivery

ARTICLE

Collaboration to Improve Colorectal Cancer Screening Using Machine Learning

Daniel Underberger, MD, Keith Boell, DO, MS-HQSM, SFHM, Jeremy Orr, MD, MPH, Cory Siegrist, MBA, Sara Hunt

Vol. 3 No. 4 | April 2022

DOI: 10.1056/CAT.21.0170

Despite significant efforts and evidence to suggest the benefits of being screened for colorectal cancer (CRC), many eligible patients are not being screened for it. To help Geisinger Health System and Medial EarlySign identified patients overdue for CRC

NEJM

Catalyst

Innovations in Care Delivery

CASE STUDY

Managing patients with pulmonary nodules: Redesigning a system to achieve the three “rights”

Eric D. Newman, MD, Paul F. Simonelli, MD, PhD, Matthew A. Facktor, MD, J. Edward Hartle, MD

Vol. No. | June 5, 2020

DOI: 10.1056/CAT.20.0015

The traditional specialty consultation process is often associated with access issues, test overutilization, provider inefficiencies, care failure, and patient frustration. We designed a new process of care that addresses these issues systematically. To test this model of

No shortage of ideas – then what do we lack...rather, what do we need?

- A shared mental model – understanding this subject
 - True “patient safety lens” – medico-legal vs. learning health system
 - Dedicated resources – to address diagnostic safety.
-
- The right thing to do → “You cannot not do it”
 - But is it an organizational priority?
 - Thanks to this work from the Leapfrog Group ... it could be!
 - Remember – this is not about the survey – use this as a nudge!



CEO Commitment to Diagnostic Excellence

<p>1) In the past 36 months, has your hospital's CEO made a formal commitment (verbally or in writing) to all staff to make reducing harm to patients from errors in diagnosis an organizational priority, and communicated at least one specific action the hospital will take to further the commitment?</p> <p><i>If "no" to question #1, skip question #2 and continue to the next question.</i></p>	<p>Yes</p> <p>No</p>
<p>2) What specific actions were communicated by your hospital's CEO as part of their formal commitment to reducing harm to patients from errors in diagnosis?</p> <p><i>Check all that apply.</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Allocated financial resources <input type="checkbox"/> Allocated staff time <input type="checkbox"/> Designated a senior leader or clinician champion <input type="checkbox"/> Formed a committee <input type="checkbox"/> Implemented a performance measure <input type="checkbox"/> Implemented a quality improvement project <input type="checkbox"/> Other

Patient Engagement

<p>3) Has your hospital chartered a Patient and Family Advisory Council (PFAC) that meets regularly?</p> <p><i>If "no" to question #3, skip question #4 and continue to the next question.</i></p>	<p>Yes</p> <p>No</p>
--	----------------------

Convening a Multidisciplinary Team Focused on Diagnostic Excellence

<p>7) In the past 36 months, has your hospital convened a multidisciplinary team that meets all of the following requirements?</p> <ul style="list-style-type: none">• Specifically focused on reducing harm to patients from errors in diagnosis,• Sponsored by either the CEO or CMO,• Includes, at a minimum, representatives from nursing, pharmacy, laboratory medicine, radiology, pathology, hospital medicine or inpatient care specialists, emergency medicine, and quality or risk management,• Meets at least quarterly,• Reports to senior leaders quarterly, and• Reports to the Board annually <p><i>If "no" to question #7, skip questions #8-15, and continue to the next question.</i></p>	<p>Yes</p> <p>No</p>
<p>8) Has the multidisciplinary team reviewed any clinical or administrative data, patient experience or patient reported data, or incident reports to identify or track errors in diagnosis?</p> <p><i>If "no" to question #8, skip question #9 and continue to the next question.</i></p>	<p>Yes</p> <p>No</p>

Closing the Loop for Cancer Diagnosis

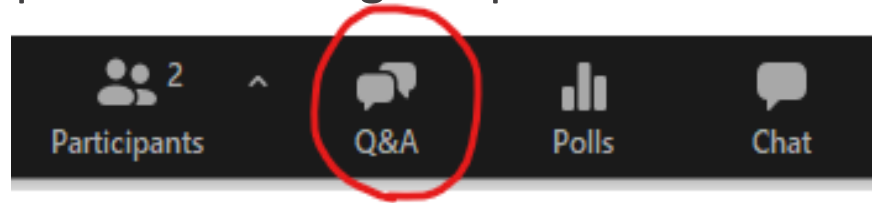
19) 12-month reporting period used:	01/01/2023 – 12/31/2023 07/01/2023 – 06/30/2024
20) Do pathologists at your hospital routinely document the date in which they communicate pathology reports indicating a diagnosis of colon, lung, or breast cancer to a patient or a patient's ordering physician? <i>If "no" to question #20, skip questions #21-24 and continue to the Affirmation of Accuracy.</i>	Yes No
21) Did your hospital calculate the proportion of colon, lung, or breast cancer diagnoses in which the patient or patient's ordering physician was notified within five business days of the report being signed by the pathologist, and do you choose to report those data to this Survey?	Yes No <i>Yes, but fewer than 30 cases met the inclusion criteria for the denominator</i>
22) Total number of patients (18 years or older) with a diagnosis of colon, lung, or breast cancer.	_____
23) Total number of patients indicated in question #22 with a documented communication between the pathologist <u>and</u> the patient <u>or</u> patient's ordering physician within five business days of the report being signed by the pathologist.	_____

Thank you

- Divvy K Upadhyay MD MPH, Geisinger
- Twitter: @Divvykant
- Email: dkupadhyay@geisinger.edu

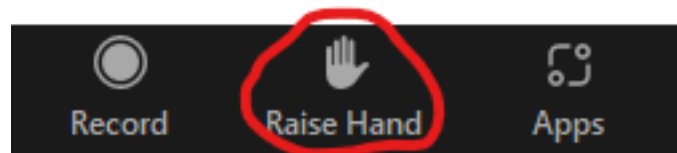
Q & A

Participants will be able to ask questions during the presentation. Please select the Q&A icon at the bottom of your screen:



- Once the icon has been selected a Q&A box will appear for you to type your questions.
- All participants will be able to view the questions and answers during the duration of the webinar.
 - You will be receiving responses in real time from a member of our team.
 - We will include a transcript of the Q&A on the Leapfrog website here: <https://www.leapfroggroup.org/survey-materials/town-hall-calls>
 - Some questions may be answered live – please pay close attention.

Following the presentation we will have a live Q&A session. Please use the Raise Hand icon at the bottom of your screen:



- Once the icon has been selected you will be placed in the que. When it is your turn to ask your question, you will receive a prompt from the host asking you to unmute yourself.

Proposed Changes to the 2024 Leapfrog Hospital Survey

- Now available on the Leapfrog website: <https://www.leapfroggroup.org/survey-materials/proposed-changes-2024-leapfrog-hospital-survey>
- Open for Comment until Midnight ET on December 15, 2023
- Leapfrog is proposing to assess hospital implementation of five evidence-based practices and one process measure aimed at reducing harm to patients from errors in diagnosis, including delayed, wrong, and missed diagnoses, and diagnoses not communicated to the patient:
 - The five practices will focus on CEO commitment, patient engagement, risk assessment and mitigation, convening a multidisciplinary team, and staff training and education.
 - The process measure is focused on closed loop communication of cancer diagnoses to patients or their ordering physician.

Thank you for joining us today.

Questions? Contact the Help Desk at <https://leapfroghelpdesk.zendesk.com>