SPSP Primary Care: Safety overview and Achieving Diagnostic Excellence in Primary Care

20 September 2023

Housekeeping

Online

- All microphones are muted except for our speakers
- You can choose to turn your camera on or off
- There will be a Q&A session, please use the chat box to ask questions (speech bubble icon at the bottom right of your screen)
- Today's session will not be recorded. Please do not record. A copy of the slides and links to resources will be shared in our post-event communications

In person

- Wi-Fi name: GJCH Public Wi-Fi
- Please try to keep background noise to a minimum to help with sound quality for our online attendees
- There will be a Q&A session, please raise your hand to ask a question

Welcome

Agenda

- Primary care safety work: Past and present
- Guest speaker Professor Hardeep Singh: Achieving diagnostic excellence in Primary Care
- Primary care safety work: What next?
- Get involved
- Final reflections/close

Belinda Robertson

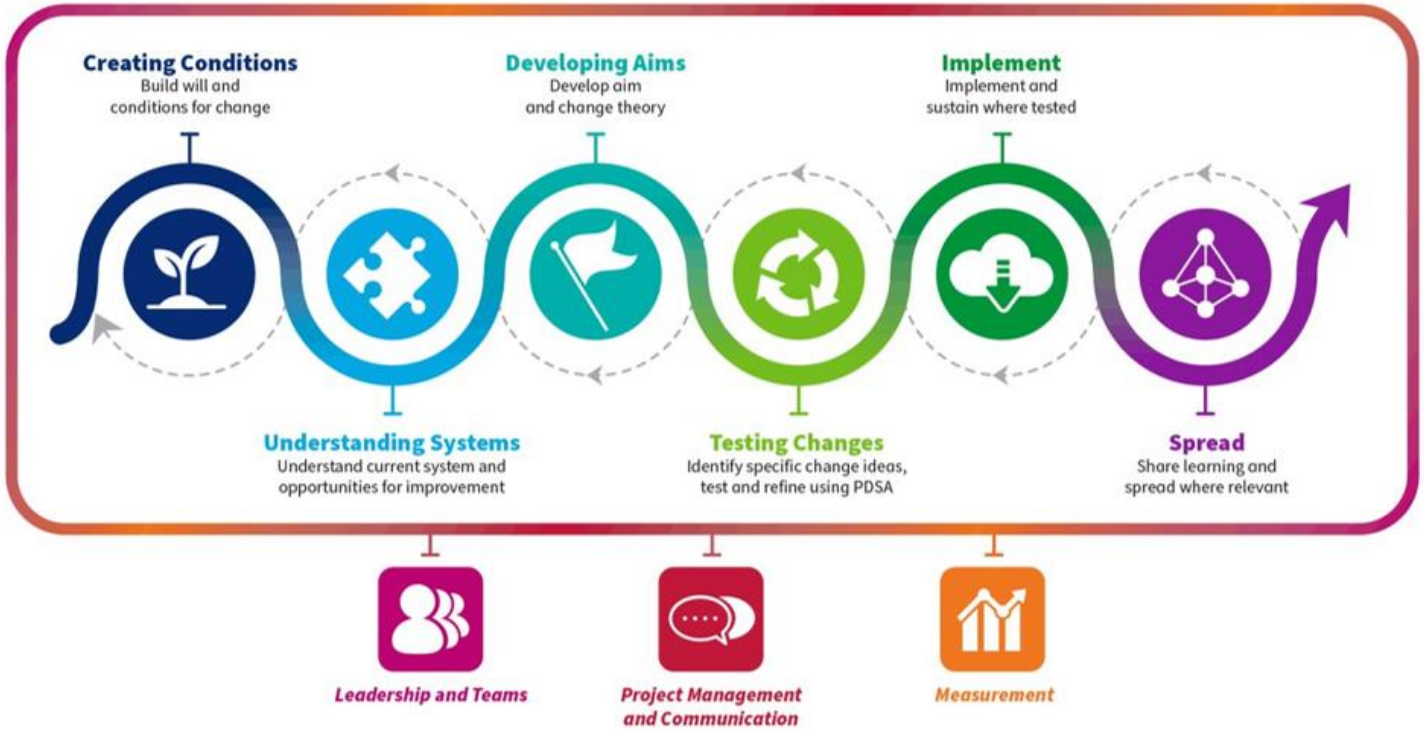
Associate Director of Improvement
Healthcare Improvement Scotland

HIS Strategy

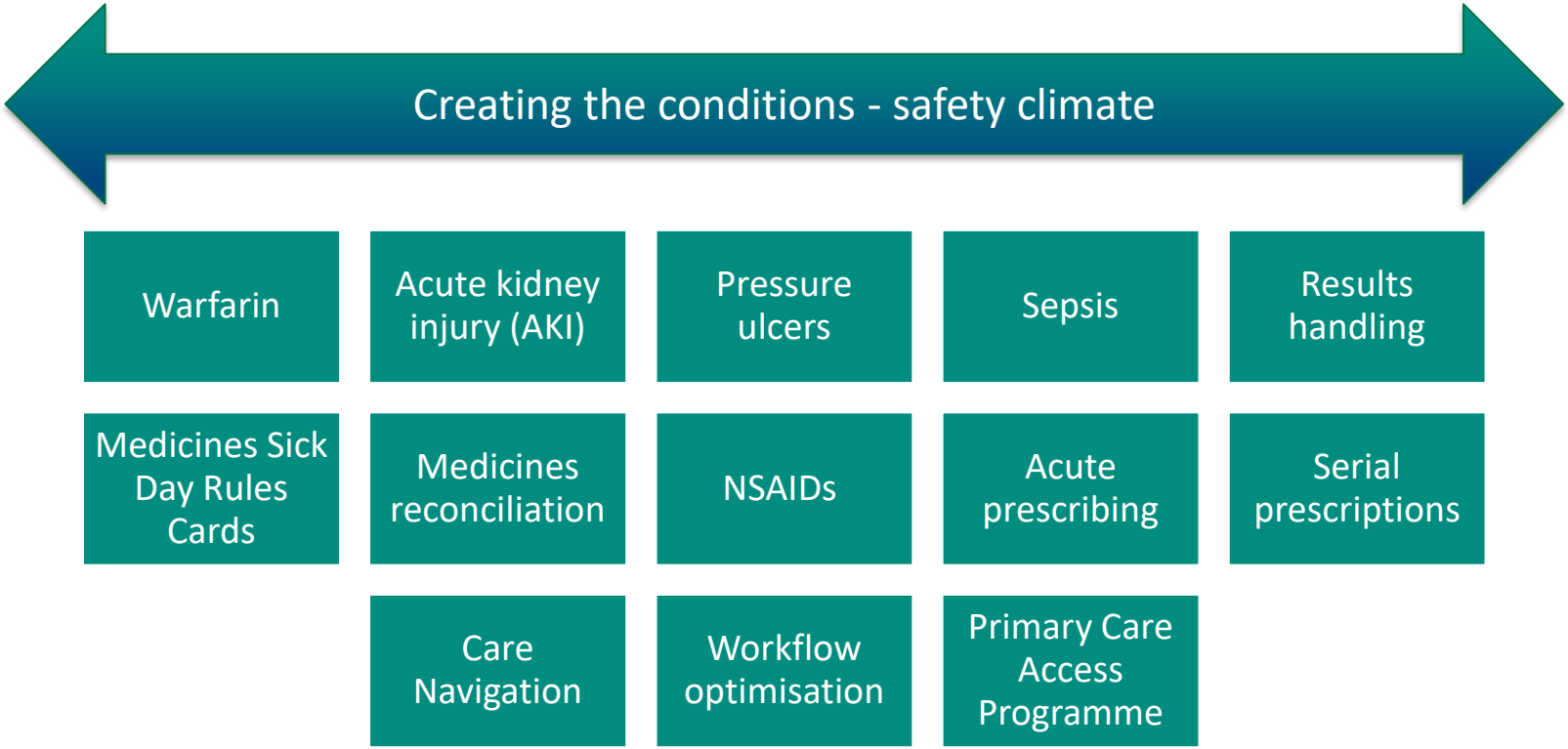
Priority 1: Enable a better understanding of the safety and quality of health and care services and the high impact opportunities for improvement

We support health and care providers to deliver safe and accessible care. As Scotland emerges from the pandemic, it is clear that the NHS and social care are facing serious and sustained challenges. These challenges are deep seated and complex and are directly impacting on the safe provision of care and staff wellbeing. We will drive a stronger and more consistent focus on safety at a national level and support a better understanding of what actions are needed to deliver sustained improvement.

How can a QI approach help?



Primary care safety work: Past



Primary care safety work : Present

- Pharmacotherapy Quick Start Programme
- Primary Care Access Programme
- Community Treatment and Care (CTAC) Network
- Acute Prescribing Quick Guide
- NSAIDs toolkit for community pharmacies evaluation

SPSP Primary Care:

- Creation of resource library for existing resources
- Stakeholder engagement

Primary care safety work: Impact

	Challenge	Change idea	Outcome
demand	• 50 – 60 acute prescription requests per day • Antidepressants generating significant acute prescription workload	• Introduced a standard operating procedure (SOP) for antidepressants and moved appropriate patients to repeat prescriptions	• An average of 28 acute prescription requests per day • 27% reduction in demand for antidepressant acute prescriptions
activity	• Patients requiring medication review had to book a same day GP appointment • Several calls often needed to book and access prescription	• Created an online review form for Hormone Replacement Therapy (HRT) and increased supply following review to 6 months	• Time taken for each review reduced from 15 to 3 minutes • Reviewed and re-prescribed HRT increased threefold in the first month

Primary care safety work: Impact

demand

In the first week, 62 patients were seen in the new clinic and did not use an urgent GP appointment slot.

capacity

The practice created 15 minor illness appointments per day, or 75 over the week.

activity

Reviewed and re-prescribed HRT increased three-fold, to 78 patients in the first month.

queue

The number of patients asked to call back decreased by 27%

Practical Approaches to Measurement and Reduction of Diagnostic Error

Hardeep Singh, MD, MPH

Center for Innovations in Quality, Effectiveness & Safety (IQuESt)

Michael E. DeBakey VA Medical Center

Baylor College of Medicine

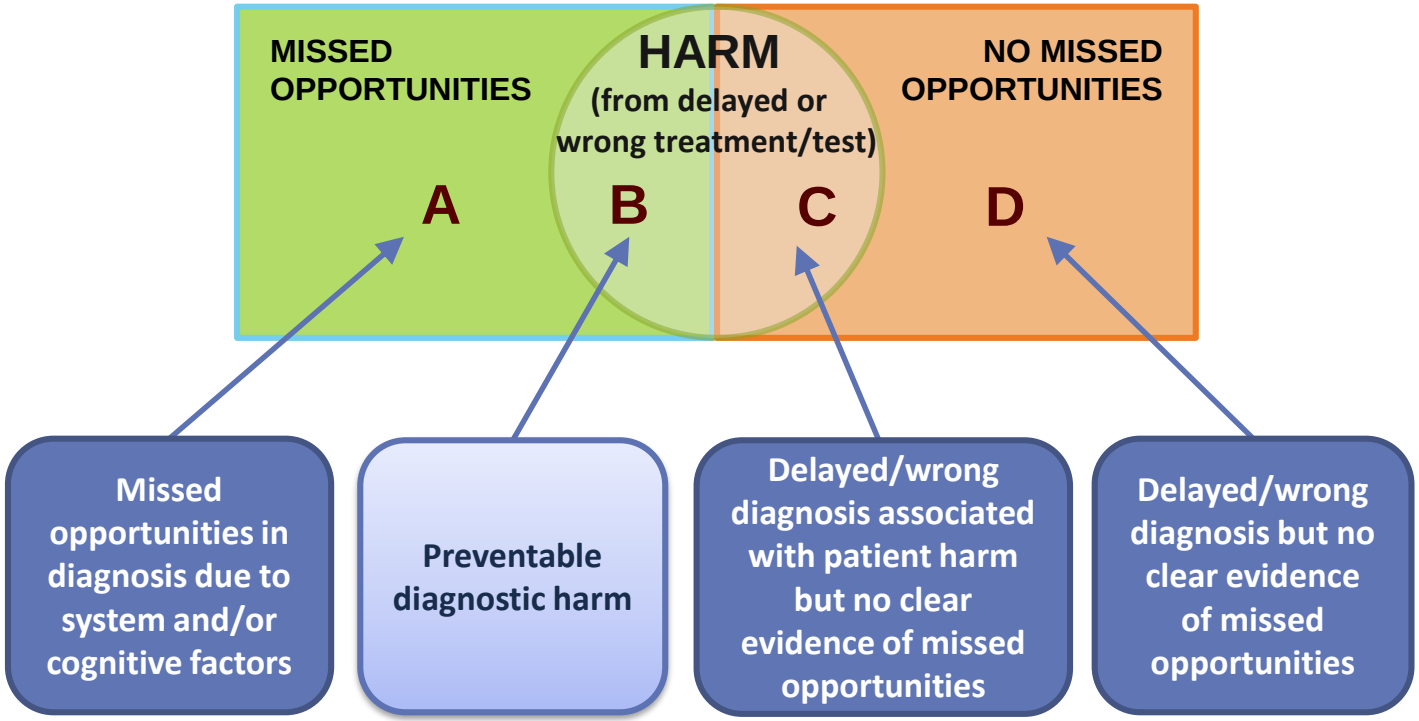
X (formerly known as Twitter): @HardeepSinghMD

IQuESt Center for Innovations in Quality, Effectiveness & Safety

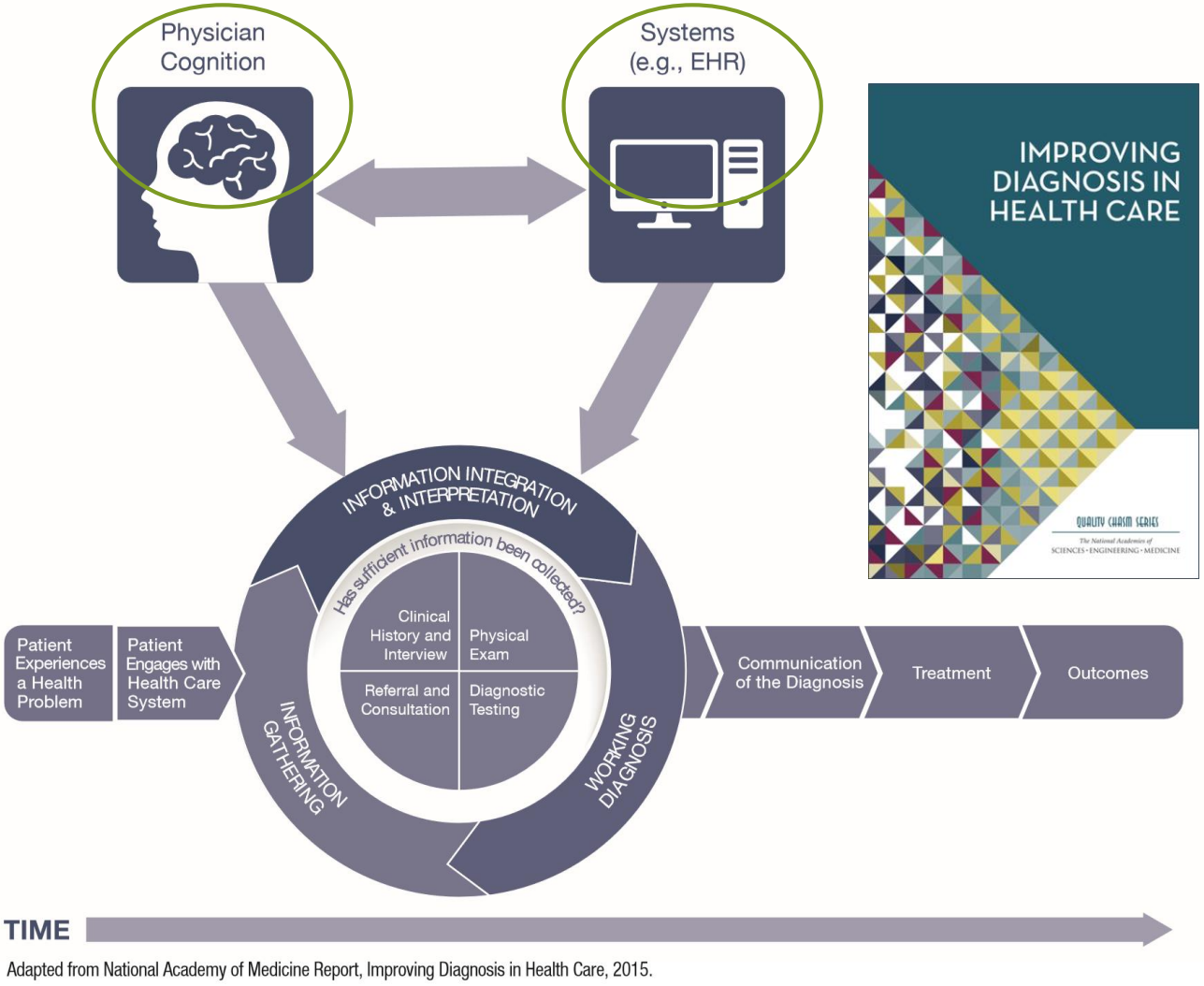
Baylor College of Medicine

VA Health Care Defining Excellence in the 21st Century

Defining Preventable Diagnostic Harm



Adapted from Singh, Jt Comm J Qual Pat Saf 2014



Adapted from National Academy of Medicine Report, Improving Diagnosis in Health Care, 2015.

Themes from Research Studies

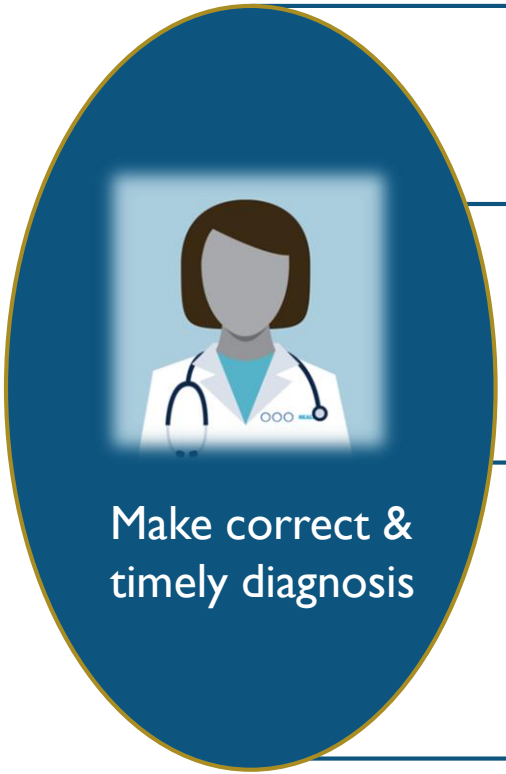
Common diseases missed

Missed opportunities to elicit or act upon key clinical findings (history/exam)

Overlooking information in medical record

Singh et al JAMA IM 2012; Singh et al Arch IM 2009

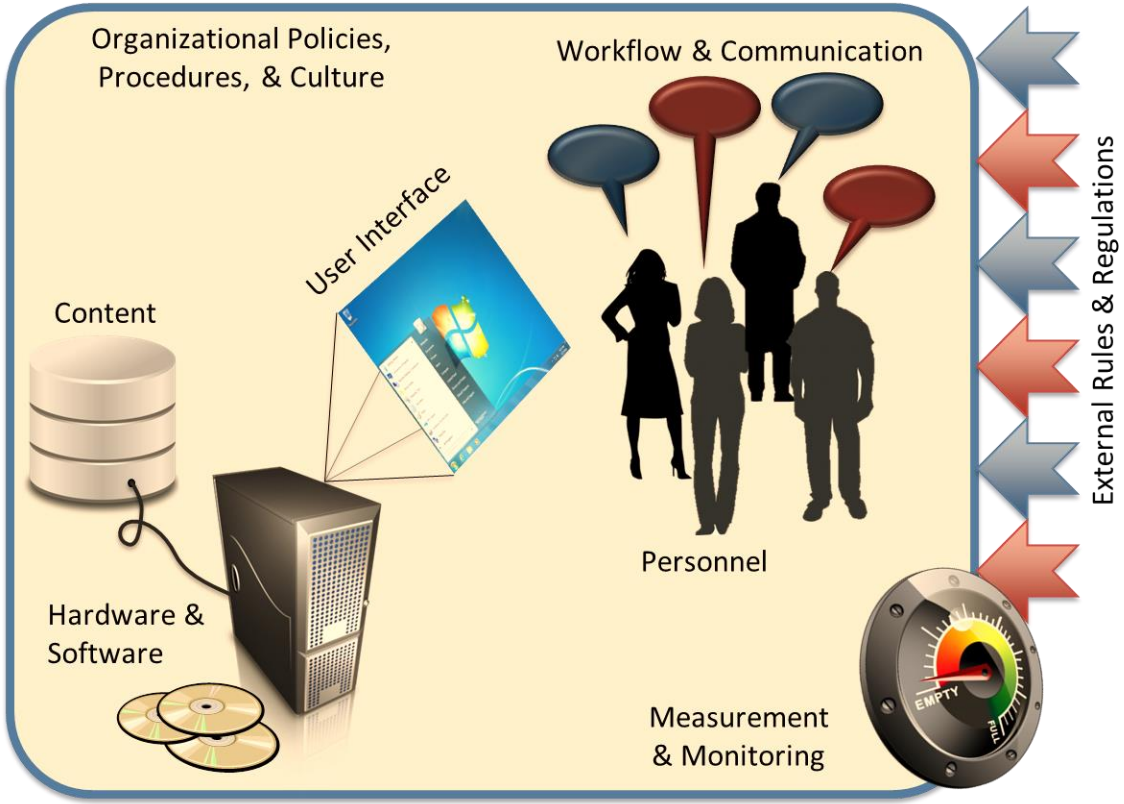
Diagnostic Excellence



- Use **fewest** resources
- Maximize **patient experiences**
- Manage and communicate **uncertainty** to patients
- Tolerates **watchful waiting** when unfocused treatment may be harmful

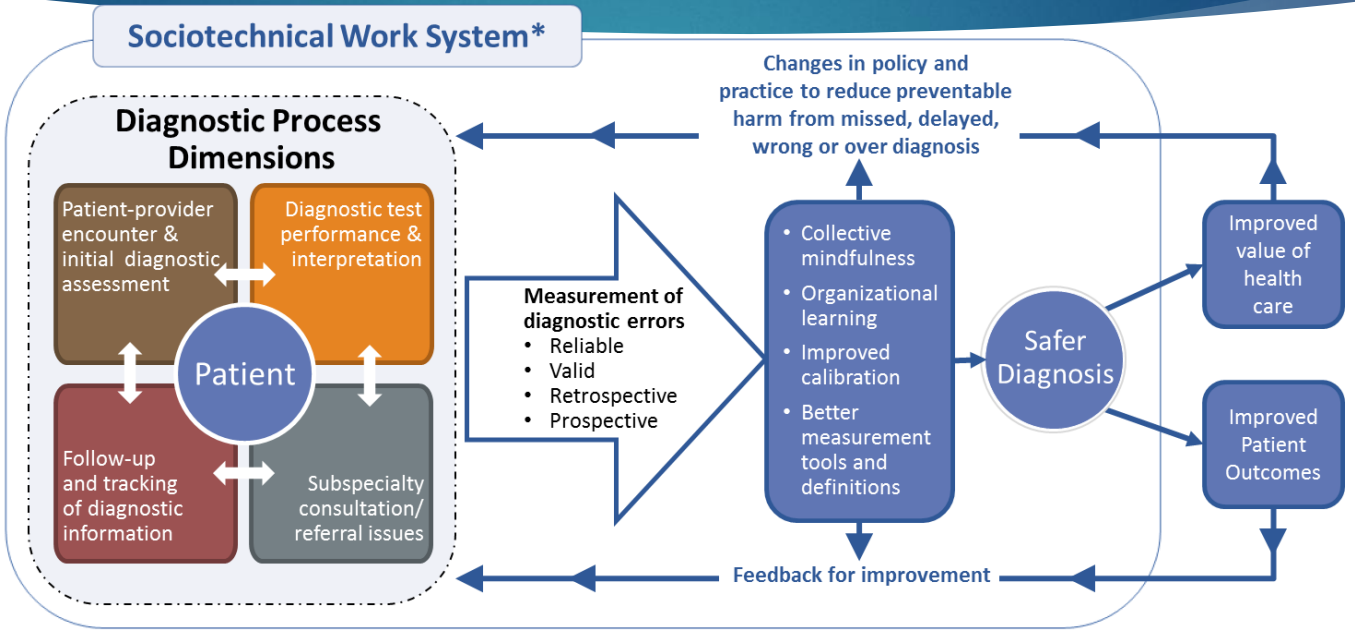
Meyer AND, Singh H. The Path to Diagnostic Excellence Includes Feedback to Calibrate How Clinicians Think. *JAMA*. 2019;321(8):737–738.

8-Dimensional Sociotechnical Framework to Help Understand



Sittig, Singh, *Qual Saf Health Care. 2010 Oct; 19(Suppl 3): i68–i74.*

Safer Dx Framework for Measurement and Reduction of Diagnostic Errors

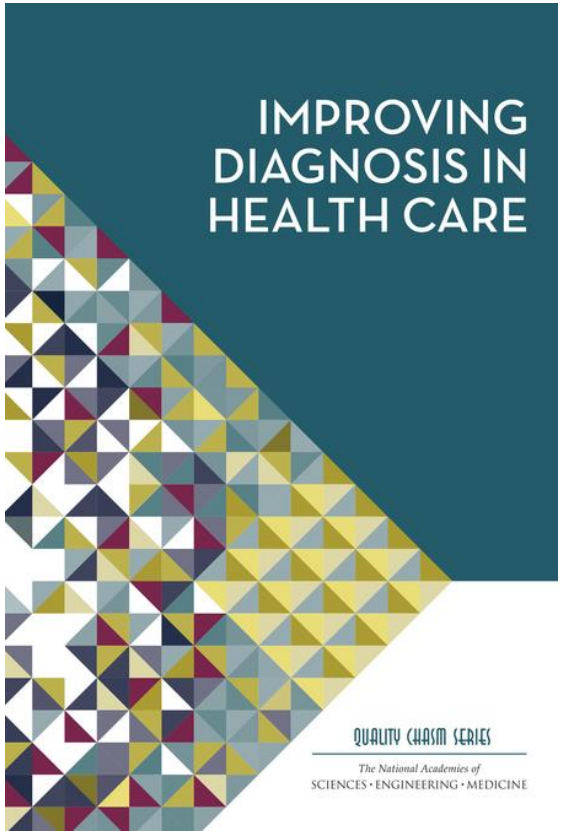


* Includes 8 technological and non-technological dimensions

Singh and Sittig, BMJ Qual Saf 2015

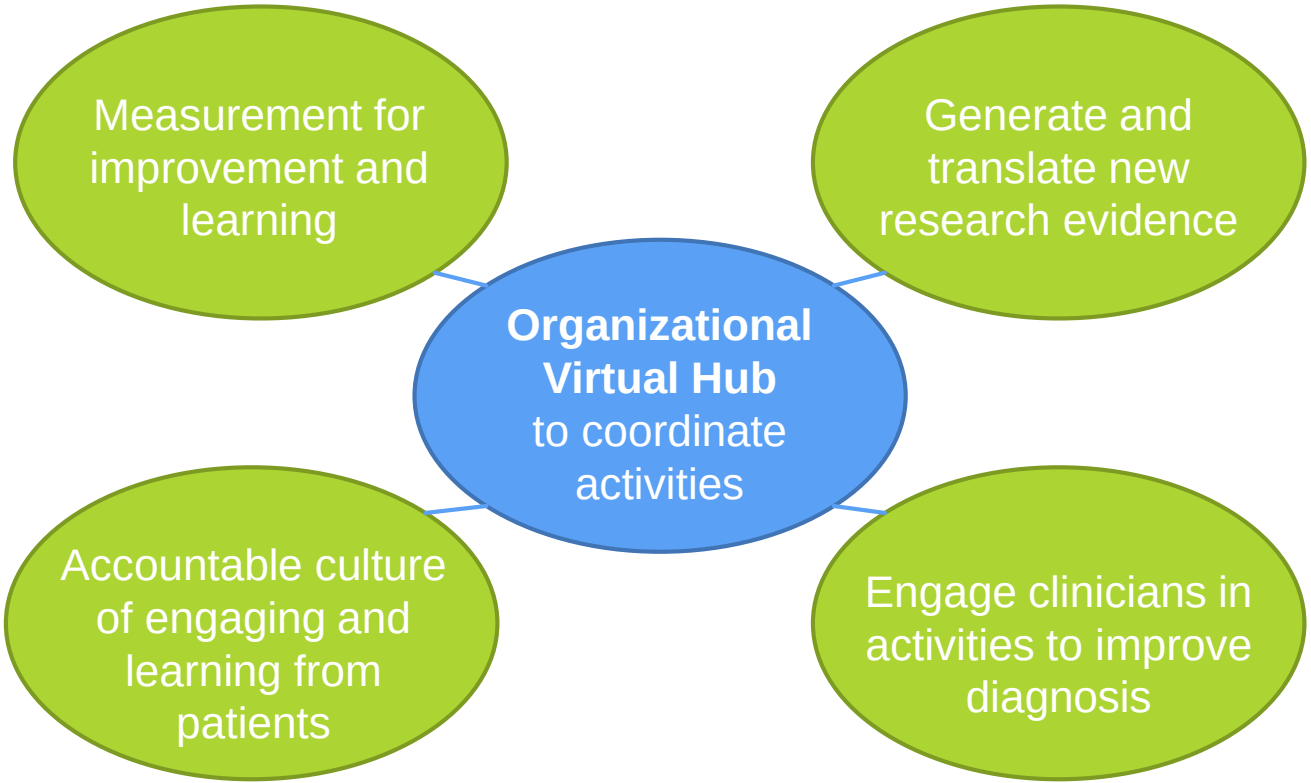
Accrediting organizations and Medicare

"require that healthcare organizations have programs in place to monitor the diagnostic process and identify, learn from, and reduce diagnostic errors and near misses in a timely fashion."



New Care Models: "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*.

BMJ Quality & Safety
The international journal of healthcare improvement

Electronic health record-based triggers to detect potential delays in cancer diagnosis

Daniel R Murphy,[1,2] Archana Laxmisan,[1,2] Brian A Reis,[1,2] Eric J Thomas,[3] Adol Esquivel,[4] Samuel N Forjuoh,[5] Rohan Parikh,[6] Myrna M Khan,[1,2] Hardeep Singh[1,2]

BMJ Quality & Safety
The international journal of healthcare improvement

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

Daniel R Murphy, Ashley ND Meyer, Dean F Sittig, Derek W Meeks, Eric J Thomas, Hardeep Singh
BMJ Qual Saf 2019;28:151–159. doi:10.1136/bmjqs-2018-008086

CHEST JOURNAL
ORIGINAL RESEARCH: LUNG CANCER|
VOLUME 150, ISSUE 3, SEPTEMBER 01, 2016

Computerized Triggers of Big Data to Detect Delays in Follow-up of Chest Imaging Results

Daniel R. Murphy, MD, MBA, Ashley N.D. Meyer, PhD, Viraj Bhise, MBBS, Li Wei, MS, Louis Wu, PA, Hardeep Singh, MD, MPH
OpenAccess DOI: https://doi.org/10.1016/j.chest.2016.05.001

e-Triggers to Identify Patients with Diagnostic Concerns

Example Trigger:

Transfer to the ICU or initiation of rapid response team (RRT) within 15 days of admission in a low-risk patient

OPEN ACCESS

An electronic trigger based on care escalation to identify preventable adverse events in hospitalised patients

BMJ

Bhise V, et al. BMJ Qual Saf 2018;27:241–246

Example Trigger:

A primary care index visit followed by unplanned hospitalization within 14 days

Electronic health record-based surveillance of diagnostic errors in primary care

BMJ Quality & Safety

Singh H, et al. BMJ Qual Saf 2011; **21** 89-92

Review of Triggered Charts

DE GRUYTER

Diagnosis 2019; 6(4): 315–323

Guidelines and Recommendations

Hardeep Singh*, Arushi Khanna, Christiane Spitzmueller and Ashley N.D. Meyer

Recommendations for using the Revised Safer Dx Instrument to help measure and improve diagnostic safety

The Safer Dx Instrument:
Items for Determining Presence or Absence of a Diagnostic Missed Opportunity

Rate the following items for the episode of care under review:

1—2—3—4—5—6—7

1= Strongly Disagree 7 = Strongly Agree

Item	Score
1. The documented history was suggestive of an alternate diagnosis, which was not considered in the diagnostic process.	
2. The documented physical exam was suggestive of an alternate diagnosis, which was not considered in the diagnostic process.*	
3. Data gathering through history, physical exam, and review of prior documentation (including prior laboratory, radiology, pathology or other results) was incomplete, given the patient's medical history and clinical presentation.	
4. Alarm symptoms or "Red Flags" (i.e. features in the clinical presentation that are considered to predict serious disease) were not acted upon.	

Engaging Clinicians

Studies have engaged frontline physicians in reporting

Frontline provider engagement, leadership support and physician champion/s

Seek feedback on diagnostic decisions

Make diagnosis a team sport

"Byte" sized practice

Foster critical thinking

Consider biases

PRACTICE POINTER

Five strategies for clinicians to advance diagnostic excellence

Hardeep Singh, [1] Denise M Connor, [2,3] Gurpreet Dhaliwal [2,3]

https://www.ahrq.gov/patient-safety/settings/multiple/calibrate-dx.html

Calibrate Dx: A Resource to Improve Diagnostic Decisions

Prepared for:
Agency for Healthcare Research and Quality
U.S. Department of Health and Human Services
5600 Fishers Lane
Rockville, MD 20857
www.ahrq.gov

Contract No. HHSP233201500022I/75P00119F37006
Task Order 5a
This project was funded under contract HHSP23320150

Prepared by:
Center for Innovations in Quality, Effectiveness, and Safety (IQuESt), Michael E. DeBakey Veterans Affairs Medical Center and Baylor College of Medicine, Houston, TX
Co-Leads: Andrea Bradford, Ph.D. and Ashley N.D. Meyer, Ph.D.
Ashish Gupta, M.D., M.B.A.
Hardeep Singh, M.D., M.P.H.

Supported by:

Engaging Patients

ORIGINAL RESEARCH

Use of patient complaints to identify diagnosis-related safety concerns: a mixed-method evaluation

Traber D Giardina [1,2] Saritha Korukonda,[3] Umber Shahid,[1,2] Viralkumar Vaghani,[1,2] Divvy K Upadhyay,[4] Greg F Burke,[4,5] Hardeep Singh [1,2]

BMJ Qual Saf: first published as 10.1136/t

Journal of the American Medical Informatics Association, 29(6), 2022, 1091–1100
https://doi.org/10.1093/jamia/ocac036
Advance Access Publication Date: 29 March 2022
Research and Applications

Research and Applications

Inviting patients to identify diagnostic concerns through structured evaluation of their online visit notes

Traber D. Giardina[1], Debra T. Choi[1], Divvy K. Upadhyay[2], Saritha Korukonda[2], Taylor M. Scott[1], Christiane Spitzmueller[3], Conrad Schuerch[2], Dennis Torretti[2], and Hardeep Singh [1]

HealthAffairs VOL. 37, NO. 11: PATIENT SAFETY

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

Traber Davis Giardina[1], Helen Haskell[2], Shailaja Menon[3], Julia Hallisy[4], Frederick S. Southwick[5], Urmimala Sarkar[6], Kathryn E. Royse[7], and Hardeep Singh[8] See fewer authors

OpenNotes®

Taking Actions to LEDE

The Safer Dx Checklist

10 High-Priority Practices for Diagnostic Excellence

PREPARED BY:

Center for Innovation in Quality, Effectiveness, and Safety (IQuESt),
Michael E. DeBakey Veterans Affairs Medical Center and
Baylor College of Medicine, Houston, TX

- Hardeep Singh, MD, MPH (Principal Investigator)
- Abigail Marinez, MPH
- Umair Mushtaq, MBBS, MS
- Umber Shahid, PhD, MPH

Geisinger, Danville, PA

- Divvy Kant Upadhyay, MD, MPH

Institute for Healthcare Improvement, Boston, MA

- Joellen Huebner, BA
- Patricia McGaffigan, RN, MS, CPPS

ACKNOWLEDGMENTS

This work was generously funded by a grant from the Gordon and Betty Moore Foundation.

http://www.ihi.org/resources/Pages/Tools/safer-diagnostic-checklist.aspx

The Safer Dx Checklist:
10 High-Priority Practices for Diagnostic Excellence

(Scenarios are examples of actions to improve the practices)

		Implementation Status (Current state of organization's practices)		
		Full	Partial	Not Implemented
1	**Health care organization leadership builds a "board-to-bedside" accountability framework that includes structure, capacity, transparency, time, and resources to measure and improve diagnostic safety.** Scenario 1: Senior leadership/C-suite establish a multidisciplinary team (e.g., diagnostic safety committee) charged with identifying and addressing opportunities to reduce errors at the institutional level. The team includes department leaders and clinical champions. Scenario 2: Senior leadership/C-suite consistently share diagnostic safety data with the governance board. This includes quantitative data to measure and track diagnostic safety as well as narrative patient stories, patterns, and action plans.	☐	☐	☐
2	**Health care organization promotes a just culture and creates a psychologically safe environment that encourages clinicians and staff to share opportunities to improve diagnostic safety without fear of retribution**. Scenario: Ensure non-punitive conditions that encourage clinical and non-clinical staff to report missed opportunities, harms, "good catches," tips, and lessons related to diagnostic safety. Clo the loop and share information on corrective actions or steps taken to prevent recurrence in a timely and effective manner.	☐	☐	☐
	Health care organization creates feedback loops to increase information flow abou			

The Safer Dx Checklist

10 High-Priority Practices for Diagnostic Excellence

The Safer Dx Checklist is an organizational self-assessment tool with 10 recommended practices to achieve diagnostic excellence.

Why Use the Checklist?

Diagnostic errors (missed, delayed, or wrong diagnoses) involve at least 1 in 20 US adults annually and lead to considerable harm to patients of all ages. They also are costly and one of the most common reasons for malpractice claims. Health care organizations need pragmatic guidance on where to focus efforts to improve diagnostic safety.

The Safer Dx Checklist is a synthesis of foundational practices that health care organizations can use to advance diagnostic excellence. The checklist provides a framework for organizations to conduct a self-assessment to understand the current state of diagnostic practices, identify areas to improve, and track progress toward diagnostic excellence over time.

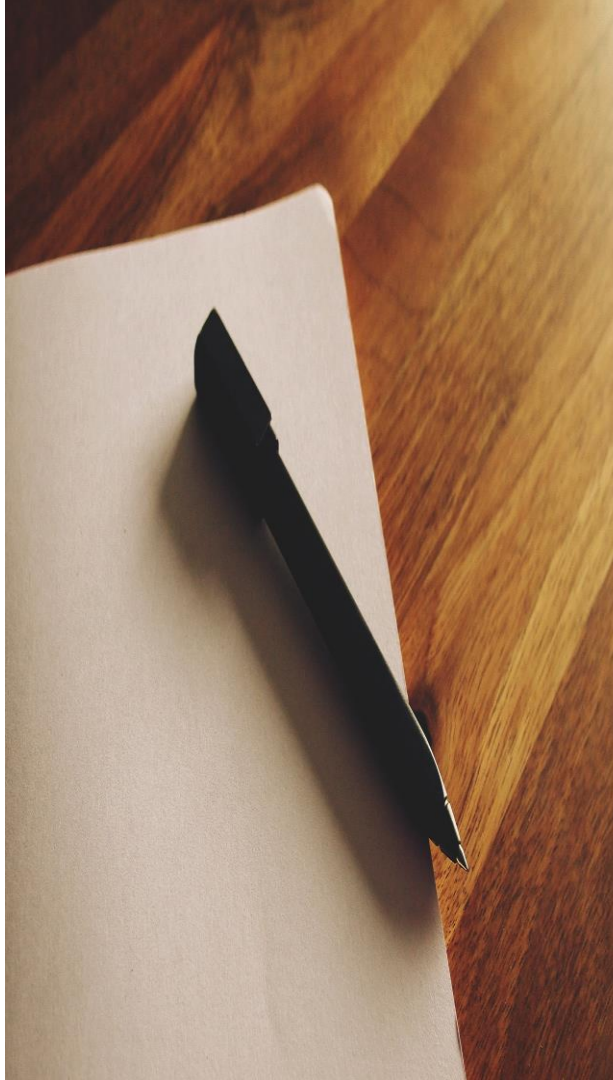
The checklist was developed using a rigorous multimethod approach that included interviews with health care quality and safety leaders,

How to Use the Checklist

1. **Identify a senior leader** (e.g., chief quality officer, chief patient safety officer, chief medical officer, or other clinician with oversight of quality) in the organization who can serve as the champion for learning and exploration of diagnostic excellence.
2. **Establish a multidisciplinary team** of individuals from various clinical and non-clinical disciplines, including quality and safety, patient

HOW TO USE THE CHECKLIST

- Identify a senior leader
- Establish a multidisciplinary team
- Complete the checklist
- Develop an action plan
- Identify regular checkpoints for follow up



Checklist Responses

For each of the checklist items, select the **Implementation Status** that best represents the current state of your organization's practices:

Full

A well-known and well-documented practice that occurs reliably in the organization.

Partial

The practice sometimes occurs in the organization. The practice is not well known, or it is implemented inconsistently across the organization.

Not Implemented

The practice does not occur.

Checklist Responses: Tips & Tricks

1. Track total “fully implemented” responses
2. You will be anonymous
3. Please report honestly!
4. Respond using the Webex poll (online) or using the in-room resources

Health care organization leadership builds a “board-to-bedside” accountability framework that includes structure, capacity, transparency, time, and resources to measure and improve diagnostic safety.

2

Health care organization promotes a just culture and creates a psychologically safe environment that encourages providers and staff to share opportunities to improve diagnostic safety without fear of retribution.

3

Health care organization creates feedback loops to increase information flow about patients' diagnostic and treatment-related outcomes. These loops include clinicians and external organizations and establish mechanisms for capturing, measuring, and providing feedback to the diagnostic team about patients' subsequent diagnoses and clinical outcomes.

Health care organization includes multidisciplinary perspectives to understand and address contributory factors in analysis of diagnostic safety events, and consider human factors, informatics, IT system design, and cognitive elements.

Health care organization actively seeks patient and family feedback to identify and understand diagnostic safety concerns and addresses concerns by codesigning solutions.

Health care organization encourages patients to review their health records and has mechanisms in place to help patients understand, interpret, and/or act on diagnostic information.

Health care organization prioritizes equity in diagnostic safety efforts by segmenting data to understand root causes and implementing strategies to address and narrow equity gaps.

Health care organization has in place standardized systems and processes to encourage direct, collaborative interactions between treating clinical teams and diagnostic specialties (e.g., laboratory, pathology, radiology) in cases that pose diagnostic challenges.

Health care organization has in place standardized systems and processes to ensure reliable communication of diagnostic information between care providers and with patients and families during handoffs and transitions throughout the diagnostic journey.

Health care organization has in place standardized systems and processes to close the loop on communication and follow up on abnormal test results and referrals.

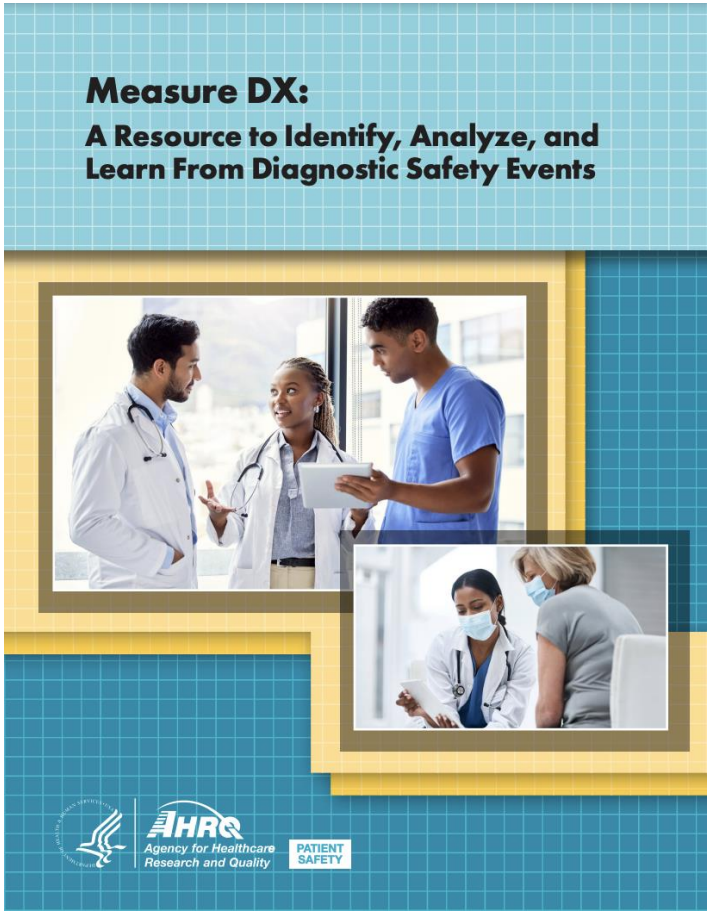
Count the total number of practices fully implemented at your site

Interpreting Checklist Results

Based on your response, your full Implementation Status is:

- **Beginning:** 0 to 3 “Full” responses
- **Making progress:** 4 to 6 “Full” responses
- **Exemplar:** 7 or more “Full” responses

Review checklist items with “Not Implemented” responses as **opportunities** for improvement.


Measure DX:
A Resource to Identify, Analyze, and Learn From Diagnostic Safety Events
AHRQ
Agency for Healthcare Research and Quality
PATIENT SAFETY

Overview of Measure Dx

1

Prepare for Measurement

- Engage stakeholders
- Build a team
- Foster psychological safety

2

Conduct a Self-assessment

Inventory available resources to support this work and select a measurement strategy

3

Implement Measurement Strategies

Use one or more data sources within the organization to capture potential diagnostic safety events for further review

4

Review & Analyze Cases

Use a systematic review process to identify learning opportunities and translate findings into useful feedback

Four Strategies to Detect Diagnostic Safety Learning Opportunities

A

USE EXISTING QUALITY & SAFETY DATA

Examine previously identified safety events for diagnostic improvement opportunities

B

SOLICIT REPORTS FROM CLINCIANS

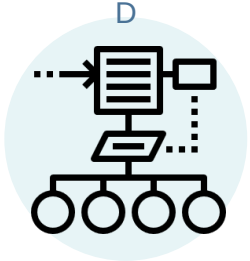
Ask clinicians to bring attention to diagnostic events within an environment of psychological safety

C

LEVERAGE PATIENT-REPORTED DATA

Examine patient surveys, incident reports, and complaints to identify missed opportunities

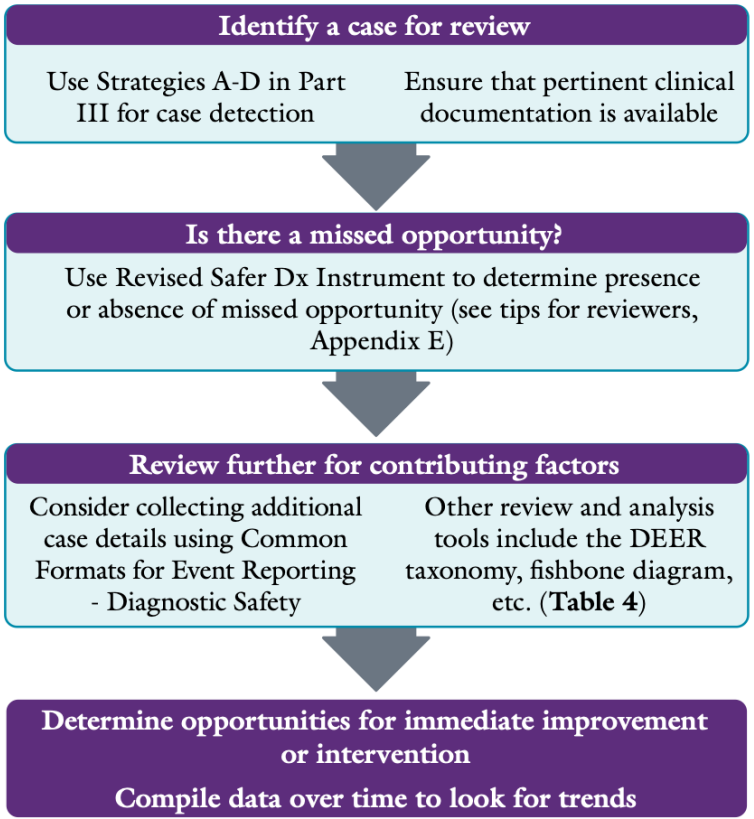
D



EHR-ENHANCED CHART REVIEW

Use EHR searches or trigger algorithms to identify high-risk diagnoses or care patterns

Case Review & Data Gathering



Towards Reducing Preventable Harm from Diagnostic Error

- Diagnostic error a complex problem but promising recent progress
- Strategies (e.g. Calibrate Dx, BMJ) for clinicians to learn & improve
- Safer Dx Checklist & Measure Dx actionable steps to improve safety

Thank You

- **Funding Agencies that make research possible:**
  - Department of Veterans Affairs
  - Agency for Healthcare Research and Quality
  - Gordon and Betty Moore Foundation
  - CanTest - CRUK
  - ONC for SAFER Guides

- **Our multidisciplinary team at the Center for Innovations in Quality, Effectiveness and Safety (IQuESt):**
  - Email: hardeeps@bcm.edu
  - Web: http://www.houston.hsrd.research.va.gov/bios/singh.asp and www.bcm.edu/saferdx
  - Twitter: @HardeepSinghMD

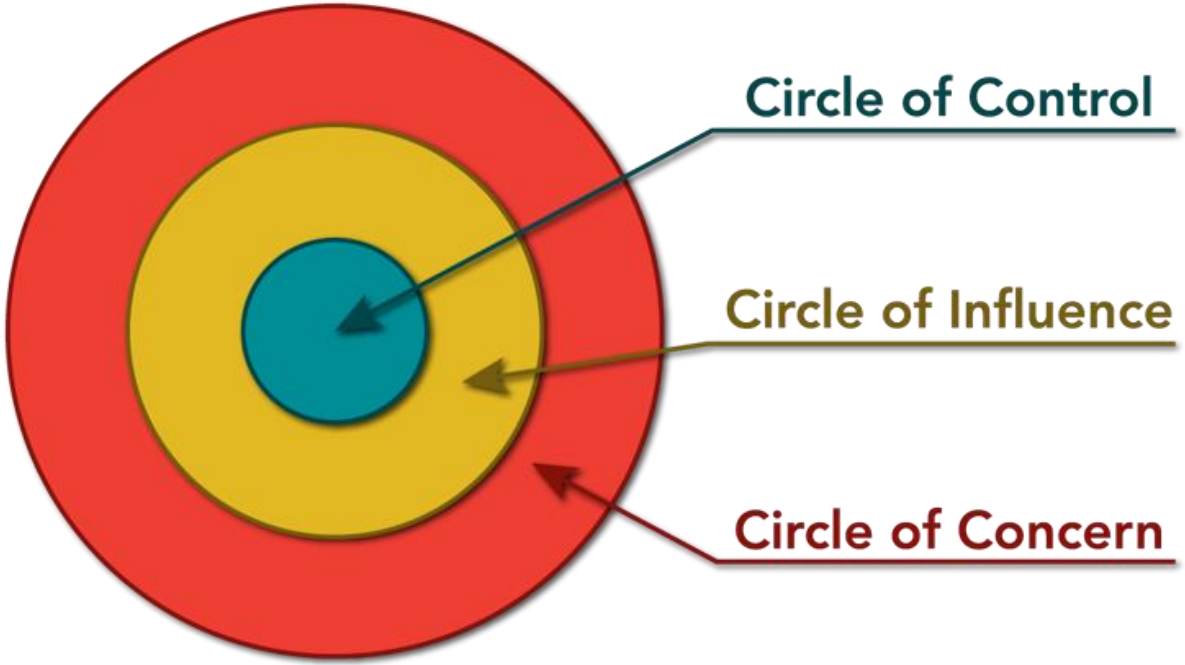
Achieving Diagnostic Excellence in Primary Care

Questions or reflections?

Ciara Robertson

Senior Improvement Advisor
Healthcare Improvement Scotland

Circle of control



Stephen R Covey: 7 Habits of Highly Effective People

Essentials of Safe Care

Aim	Primary Drivers	Secondary Drivers
To enable the delivery of Safe Care for every person within every system every time	Person centred systems and behaviours are embedded and support safety for everyone	Structures & processes that enable safe, person centred care
		Inclusion and involvement
		Workforce capacity and capability
	Safe communications within and between teams	Skills : appropriate language, format and content
		Practice : use of standardised tools for communication
		Critical Situations : management of communication in different situations
	Leadership to promote a culture of safety at all levels	Psychological safety
		Staff wellbeing
		System for learning
	Safe consistent clinical and care processes across health and social care settings	Reliable implementation of Standard Infection Prevention and Control Precautions (SICPS)
		Safe Staffing

Primary care safety work – future

- Continue development of pharmacotherapy element of the GMS contract
- Develop our SPSP Primary Care offer

Your safety priorities

What are your safety priorities in Primary Care?

Get involved

Join our programmes

- Pharmacotherapy Quick Start Programme
- Primary Care Access Programme
- CTAC (Community Treatment and Care) Network
- GP Cluster Improvement Network

Resources

- Pharmacotherapy toolkits:
  - Acute Prescribing Quick Guide
  - Acute Prescribing Toolkit
  - Serial Prescriptions Toolkit
- Visit the **SPSP and Primary Care resource libraries** for further, toolkits, clinical tools, case studies and reports

See the links in your digital delegate bag!

Thank you

Any questions or suggestions: his.pcpteam@nhs.scot.