2020-21 Teaching Academy

Teaching Academy Series

July 21, 2020	**Educational Technology**
Aug. 18, 2020	**Engaging Students Remotely**
Sept. 15, 2020	**Multiple Levels of Simulation**
Oct. 20, 2020	**Where to Publish?**
Nov. 17, 2020	**Strategies for Success in Conducting Educational Research**
Dec. 15, 2020	**Teaching and Implementing the 4Ms of an Age-Friendly Health System in clinical settings**
Jan. 19, 2021	**Assessment of Student Learning**
February 16, 2021	**Accessibility in the Health Sciences**
March 16, 2021	**Leveraging the "IBR" (Interest-Based Relational) Approach for Resolving Conflict**
April 20, 2021	**Things to Consider When Becoming a PI - Rescheduled**
May 18, 2021	**Working with the Media: Keys to Success**
June 15, 2021	**Self-awareness and Social Awareness for Effective Problem Solving**

RUSH

Excellence is just the beginning.

Rush University

Educational Technology

Teaching Academy
July 21, 2020

Brandon Taylor
Instructional Designer

tte Washington
ctional Designer

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Center for Teaching Excellence and Innovation

1 Presentations

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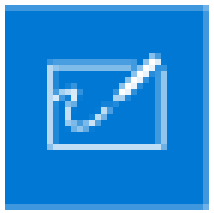
Microsoft 365 Training/Help

Sway



Whiteboard

https://support.microsoft.com/en-us/training

(click "**More Office apps →**" to see Sway & Whiteboard training/help)

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Microsoft Sway's Uses

Use MS Sway to create and share interactive reports, presentations, personal stories, and more.

https://support.microsoft.com/en-us/training

(click "**More Office apps** →" to see Sway & Whiteboard training/help)

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Microsoft Sway Overview

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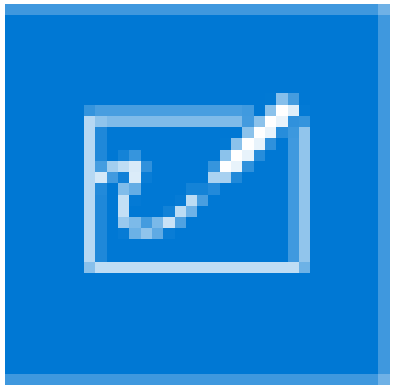
Microsoft Whiteboard Uses



Use MS Whiteboard as an infinite digital canvas—where ideas, content, and people come together.

https://support.microsoft.com/en-us/training

(click "**More Office apps** →" to see Sway & Whiteboard training/help)

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Microsoft Whiteboard Overview

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2 Collaboration

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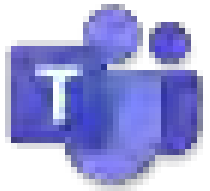
Microsoft 365 Training/Help

OneDrive



Teams

https://support.microsoft.com/en-us/training

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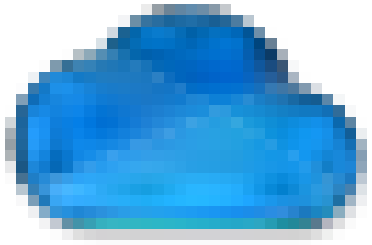
Microsoft OneDrive Uses



Use MS One Drive to collaborate with others & store, share, sync your files.

https://support.microsoft.com/en-us/training

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Microsoft OneDrive Overview

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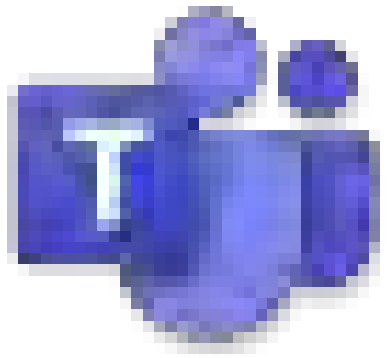
Microsoft Team Uses



Use MS Teams to set up, customize, and collaborate in teams via files, posts, messages, chats, calls, and meetings.

https://support.microsoft.com/en-us/training

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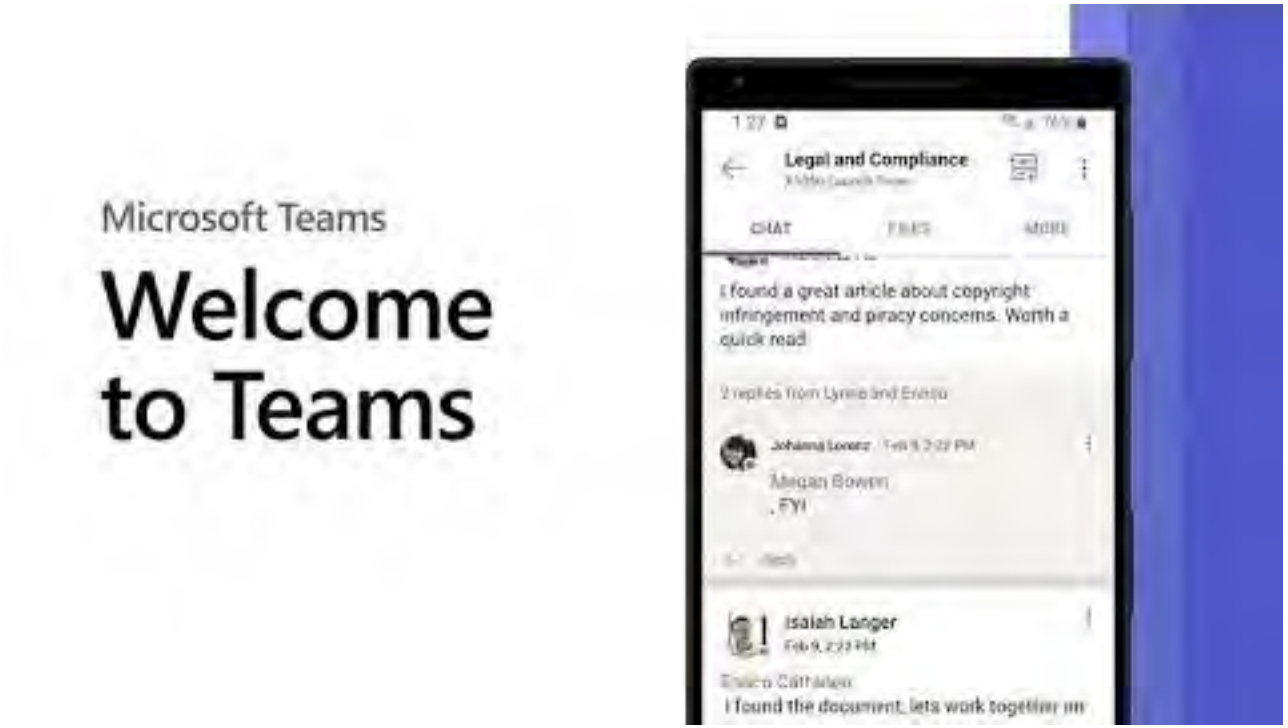
Microsoft Teams Overview



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3 VIDEOS

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Poll via Zoom

Do you currently use videos in your course? If so, which Rush supported video tool do you use? (Check all that apply)

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Panopto Uses

A platform for Higher Ed that allow both faculty and students to record and share video content.

- Lecture Recording
- Screen Casting
- Video Streaming

https://howtovideos.hosted.panopto.com/Panopto/Pa ırtmentHome.aspx?folderID=4b9de7ae-0080-4158-8496-a9ba01692c2e

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Panopto Overview

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Handout - https://uploads.panopto.com/2018/03/06120103/Panopto-Student-Survey-Infographic-2018.pdf

Screencast-o-matic Uses

- Create how-to-videos
- Tutorials
- Product walkthroughs and more

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https://screencast-o-matic.com/tutorial/welcome-to-screencast-o-matic

Screencast-o-matic Overview

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https://screencast-o-matic.com/tutorial/welcome-to-screencast-o-matic

4 Polling/Quizzing

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Poll Everywhere

Allows you to create live polls for your students, capturing powerful feedback

Downloadable Guides

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Poll Everywhere

Respond at **PollEv.com/lynettewashi135**

Text **LYNETTEWASHI135** to **22333** once to join, then text your message

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Microsoft Form Uses

Forms

Create a quick survey, poll, or quiz with Microsoft Forms

https://support.microsoft.com/en-us/forms

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Microsoft Form Overview

https://forms.office.com/Pages/ResponsePage.aspx?id=yuQugqzu9EuVe5ekuwsWl1eXnlu_CGpKj6HbVkTDi5JUQlozMjNOMEZSQzJUUjIGVDMwTUpGWk4xQi4u

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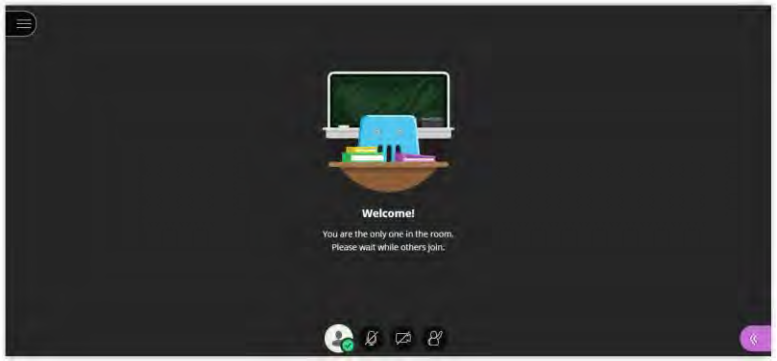
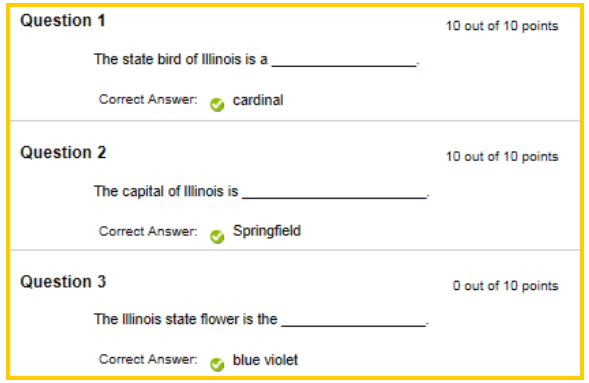
Blackboard Collaborate





https://www.youtube.com/watch?v=Qya2MrXNA1o&feature=youtu.be

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References

- Center for Teaching Excellence and Innovationo (CTEI)
- Microsoft Trainings
- Panopto
- Panopto handout
- Screencast-o-matic
- Forms
- Poll Everywhere
- LMS – Blackboard Learn for Instructors

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Thank you.

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Engaging Students Remotely

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Teaching Academy
August 18, 2020

Brandon Taylor, MS, MOT
Instructional Designer

Lynette Washington, MATD
Instructional Designer

Center for Teaching Excellence and Innovation

OBJECTIVES

- Discuss strategies to motivate and engage students in deeper learning
- Identify specific strategies that promote collaboration through synchronous and asynchronous opportunities

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BREAKOUT ROOMS

Amongst your group, define Student Engagement

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1 Why is Engagement Important?

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National Student Engagement Studies

NSSE & FSSE

https://nsse.indiana.edu/

Reassessing Disparities in Online Learner Student Engagement in Higher Education

https://journals.sagepub.com/doi/10.3102/0013189X19898690

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2 How do students engage in Courses?

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VIA CHAT

Let us know how students engage in your Courses?

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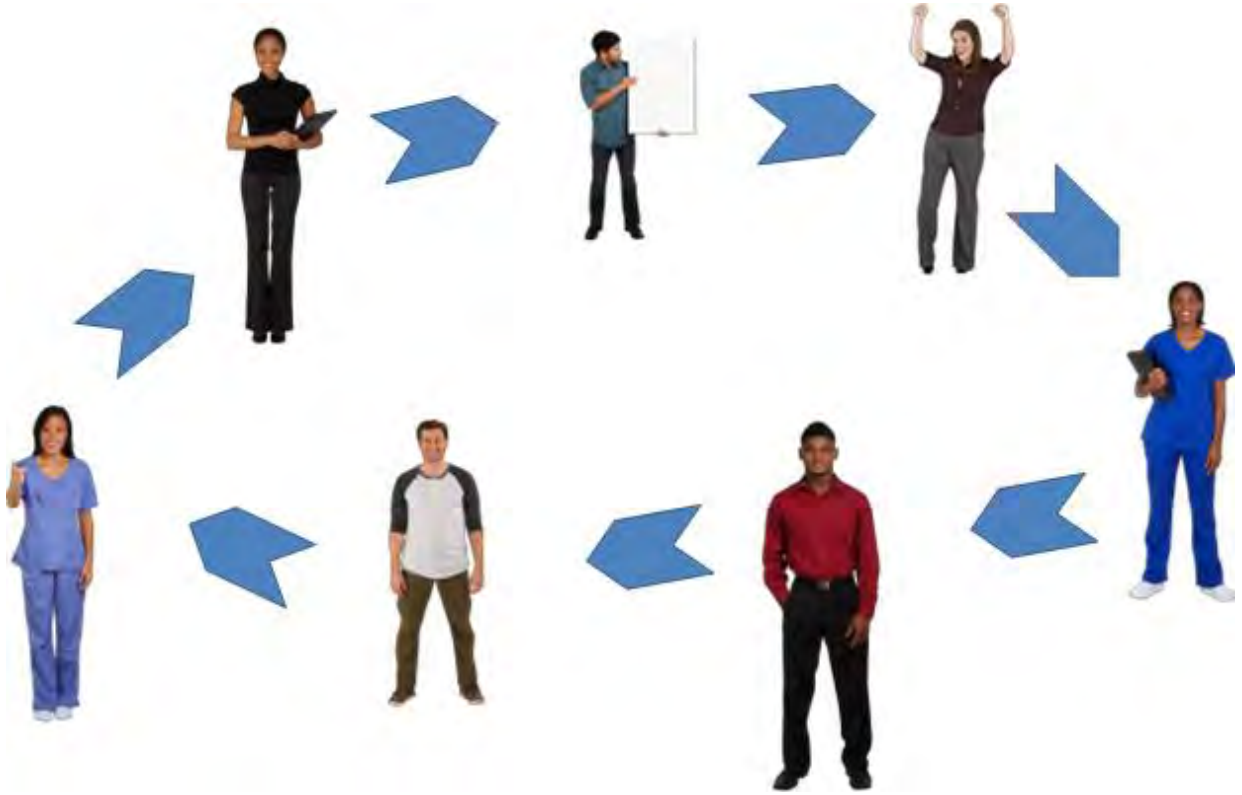
Student-to-Student



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Student-to-Content

Simulations

QUIZ!

Readings

Tutorials

Web Quests

video with embeded quizzes

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Student-to-Instructor

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Raise your hand if you want to give me an example via your microphone:

3 Ways to Engage Student in Online Courses/Activities

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Sample Online Engagement Activities

UIS/ION's Online Instructional Activities Index

https://www.uis.edu/ion/resources/instructional-activities-index/

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4 Engaging Students (Ice Breakers Demonstrations)

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ICE BREAKERS

LET'S GO BACK INTO OUR BREAKOUT ROOMS

https://rush-my.sharepoint.com/:b:/g/personal/lynette_washington_rush_edu/EYWn00QfQmtEsoyviaFVLXIB1M52gdDeiisRuO1E5UozAw?e=C3h58Z

Poll Everywhere

Respond at **PollEv.com/lynettewashi135**

Text **LYNETTEWASHI135** to **22333** once to join, then text your message

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Engaging Students 5 (Video Quiz/Polling Demonstration)

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MS Stream & Panopto Video Quiz/Polling

Microsoft Stream

Panopto

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References

- Center for Teaching Excellence and Innovation (CTEI)
- Teaching Elements
- Virtual Classroom Engagement – Facilitator's Do's & Don'ts
- Online Instructional Activities Index
- 21 Free Fun Icebreakers for Online Teaching, Students & Virtual and Remote Teams
- 20 Poll Ice Breakers Questions
- National Survey of Student Engagement (NSSE) Studies
- Microsoft Stream video quizzing/polling
- Panopto video quizzing

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Thank you.

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RUSH UNIVERSITY

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Teaching Excellence
Multiple Levels of Simulation

September 15, 2020

Michelle Sergel, MD
Co-Director - Rush Center for Clinical Skills and Simulation
Simulation Director – Cook County Simulation Center
Assistant Professor of Emergency Medicine
John H. Stroger of Cook County Hospital

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Disclosures

I, Michelle Sergel, have no relevant financial relationships to disclose for this educational activity

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Learning Objectives

- Describe the theoretical frameworks of simulated procedural skill instruction
- List the various categories of simulation-based medical education
- Critique the best application of each of the categories
- Describe the current changes to simulation-based medical education during remote learning

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Multiple Choice Tests Cannot Assess Clinical Performance!

WE NEED TO KNOW MORE!

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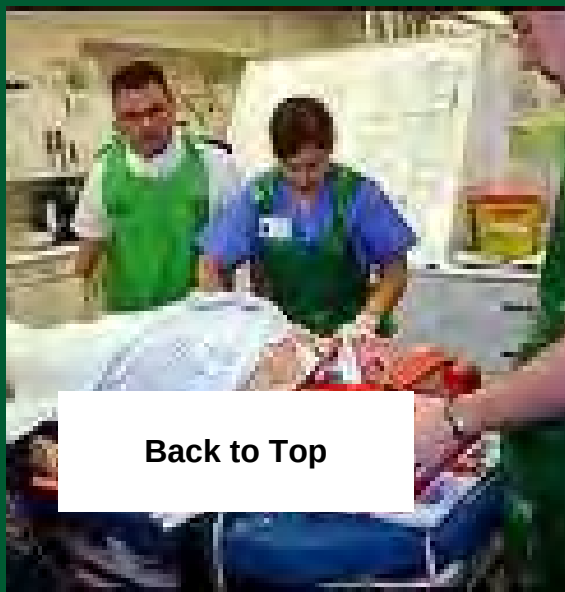

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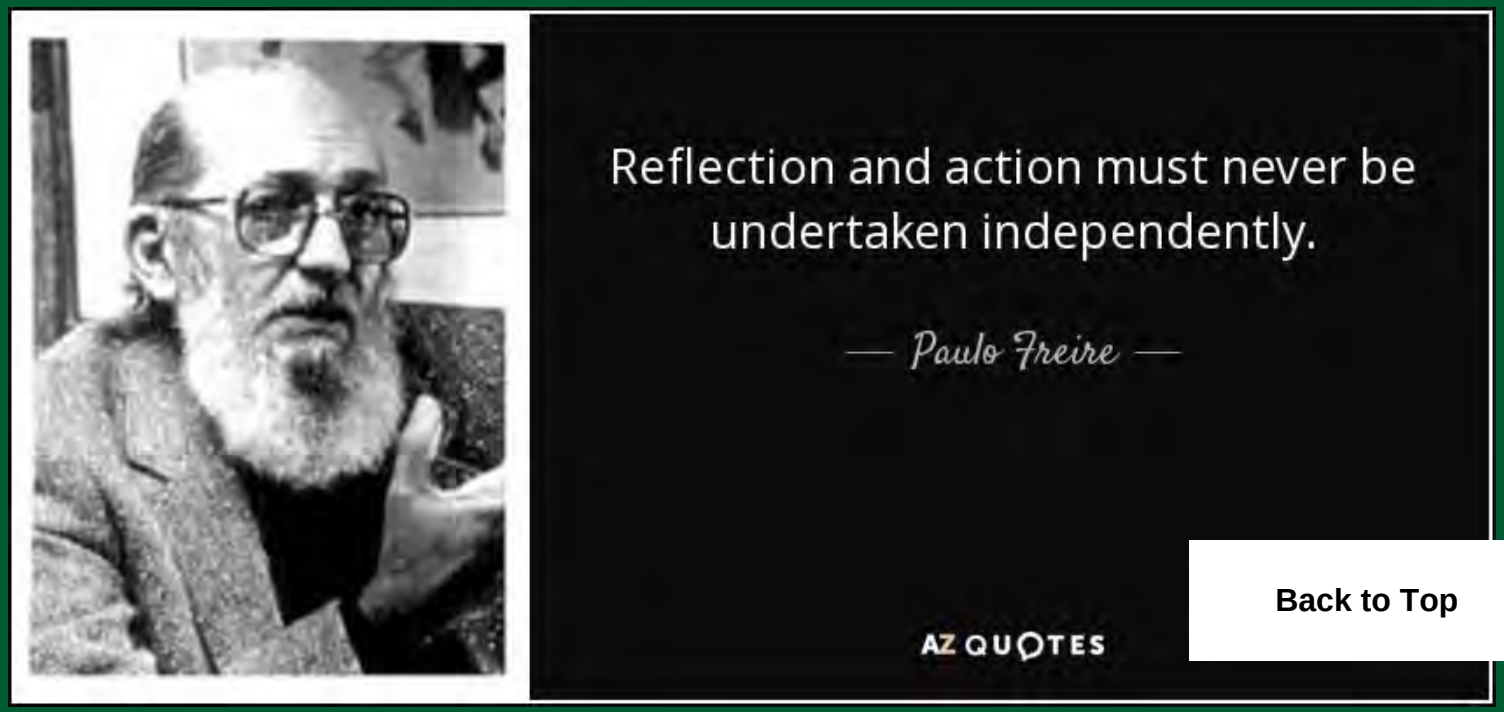
Simulation-based medical education

- Ethical tension in medical education
- Creating a safe environment



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Silos of Work and Training

RNs

MDs

PharmDs

RRTs

Technicians
Support Staff

Silos contribute to medical errors!

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Pedagogy of Simulation

THE SCHOLARLY BACKBONE

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Theoretical Frameworks

- Best Evidence Medical Education Guide
- Maximum benefit of SBME
- Issenberg et al. 2005

- Repetitive active / standardized experiences
- Educational feedback
- Embedding the training

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Theories/Frameworks of Skill Acquisition

- Fitts & Posner (1967)
- Ericcson (1993)
- Miller (1990)
- Dreyfus (1986)
- Simpson (1966)
- Steinert (2001)

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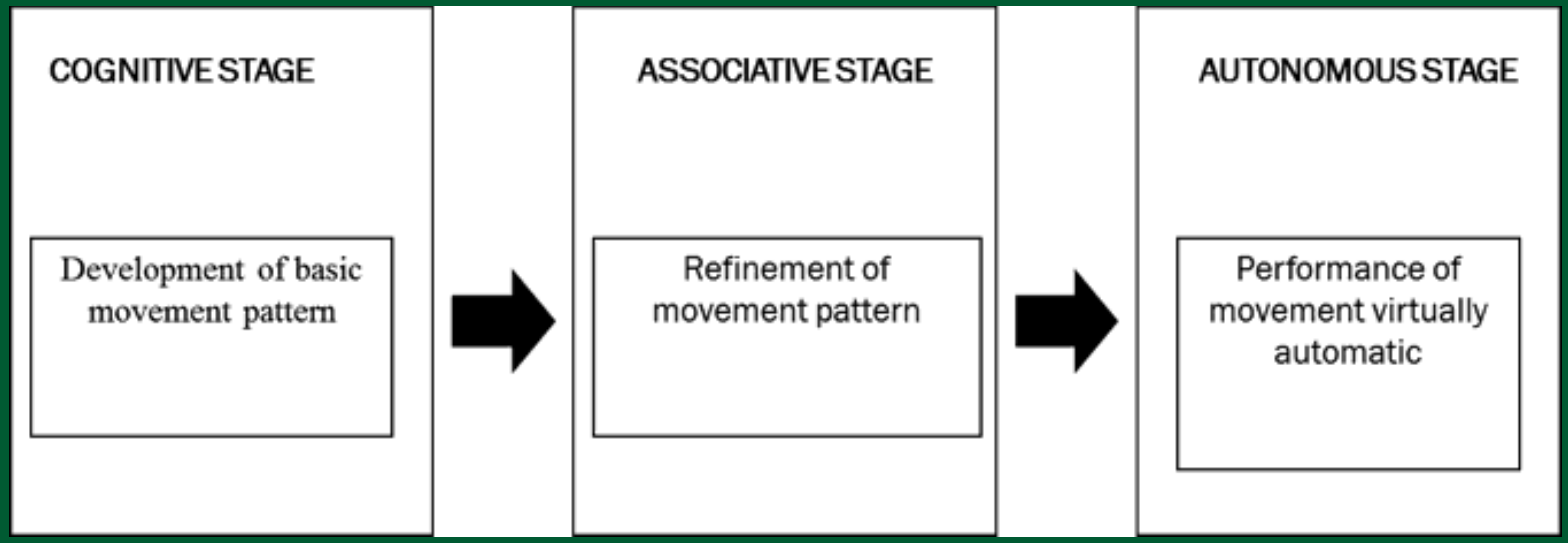
Fitts and Posner: 3 phase model



Skill being learned

Skill becoming ingrained

Skill automatic, performed without conscious thought

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Deliberate Practice - Ericsson

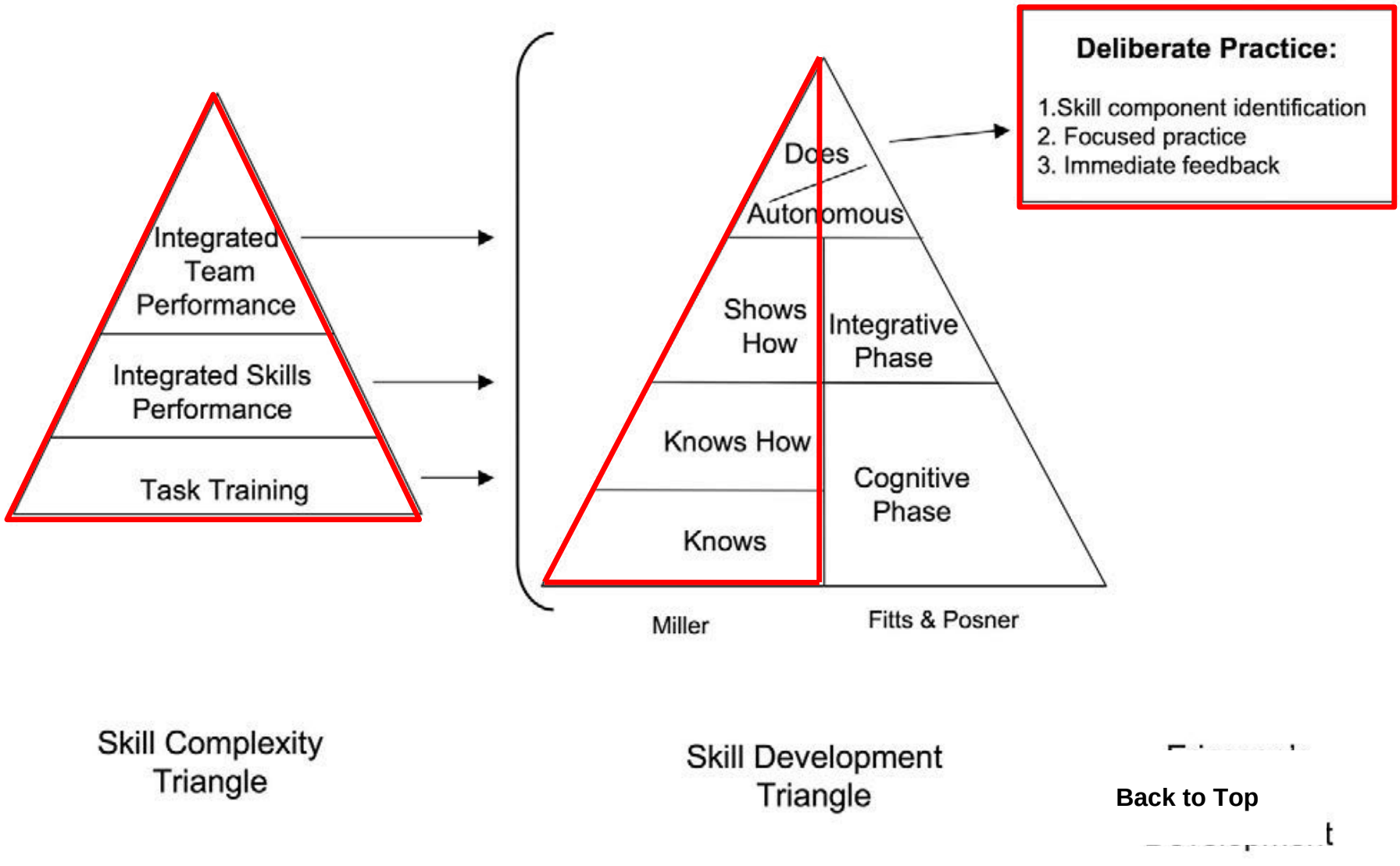
- Importance of *how* one practices, rather than merely performing a skill multiple times

1. Focused, repetitive performance of psychomotor skill
2. Rigorous skill assessment
3. Specific, focused feedback
4. Repeated performance of the skill

Back to Top

Ericcson KA. Deliberate practice and the acquisition and maintenance of expert performance in medicine and related domains. Academic Medicine 2004; 70 (10):S70-81.

Miller's Pyramid of Competence



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“The Five-Stage Model of Adult Skill Acquisition”

Dreyfus, Stuart E. Bulletin of Science, Techn & Society, June 2004

- Novice – Context free features
- Advanced Beginner – Situational experience
- Competence – Learner responsibility
- Proficiency – Involved understanding – decisions
- Expertise - Intuitive

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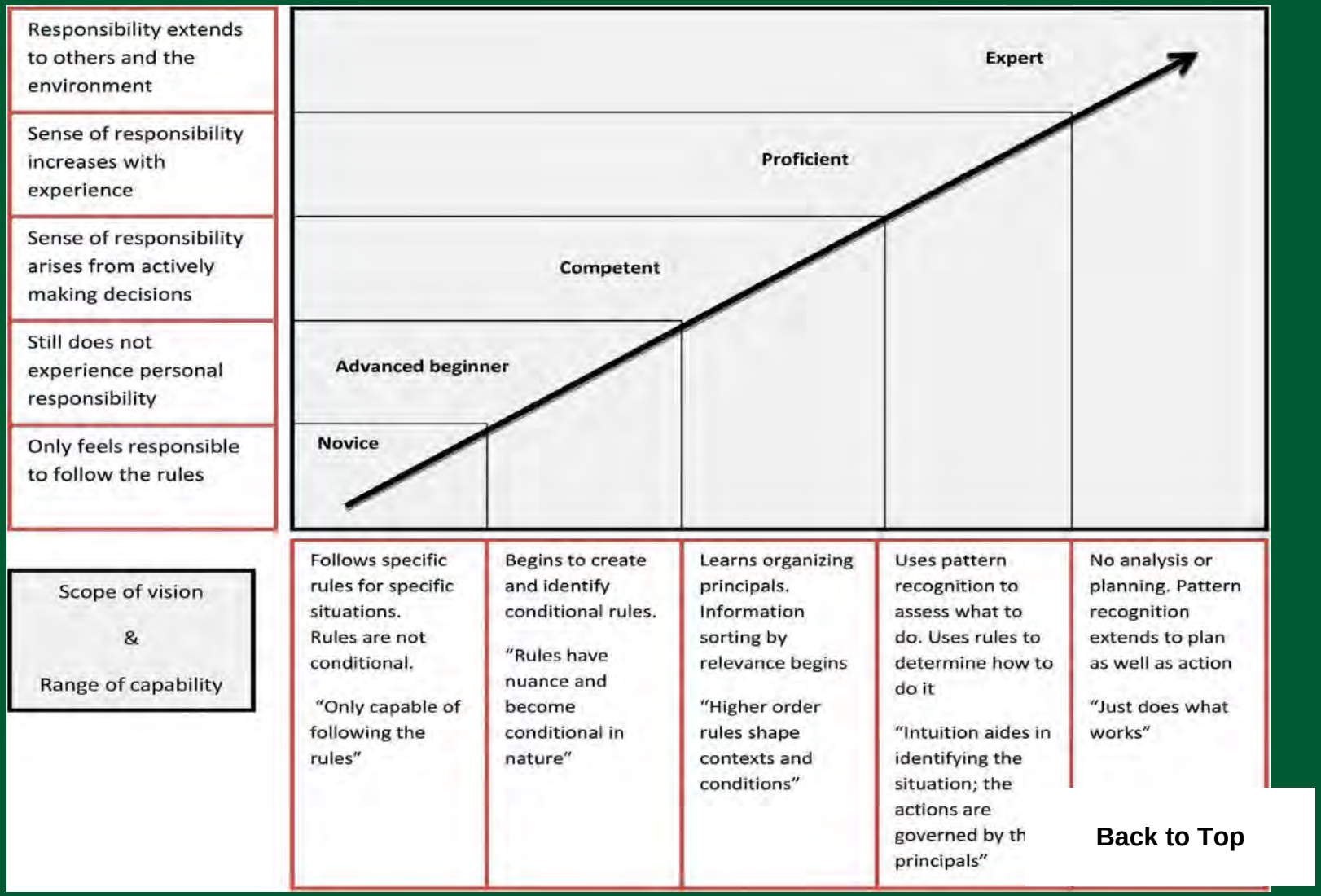
Dreyfus Five-Stage Model of Adult Skill Acquisition



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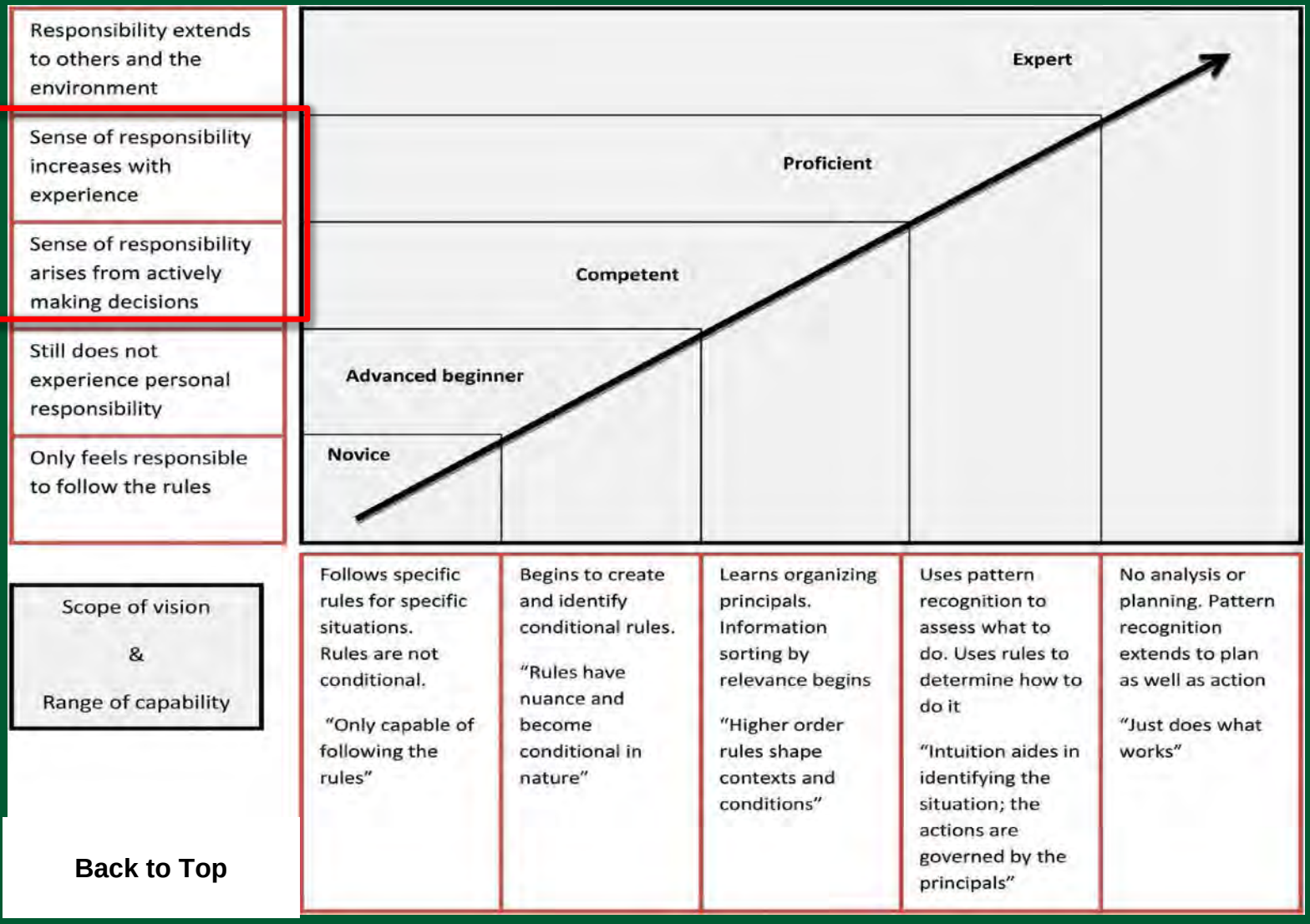
Dreyfus, SE. The Five-stage Model of Adult Skill Acquisition. Bulletin of Science, Technology & Society 2004; 24(3):177-181.

Dreyfus Five-Stage Model of Adult Skill Acquisition



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Dreyfus, SE. The Five-stage Model of Adult Skill Acquisition. Bulletin of Science, Technology & Society 2004; 24(3):177-181.

Psychomotor Skill Development – Simpson

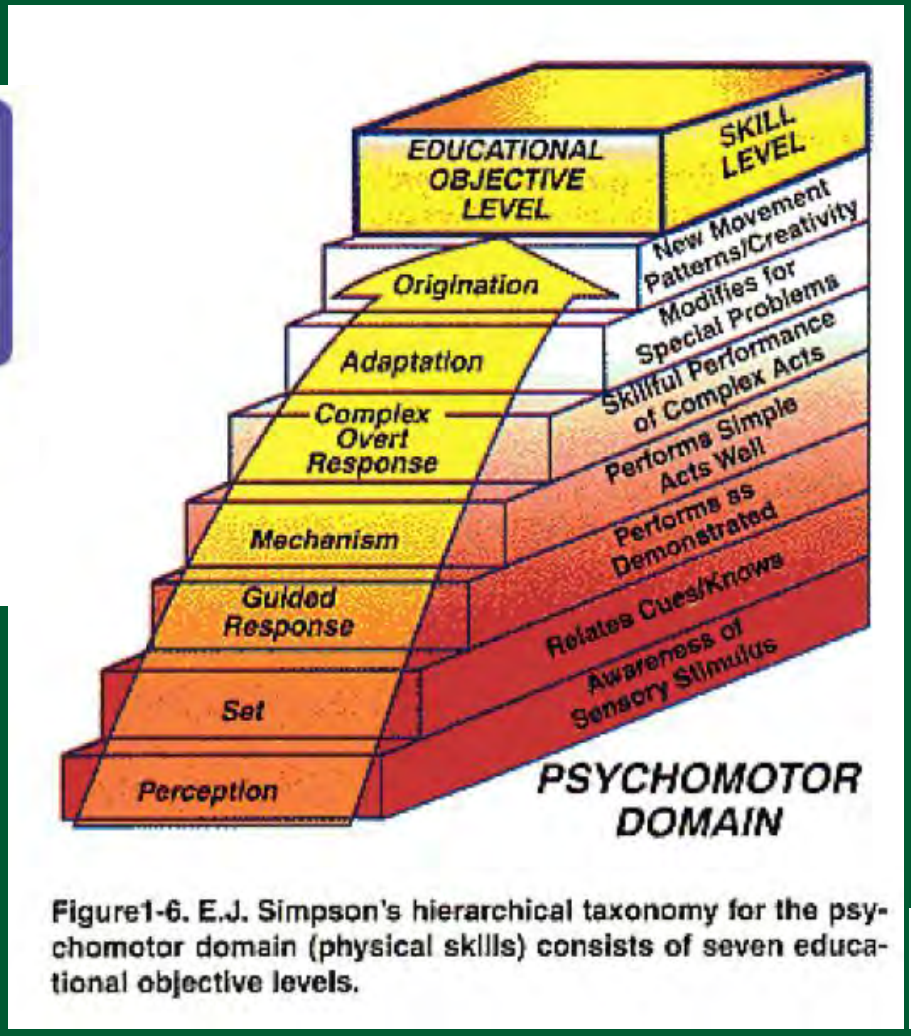

Figure1-6. E.J. Simpson's hierarchical taxonomy for the psychomotor domain (physical skills) consists of seven educational objective levels.

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Principles for Teaching Procedural & Technical Skills Steinert

- 1. Plan ahead
- 2. Demonstrate
  - Explicit commentary
  - Questions
- 3. Observe learner
- 4. Feedback
- 5. Self-assessment
- 6. Practice in less-than-ideal conditions
- 7. Modify approach

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McLeod PJ, Steinert Y, Trudel J, Gottesman R. Seven Principles for Teaching Procedural and Technical Skills. Acad Med 2001;76:1080.

Principles for Teaching Procedural & Technical Skills Steinert

- 1. Plan ahead
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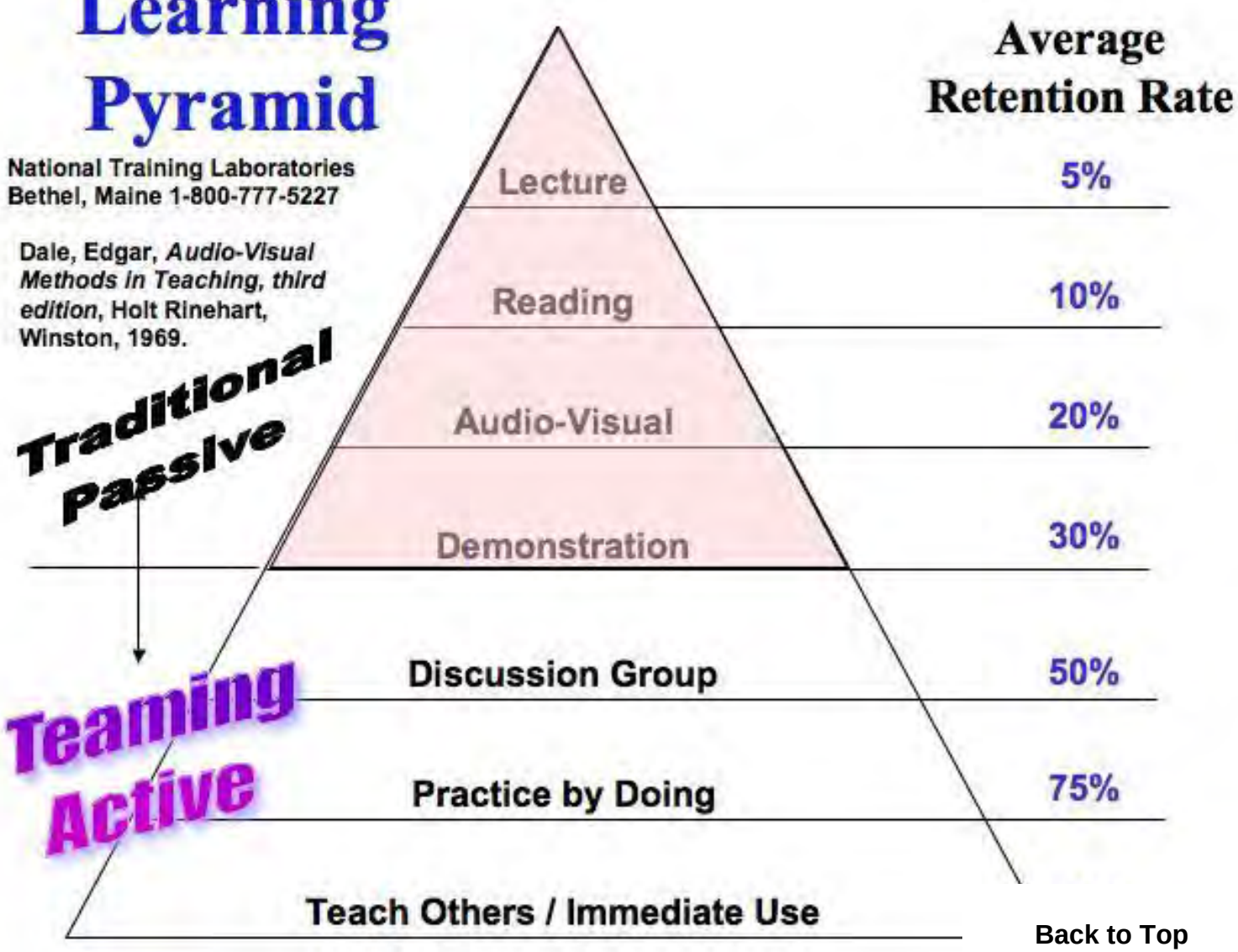
McLeod PJ, Steinert Y, Trudel J, Gottesman R. Seven Principles for Teaching Procedural and Technical Skills. Acad Med 2001;76:1080.

Learning Pyramid

National Training Laboratories
Bethel, Maine 1-800-777-5227

Dale, Edgar, *Audio-Visual Methods in Teaching, third edition*, Holt Rinehart, Winston, 1969.



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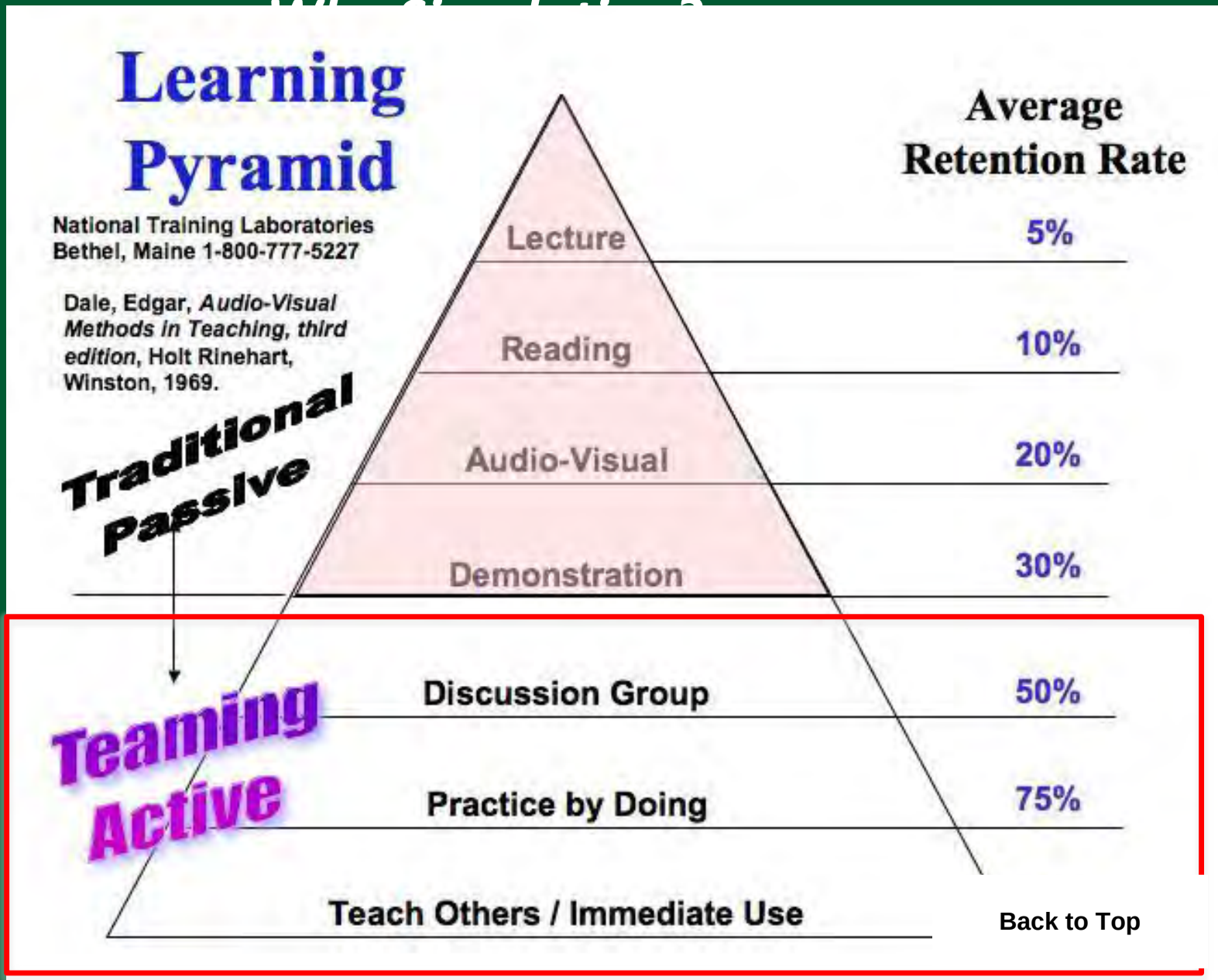
Learning Pyramid
National Training Laboratories
Bethel, Maine 1-800-777-5227
Dale, Edgar, Audio-Visual Methods in Teaching, third edition, Holt Rinehart, Winston, 1969.
Traditional Passive
Teaming Active
Average Retention Rate
Lecture
5%
Reading
10%
Audio-Visual
20%
Demonstration
30%
Discussion Group
50%
Practice by Doing
75%
Teach Others / Immediate Use

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“Evaluating Clinical Simulations for Learning Procedural Skills: A Theory-Based Approach”

Roger Kneebone, et al. Acad Med. 2005

Four areas:

1. Gaining and retaining technical proficiency
2. Expert assistance in task-based learning
3. Learning within a professional context
4. Affective component of learning

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“Evaluating Clinical Simulations for Learning Procedural Skills: A Theory-Based Approach”

Roger Kneebone, et al. Acad Med. 2005

Four areas:

1. Gaining and retaining technical proficiency
2. Expert assistance in task-based learning
3. Learning within a professional context
4. Affective component of learning

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"Simulation for Learning and Teaching Procedural Skills – The State of the Science"

Nestel, Debra, et al. Sim Healthcare 2011

- Results in improved knowledge and skills
- Trainees and instructors –satisfaction

- Studies to prove true transfer to practice – positive but limited
- Alignment of learner, instructor, setting and simulation

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“The benefit of repetitive skills training and frequency of expert feedback in the early acquisition of procedural skills”

Hans Martin Bosse, et al. BMC Medical Education 2015

- Feedback – optimally timed and designed
- Unknown ideal frequency or mode of delivery
- High versus low frequency feedback
- Improvement in skills performance HF>LF
- Repetitive deliberate practice – imperative!

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“The benefit of repetitive skills training and frequency of expert feedback in the early acquisition of procedural skills”

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- Feedback – optimally timed and designed
- Unknown ideal frequency or mode of delivery
- High versus low frequency feedback
- Improvement in skills performance HF>LF
- Repetitive deliberate practice – imperative!

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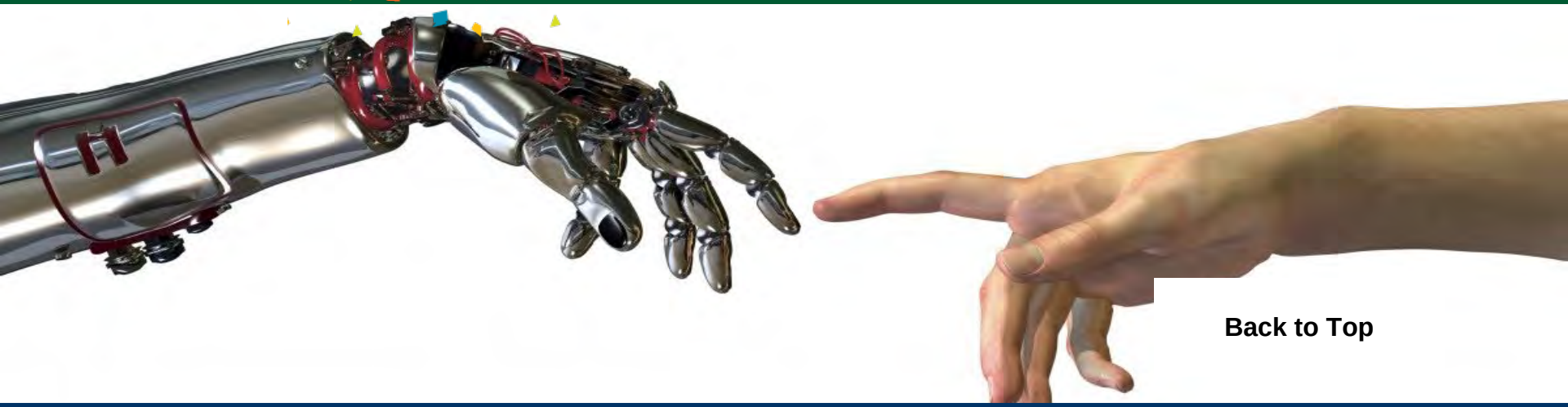
Recap – why use simulation?

- Learning in a safe environment
- Interactive – improves learning
- Observe strengths and weaknesses
- Provide immediate feedback – debriefing



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QUESTIONS?

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Categories of simulation-based medical education (SBME)

- List the various categories of SBME
- Critique the best application of each of the categories

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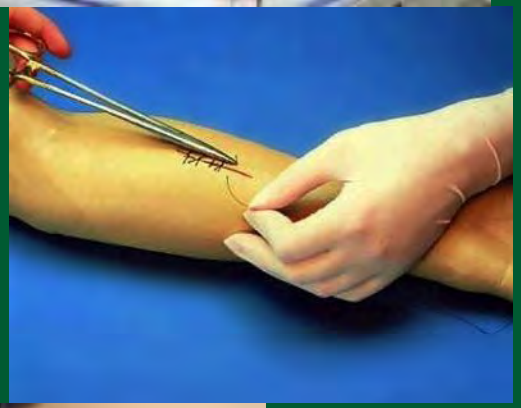
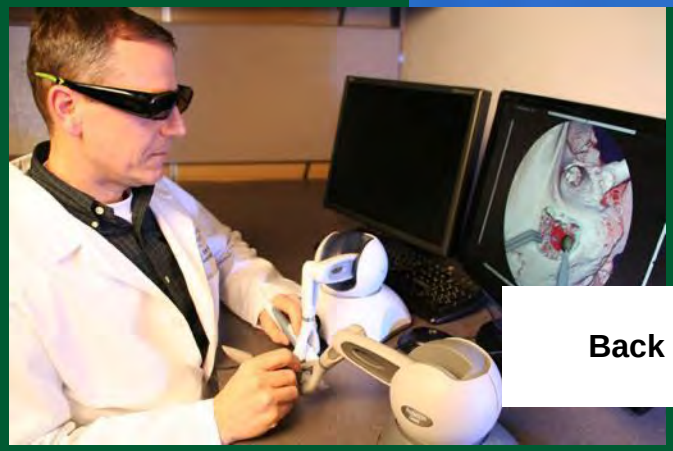
Modes of Simulation

- Task trainers
- Mannequin-based
- Standardized patients
- Cadaveric/Animal
- Virtual reality





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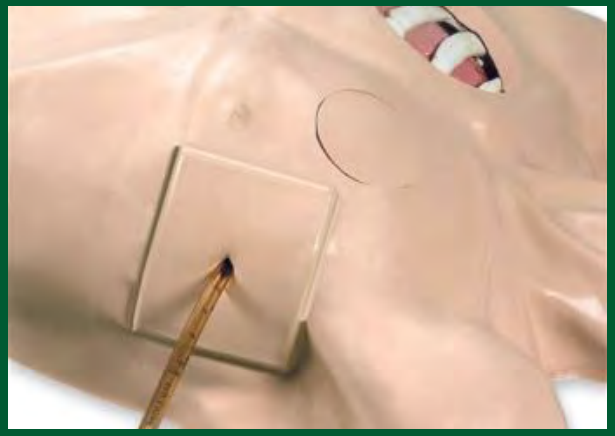

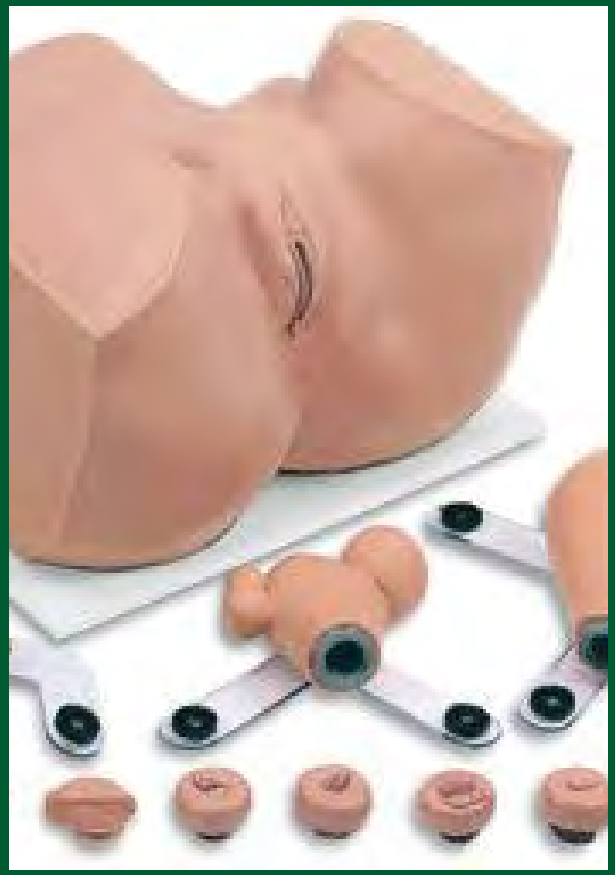

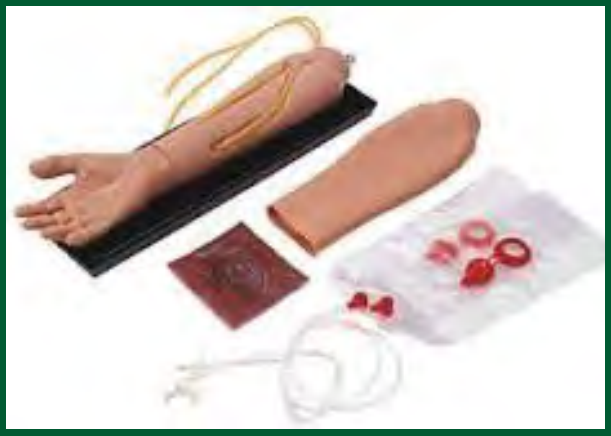

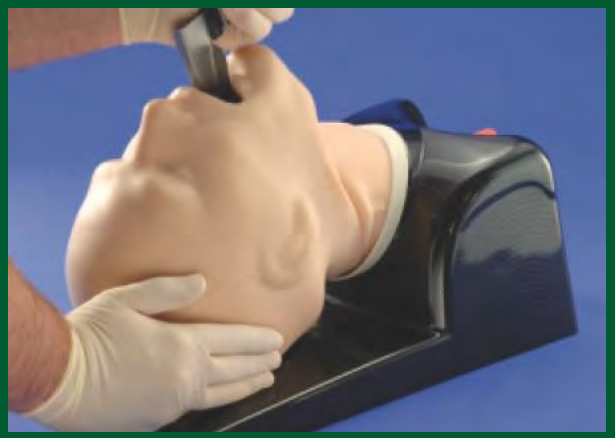

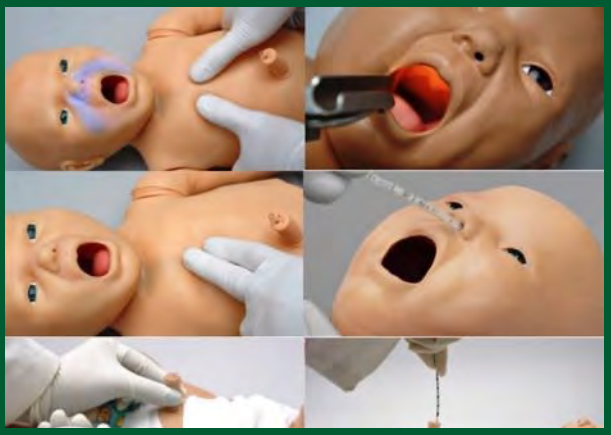

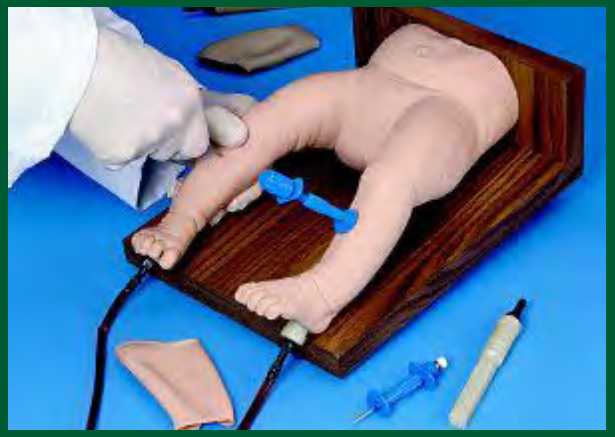

Task Trainers

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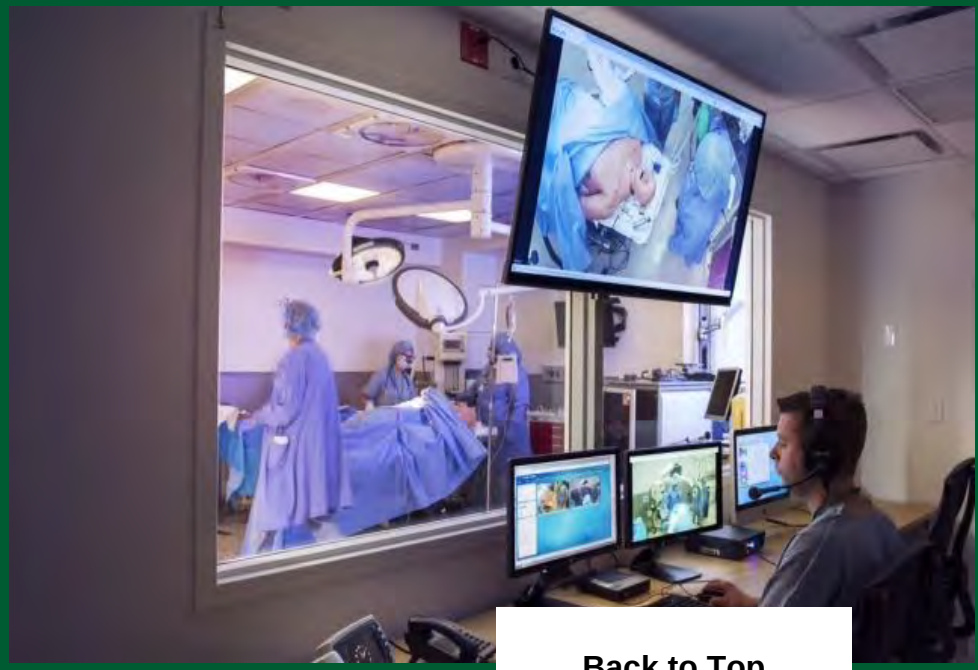
High-fidelity Simulation

- Wireless
- Blinking eyes
- Pulses
- Heart and lung sounds
- Blood, fluid and power sources all contained in mannequin



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Standardized Patients

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Virtual Reality

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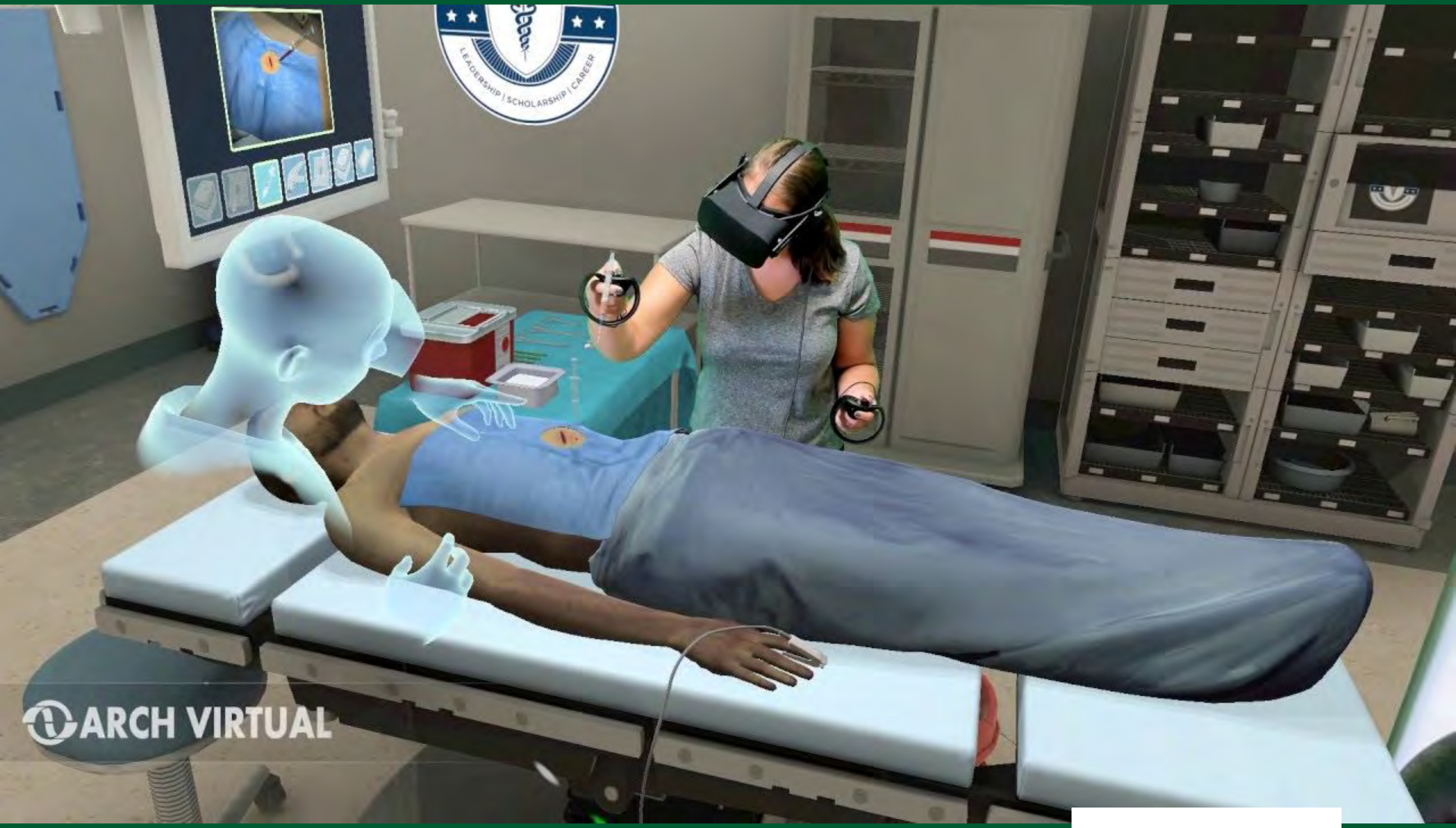

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Fidelity	Simulation Modality	Best use example
"Low"	Arm task trainer for IV insertion	New nursing hires to become familiar with the mechanics of hospital specific IVs
"High"	Mannikin simulator	Resident team to practice a pediatric sepsis resuscitation
"Physical"	In-situ simulation	Intra-professional simulation to practice pediatric trauma codes in a trauma bay to become familiar with equipment and flow
"Psychological"	Standardized Patient	Medical student practice giving bad news communication skills

Pediatric Simulation Handbook, Wild, Bridget M., editor. McQueen, Alisa, editor. Hagem
editor. Wang, Ernest, editor, Nova Science Publishing Inc., 2020

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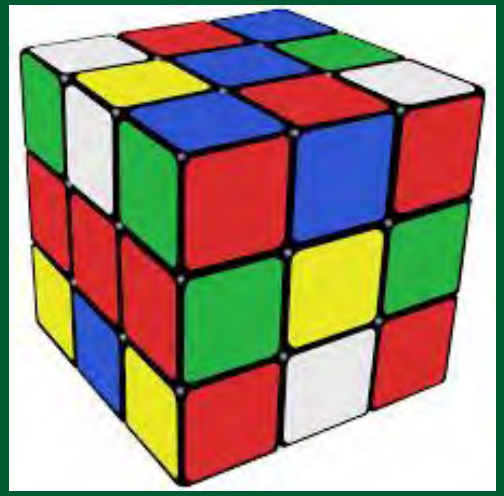
The Rubik's cube

- One dimension – one goal
- Simulation center-centric
- Learner-centric
- Gaba and Harden
- Rubik's Cube



- Align the various components

Groom, J. Creating New Solutions to the Simulation Puzzle *Simulation Healthcare* 2009;4: 131-4

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Rubik's Cube – Six sides

- Learners – novice, intermediate, experienced
- Simulator – task trainer, computerized, SP
- Environment – simulation center, in-situ
- Fidelity – low, medium, high
- Participation – individual, group, team
- Objective – diagnostic, instruction, assessment

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POLL Questions

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SBME and COVID-19

- Changes in healthcare
- Insidious decay
- Effective and safe learning environment
- Trainees perform skills faster and more accurately
- SBME a necessity, not an optional extra
- 2020 - Lower volume and higher risk!

"The mental and motor activities required to execute a manual task" Foley RP, Spilansky J. Teaching Techniques: A Handbook for Health Professionals. New York, McGraw Hill; 1980:71-91.

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Procedural and deliberate practice

- Full-circle – back to the theoretical framework
- Medical decision making
- Procedural training
- Pandemic “essential workers”

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Medical decision making

- Medical student simulation sessions
- Residency simulation sessions
- Zoom-based lectures
- Breakout rooms - hour-long session
- Faculty facilitator
- Case – 40 minutes, Debrief – 20 minutes
- SimMon software – share screen
- Simpl software – download smart phone / tablet

Winfield, Sergel, DeDonato, Hughes "A Zoom Based Platform for Virtual Simulation" *Academic Emergency Medicine Education & Training (AEM E&T). Aug 2020*

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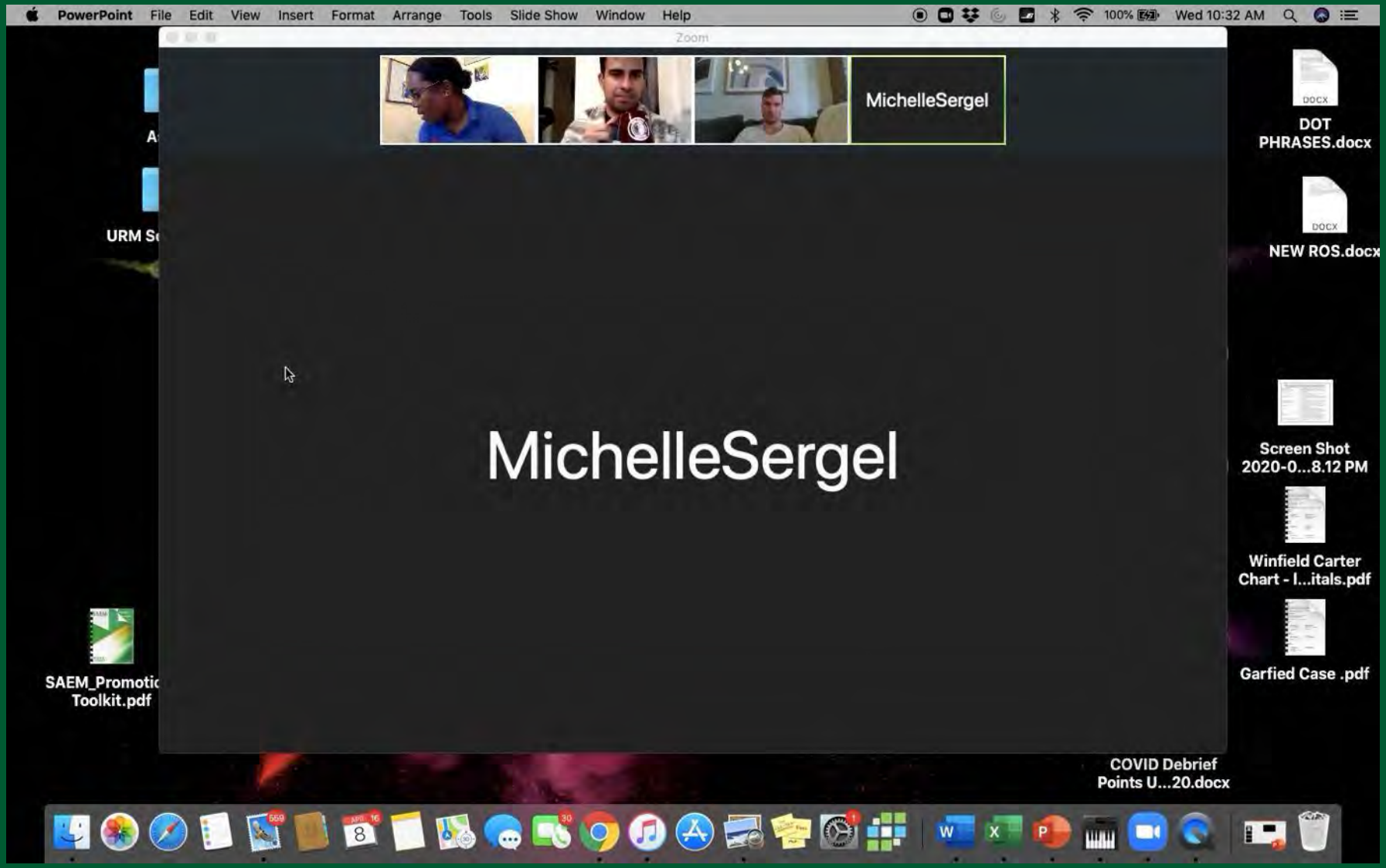
PowerPoint File Edit View Insert Format Arrange Tools Slide Show Window Help
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DOT PHRASES.docx
NEW ROS.docx
Screen Shot 2020-0...8.12 PM
Winfield Carter Chart - I...itals.pdf
Garfied Case .pdf
SAEM_Promotic Toolkit.pdf
COVID Debrief Points U...20.docx

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Systems integration

- Change in procedure – viral filter, PPE
- Improving skills –FM/IM to front line
- Skill maintenance

- Video for instruction –

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THANK YOU!

QUESTIONS?

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RUSH

Excellence is just the beginning.

Rush University

Where to Publish

October 20th, 2020

Scott Thomson, MS, MLIS, AHIP

Library Director, Rush University Medical Center Library

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What we will cover today:

- Determining Authority/Quality

- Impact Factor
- Database Indexing (PMC vs MEDLINE, etc.)
- Collection Development Guides
- Library Holdings
- Publisher affiliation/reputation

- Publishing Options

- Traditional vs open access
- Pitfalls (standards, predatory publishing, etc.)
- Gold Open Access Model

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Determining Authority/Quality

- Many factors to consider
  - There is no single “source of truth”

- Use a combination of sources

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Impact Factor

- The impact factor (IF) is a measure of the frequency with which the average article in a journal has been cited in a particular year. It is used to measure the importance or rank of a journal by calculating the times its articles are cited.[1]

- Limitations
  - Imperfect evaluation criteria [2]
  - Sometimes outdated
  - Not nuanced

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Database Indexing

- i.e. is this publication indexed in major citation databases (ex. MEDLINE, CINAHL, EMBASE, PsycINFO, etc.)

- Difference between listed/available and indexed.
  - Confusing.
  - PMC example. [3]

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Collection Guides

- Library collection guides
  - Libraries with large collections in certain subject areas often create subject guides.
  - Example: UIC History: Getting started [4]
- Usually curated by subject specialists
- Unbiased
- Accessible via Google.

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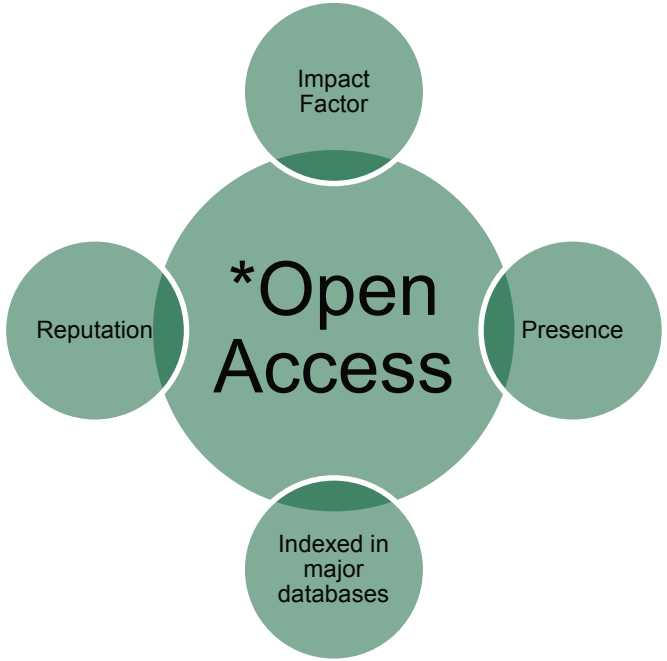
Library Holdings

- WorldCat.

- Journals that are not held by many libraries usually aren't very prestigious.*



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Publisher Affiliation/Reputation

- Publisher reputation matters
  - Reputable, well-known publisher, professional society, etc.
  - Doesn’t guarantee high ”rank”/prestige, but you can assume it’s legitimate.

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When in Doubt…..

- Ask a librarian!
  - We can help research individual titles and offer options for publication.
  - Collection guides are often put together by librarian subject specialists.

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Publication Options

- Traditional vs open access
- Advantages and disadvantages with each

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Traditional

- Pros:
  - Prestige
    - Often higher impact factors
    - “Safe”
    - Widely held, indexed, etc.
  - No cost.

- Cons:
  - Not freely available
    - Lower potential citations/readership
  - Loss of copyright ownership

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Open Access

- Pros:
  - Freely available
    - Wider Readership
    - Potentially more frequently-cited
  - Often retain copyright

- Cons:
  - Sometimes (but not always) lower prestige
  - Can have associated costs (gold open access model)
  - More difficult to determine quality
    - Can’t use publisher and library holdings to determine quality.
  - Need to watch out for predatory publications

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The Future

- ?
  - Lots of hybrid publication models
    - Institutional publications
    - Blog and podcast-like publications
    - Etc.

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Gold Open Access Model

- Many new publishers/publications use the Gold Open-Access Model, also known as the “author pays” model.
  - The author pays all fees associated with the publishing and editing process. In return, the article is freely available.
  - Increasingly used by traditional publishers as well.

- Not all OA journals are bad.
  - Example: PLOS journals use the Gold Open Access Model.

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Predatory Open-Access Journals

- Exploit the Gold Open Access Model for profit
- Most common form of predatory publishing encountered today
- Some are more “predatory” than others
  - <Vanity Press ---------- Scam>

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What to Look Out for

- General Red Flags: [5]

  - The publisher engages in excessive use of spam email to solicit manuscripts or editorial board memberships.
  - The publisher displays prominent statements that promise rapid publication and/or unusually quick peer review.
  - Sound-alike titles and hijacked titles.
  - Fake Impact Factors.
  - Overly informal language, spelling mistakes, etc.
  - Evidence that editors/publishers lack necessary expertise to edit a journal on a given topic.
  - Journals with overly broad scope and/of featuring unrelated topics (ex. Journal of Intensive Care and Business Administration).
  - The publisher claims to publish peer-reviewed, scholarly publications, but actual submission/acceptance standards are low or nonexistent.
  - The publisher provides minimal or no copyediting or proofreading of submissions.
  - Evidence exists showing that the publisher does not really conduct a bona fide peer review.
  - The publisher or its journals are not listed in standard periodical directories or are not widely cataloged in library databases.

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What to Look Out For

- Deception:
  - They have concocted editorial boards (made up names), name scholars to their editorial board without their knowledge or permission, or otherwise deceive scholars into appearing on a list of editors/reviewers to give the publisher/publication a greater appearance of legitimacy. [6]
  - The publisher begins operations with a large fleet of journals, often using a common template to quickly create each journal's home page (be very wary of any new publisher that claims to publish a large number of journals in a wide variety of fields, especially if many of these journals have few, if any, actual volumes/issues).
  - The publisher demonstrates a lack of transparency in publishing operations or otherwise provides insufficient information or hides information about author fees, offering to publish an author's paper and later sending an unanticipated "surprise" invoice.

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How to Spot a Predatory Journal During Research

- Can be challenging
  - Good science does end up in predatory publications.
  - Intentional predatory publication. [7]
- Usual evaluation techniques.
- When in doubt, investigate journal. Do not assume peer review or give benefit of the doubt.

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A Quick Note About Editors/Review Boards:

- If you receive an email asking you to serve as an editor or reviewer:
  - Investigate thoroughly.
    - Have you heard of the publication/publisher?
    - Is it your area of expertise?
    - Do you know anyone involved?
  - If unsure, don’t respond.
    - People are often added to lists without knowledge/permission.
    - It can be difficult to get your name removed.

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Articles, Guides, and Recommended Readings

- Beall's List:
  - Jeffrey Beall, a libra[illegible]n and [illegible]ociate professor at Auraria Library, University of [illegible]ora[illegible]at Denver.
  - Widely considered an [illegible]on predatory open access publishing.
  - Maintains a list of [illegible]spected p[illegible]tory open access publishers and [illegible]ications.

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Beall doubles down.. Predatory blog shutdown

Jeffrey Beall will be criminally prosecuted in USA for fraud, extortion, bribery and money laundering

https://scholarlyoa.com/ shutdown. No information where about predatory Blogger Beall
Predatory Blogger, Beall's university profile is also gone. http://people.auraria.edu/jeffrey-beall/home

Predatory blogger Beall created own his criterions and directed alot of false claims, causing tremendous injury, personal and professional, to countless numbers of individuals, publishers and organizations. He should be made to release the full content of every blog post he ever published, because that information was in the public domain. So, by suddenly removing all information, he has not only acted cowardly, but irresponsibly.

Jeffrey Beall
Potential, possible, or probable predatory blogger

Google search keywords: Predatory Blogger

Beall is not a recognized authority in evaluating scholarly Journals
Man with no credibility

Jeffrey Beall's blog has no affiliation to any governing body or organization accredited to scholarly publishing. This is an important key element that needs to be considered when analyzing his blog. He is just a single individual writing a blog (full of nonsense) same as many others do over the internet. His blog is his personal opinion and has not been tested for its validity and as such has no authority whatsoever. Even so, Beall attempted to create a problem that does not exist. When we compare the number of open access journals around the world, Beall's list is not significant at all. Despite that, Beall has maliciously discredited many Open access journals and demanded ransom in exchange for the removal of them from his hit list. This academic crime must end. We have added Jeffrey Beall to our list as a potential, possible, probable, predatory Blogger. Read more

Jeffrey Beall : Academic terrorist

Be aware
Jeffrey Beall : Academic terrorist

Jeffrey Beall just simply confusing us to promote his academic terrorism. His list is fully

Predatory Blogger, Beall's Facts Checker

Beall claims to be a professor at the University of Colorado, but he is not. He is only a library student worker. His school gives academic ranks to library employees. Theoretically, a student worker at the University of Colorado could be a professor and actually this is what happened

Jeffrey Beall : Alcoholic and drug addict
Drunken Stupor

Drunken Stupor
Jeffery Beall : Alcoholic and drug addict

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Happier Ending

- Attempts to discredit Beall have largely backfired.
- Beall's List now widely mirrored.
- Much more interest in predatory publishing.
- Recent Injunction against largest predatory publisher. [8]

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Articles, Guides, and Recommended Readings

- Articles:
  - The Chronicle of Higher Education. [9]
    - 03/12 article provides great overview.
  - Nature [10]
  - ACRL [11]

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Articles, Guides, and Recommended Readings

- Fun Stuff:
  - Random Computer Science Paper Generator.[12]
    - Have a submission-ready paper in seconds!
  - Who's Afraid of Peer Review?[13]
    - Science author spoofs open-access journals.
- Many tools available. [14,15]

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Questions?

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STRATEGIES FOR SUCCESS IN MEDICAL EDUCATION RESEARCH

November 17, 2020

Adam Wilson, PhD

Adam_Wilson@rush.edu

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PRESENTATION GOALS

1. Define **M**edical **E**ducation **R**esearch (MER)
2. Summarize six strategies for success in MER

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WHAT IS MEDICAL EDUCATION RESEARCH?

Medical Education Research is the scientific field of study that examines educational and learning processes, as well as the attributes, interactions, organizations, and institutions that shape practices and outcomes within the health professions.

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STRATEGY #1

Don’t wait for funding to get started on medical education research.

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FUNDING CHALLENGES

Securing funding for medical education research is like finding a needle in a haystack.

- Funding sources are limited and funding amounts are small.
  - Typical grants are $5k-$15k.
  - Funding typically never covers salaries or overhead/indirect costs.
- Over 2/3rds of published MER does not have extramural funding.

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FUNDING CHALLENGES – VICIOUS CYCLE

I want to do a MER project…

Absence of funding limits scope and quality of MER projects

Perceptions of low quality raise doubts about investing in MER

Little interest in funding low quality research.

ME researchers have learned to get by without funding

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FUNDING SOURCES

- International Association of Medical Science Educators
  - $5K max for 2 years
- Central Group on Educational Affairs of AAMC
  - $5K max for single institution studies
- Team-Based Learning Collaborative
  - $5K max
- Spencer Foundation
- NBME Stemmler Medical Education Research Fund
  - $150K max for 2 years

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MORE FUNDING SOURCES

- Josiah Marcy, Jr. Foundation
- NSF Directorate for Education and Human Resources
- D.W. Reynolds Foundation
- PEW Charitable Trust
- Robert Wood Johnson Foundation
- Agency for Healthcare Research and Quality (AHRQ) Grants
- Fund for the Improvement of Postsecondary Education (FIPSE)
- Henry J. Kaiser Family Foundation
- HRSA- U. S. Department of Health and Human Services
- Specialty Societies (e.g., Association for Surgical Education Foundation CESERT grants)

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STRATEGY #2

Familiarize yourself with the various research methods used in MER

"Think beyond efficacy studies."

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TYPES OF RESEARCH BY PRIMARY METHOD

- **Efficacy studies**
  - Which educational intervention is better?
- **Correlational and regression studies**
  - For associating and predicting the effects of factors on outcomes
- **Psychometric studies**
  - How well does a test, instrument, or scale perform
- **Survey studies**
- **Trend analyses and data mining studies**
- **Qualitative studies**
- **Systematic review and meta-analyses**
- **Mixed Methods**

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STRATEGY #3

Diversify your research portfolio by conducting projects across multiple topic areas.

"Think beyond evaluating pedagogy"

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CATEGORIES OF RESEARCH BY TOPIC

Teaching pedagogies/androgogies

Faculty development / mentoring / coaching

Measurement and evaluation

- Psychometrics
- Behavioral research (professionalism, communication, etc.)
- Meta-analyses

Curriculum design and program development

Admissions practices

Educational theory

Profession-level research

Student and faculty wellness

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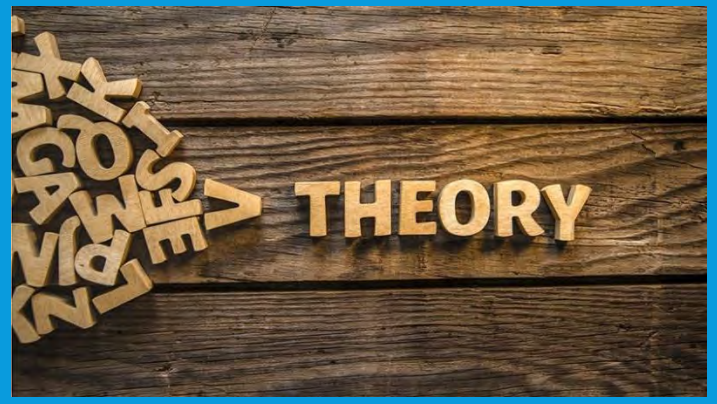
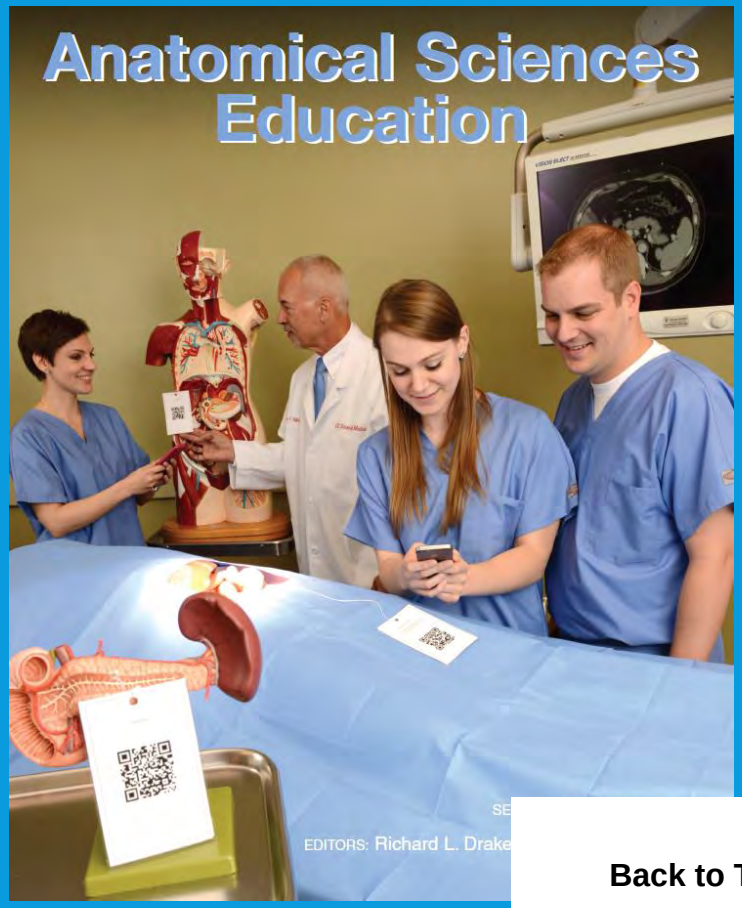


EXAMPLE: TEACHING PEDAGOGIES



RESEARCH REPORT

ASE

Investigating the Use of Quick Response Codes in the Gross Anatomy Laboratory

Study Aims

(1) Summarize student perceptions on the usefulness of QR codes as anatomy learning aids.
(2) Measure whether the introduction of QR codes in the gross anatomy laboratory contributed to differences in practical examination performance.
(3) Evaluate whether practical examination performance could be explained by the frequency of QR code usage.

Findings

(1) 89% of students agreed that QR codes augmented their learning.
(2) No difference in scores between users and non-users.
(3) Frequency of QR code usage did not explain learner performance

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EXAMPLE: FACULTY DEVELOPMENT

Study Aim

How well do medical schools' promotion criteria align with published standards for documenting and evaluating educational activities.

Context

P&T documents were reviewed from 120 (of 185) U.S. allopathic and osteopathic medical schools

Major Findings

- Less than half of schools (43%; 52 of 120) documented a well-defined education-related pathway for advancement
- P&T documents for 47% of schools were rated as "below average" or "very vague" in their clarity/specificity.
- Less than 10% of U.S. medical schools have thoroughly embraced published recommendations for documenting and evaluating educational excellence.

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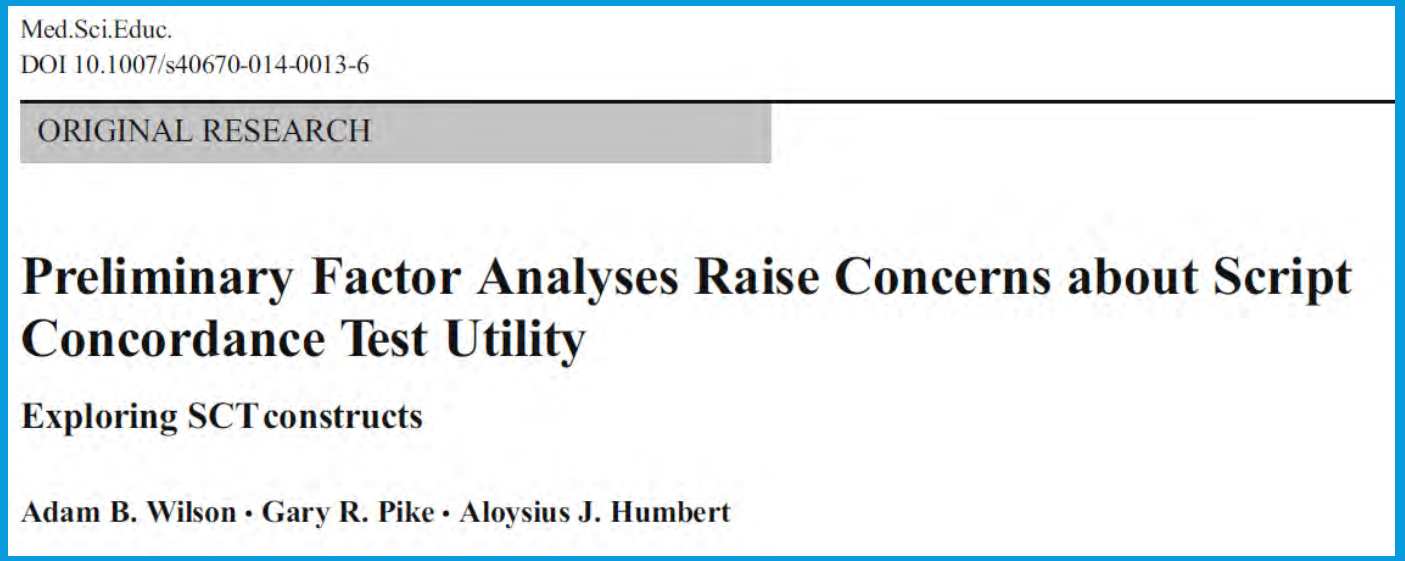
EXAMPLE: MEASUREMENT AND EVALUATION

Study Aim
To directly examine the construct validity/dimensionality of SCTs using factor analysis.


Med.Sci.Educ.
DOI 10.1007/s40670-014-0013-6

ORIGINAL RESEARCH

Preliminary Factor Analyses Raise Concerns about Script Concordance Test Utility

Exploring SCT constructs

Adam B. Wilson · Gary R. Pike · Aloysius J. Humbert

Major Findings / Conclusions

- The results challenge the assertion that SCTs measure one dimension of clinical reasoning.
- The interpretation and use of SCT scores should be met with caution.
- It is advised that SCTs bear no weight in decision making activities (e.g., deciding to pass or fail a medical student on EM clerkship).

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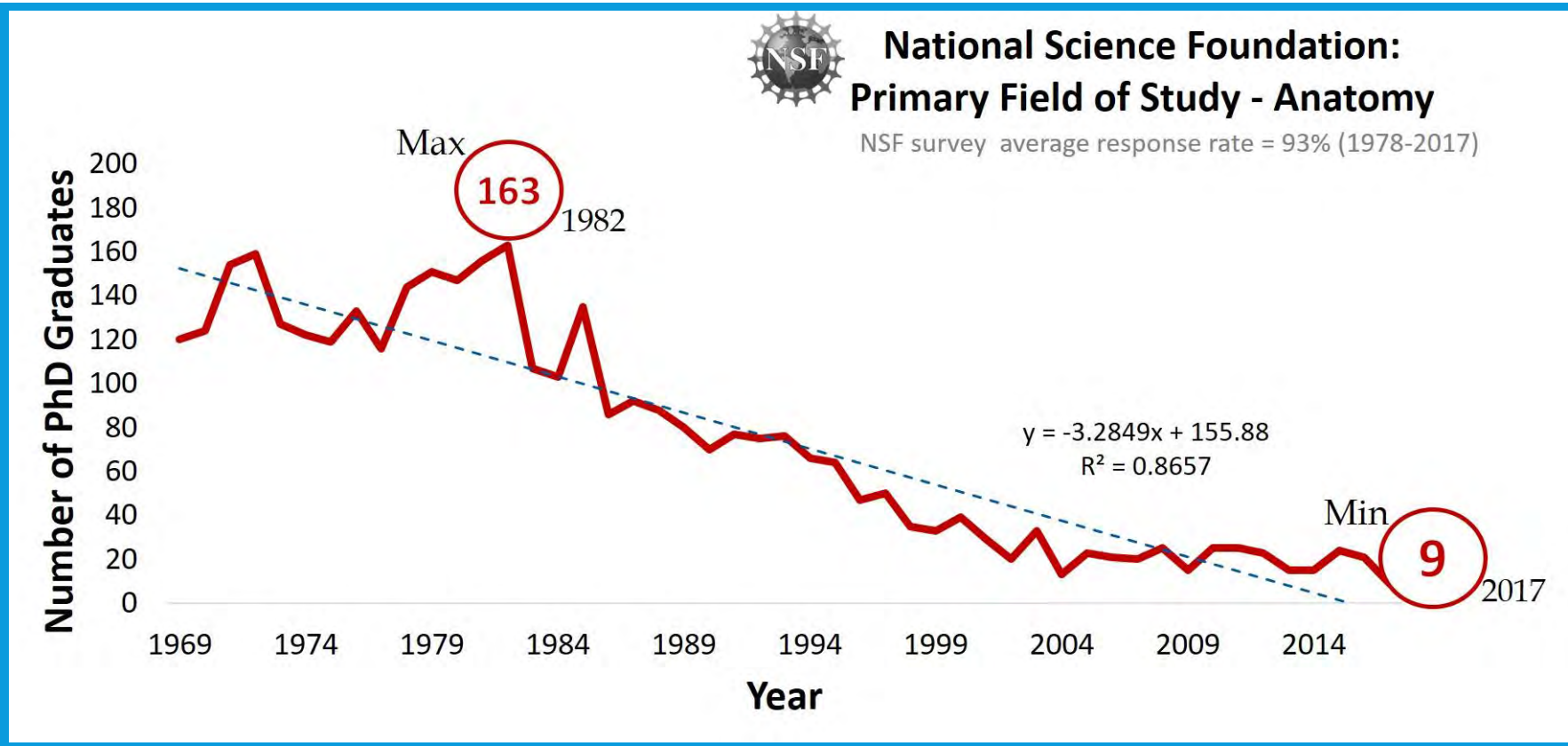
EXAMPLE: PROFESSION-LEVEL RESEARCH

Study Aim

To use NSF data to understand how faculty pipeline trends may explain an anatomy educator shortage.



Major Findings / Conclusions

- On average, the number of PhDs awarded in anatomy has declined by 3 graduates per year for the past 50 years.
- The current faculty pipeline is not sufficient to meet the growing needs for anatomy educators within the U.S.

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STRATEGY #4

Writing to an audience of educators and educational researchers is slightly different than writing to an audience of scientists.

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MANUSCRIPT WRITING TIPS

ART OF WRITING

Writing an Abstract for a Research Manuscript: Providing an Honest, Succinct and Complete Summary

Sandeep B Bavdekar[1], Nithya J Gogtay[2]

Abstract

Abstract is a vital part of a research paper. Besides the title, it is the most widely read section of an article. The first impressions created by the abstract on editors and reviewers can have a great influence on the fate of the article. After its publication, a reader might decide to give the article a miss, if he finds the information provided in the abstract uninteresting, irrelevant or uninspiring. An abstract should, therefore, be packed with all important relevant information about the study, so that reviewers and readers understand the rationale of the study, are assured of adequacy of the methodology employed, are informed about the important findings and appreciate the reasonable conclusions stated in the abstract. Brevity, self sufficiency, providing complete and accurate information in an unbiased manner are some of the important characteristics of a good abstract.

Introduction

An abstract is a summary of a full article. Annesley[1] has rightly compared abstract to an 'elevator talk', wherein an author summarizes the important information the paper conveys with an aim of getting the reader interested in the idea enticing him to read the whole manuscript. It is, therefore imperative that authors give great attention to writing a good abstract for their paper. The importance of an abstract cannot be over-emphasized. After the title, it is the most commonly read part of a manuscript.[2] Once a manuscript is submitted to a journal for consideration for publication, editors read the abstract to check if the article is likely to meet the preliminary criteria for processing it further. On the basis of the first impression made by the title and the abstract, they try to determine if the article would be of interest and relevance to the journal's readership. If they decide to send it for peer review, the prospective reviewers are generally provided access only to the abstract before they agree to review the whole paper. Abstract is the only part of the article that readers get to see when they search through electronic databases[3] and several journal websites allow the non-subscribers access to the abstract alone.[4] Once published, most readers decide to read the paper only if they find the abstract interesting or stimulating. Here, an abstract acts as a trailer.[5] If readers are unimpressed by the information contained in the abstract, they might perceive the study to be weak and simply move on to the next paper.[6] Although various types of articles (reviews, case reports, opinion article, etc.) have abstracts, this article will discuss abstracts in the context of research articles.

Types of Abstracts

Abstracts can be descriptive or informational.[7] The descriptive abstracts only portray what the paper contains without providing any details. The reader is required to read the entire article to know what the article really contains. Such abstracts are usually ultra-short (75-150 words) and are rarely used for original research articles. They are more commonly seen with Case Reports, reviews and opinion articles; articles that do not contain original research data.[7] In contrast, informational abstracts intend to provide a gist of what the research article contains and are, therefore, built in the form of a synopsis of the entire article. They include details of the research study and have enough material information to act as a proxy for the entire paper.[7] Informational abstracts can be unstructured or structured. Unstructured (also called as non-structured) abstracts are free-flowing and as the name suggests

Whenever possible…

- Ground the introduction and discussion sections in theory or a conceptual framework.
- Use a mixed methods approach.
- Report effect sizes to demonstrate the magnitude of an effect.
- Emphasize practical implication for educational practice.
- Generalizability of findings is key and distinguishes research from program evaluation.

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STRATEGY #5

Pick the right journal.

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RANKED MEDICAL EDUCATION JOURNALS

2020 Impact Factor	Journal
5.354	Academic Medicine
4.570	Medical Education
3.759	Anatomical Sciences Education
3.700	Studies in Science Education
2.654	Medical Teacher
2.490	Nursing Education Today
2.480	Advances in Health Sciences Education
2.220	Journal of Surgical Education
1.848	Teaching and Learning in Medicine

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Source: InCites Journal Citation Reports

STRATEGY #6

The more engaged you become in medical education research, the easier it is to publish.

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ED-PRIME

- Meets once per month
  - Last Thursday of each month at noon
  - A different presenter each month
- Is a venue for:
  - Presenting/developing research project for feedback
  - Presenting research outcomes prior to conferences
  - Holding journal club style discussions
  - Faculty development on educational research methods and practices

We welcome the involvement of interested faculty!

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SUMMARY OF STRATEGIES

1. Don’t wait on funding to start MER.
2. Learn the breadth of research methods - Think beyond efficacy studies.
3. Conduct research projects across multiple topic areas.
4. Adapt your writing for educators and educational researchers.
5. Pick the right journal.
6. Get engaged in MER circles.

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QUESTIONS?

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HOW TO LEARN MORE ABOUT MER

- AAMC Medical Education Research Certificate
  - https://www.aamc.org/what-we-do/mission-areas/medical-education/meded-research-certificate-program
- UIC Masters of Health Professions Education
  - http://chicago.medicine.uic.edu/departments/academic-departments/medical-education/dme-educational-programs/mhpe/

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ARTICLE: OLDIE BUT GOODIE

The themes, institutions and people of medical education research 1988-2010: content analysis of abstracts from six journals

Jerome Rotgans. Adv in Health Sci Educ (2012) 17:515-527.

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A review of U.S. Medical schools' promotion standards for educational excellence

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GROUNDWORK

A review of U.S. Medical schools' promotion standards for educational excellence

Leslie A. Hoffman[a], Rebecca S. Lufler[b], Kirsten M. Brown[c], Kathryn DeVeau[c], Nicole DeVaul[c], Lawrence M. Fatica[d], Jason Mussell[e], Jessica N. Byram[a], Stacey M. Dunham[f], and Adam B. Wilson[g]

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ABSTRACT

Phenomenon: Given the growing number of medical science educators, an examination of institutions' promotion criteria related to educational excellence and scholarship is timely. This study investigates the extent to which medical schools' promotion criteria align with published standards for documenting and evaluating educational activities. *Approach:* This document analysis systematically analyzed promotion and tenure (P&T) guidelines from U.S. medical schools. Criteria and promotion expectations (related to context, quantity, quality, and engagement) were explored across five educational domains including: (i) teaching, (ii) curriculum/program development, (iii) mentoring/advising, (iv) educational leadership/administration, and (v) educational measurement and evaluation, in addition to research/scholarship and service. After independent review and data extraction, paired researchers compared findings and reached consensus on all discrepancies prior to final data submission. Descriptive statistics assessed the frequency of referenced promotion criteria. *Findings:* Promotion-related documents were retrieved from 120 (of 185) allopathic and osteopathic U.S. medical schools. Less than half of schools (43%; 52 of 120) documented a well-defined education-related pathway for advancement in academic rank. Across five education-specific domains, only 24% (12 of 50) of the investigated criteria were referenced by at least half of the schools. The least represented domain within P&T documents was "Educational Measurement and Evaluation." P&T documents for 47% of schools were rated as "below average" or "very vague" in their clarity/specificity. *Insights:* Less than 10% of U.S. medical schools have thoroughly embraced published recommendations for documenting and evaluating educational excellence. This raises concern for medical educators who may be evaluated for promotion based on vague or incomplete promotion criteria. With greater awareness of how educational excellence is currently documented and how promotion criteria can be improved, education-focused faculty can better recognize gaps in their own documentation practices, and more schools may be encouraged to embrace change and align with published recommendations.

KEYWORDS
Promotion; tenure; faculty; medical science educators; scholarship of teaching

Introduction

Modern academic medicine has experienced a shift in momentum toward academic promotion systems that recognize and reward the work of educators as vital contributors to the educational mission.[1–3] This shift comes at a time when a number of medical schools are centralizing educational infrastructures and expanding the "core" medical education faculty to enhance teaching quality and scholarly pursuits related to the educational mission.[4,5] As efforts expand to recruit more full-time medical science educators to fulfill substantial teaching responsibilities in highly integrated curricula, there is a concurrent need to reflect on the quality and comprehensiveness of promotion standards to ensure fair and equitable advancement for all faculty, irrespective of their primary roles. At present, ambiguities in promotion documentation remain a significant barrier for many

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education-focused faculty.[6] Given these considerations, it is important to gauge whether medical schools are keeping pace and responding to faculty needs by updating their promotion and tenure (P&T) guidelines to align with recommendations for documenting all forms of educational excellence.

The slow shift away from traditional promotion models has been in progress since Boyer's reframing of the professorate in the 1990s[7] and has compelled many "school leaders [to] recognize that educators must be 'supported and rewarded, both professionally and financially' to sustain the educational mission."[1,(p1003)8] Boyer's 1990 data demonstrated that over 70% of faculty cited teaching as their primary interest; however, most faculty reported that reward systems were more heavily weighted toward published research at 4-year institutions.[7,9] The disparity between faculty priorities and institutional reward systems was a primary motivator in Boyer's expansion of the definition of scholarship beyond research (i.e., the scholarship of discovery) to include the scholarship of integration, application, and teaching.[7]

Glassick expanded upon Boyer's work by establishing rigorous standards for the assessment of educational scholarship, which provided a basis for medical science educators to be recognized and rewarded for their work in educatation.[9] Many schools have since adopted the use of education portfolios as a means of documenting educational activities for promotion reviews and decisions.[1,10] However, the variability in how evidence was documented in these portfolios necessitated a common set of standards to guide individuals and institutions in the documentation and evaluation of educational activities. In 2006, leaders from the Academic Pediatric Association (APA) and the Association of American Medical Colleges (AAMC) Group on Educational Affairs (GEA) developed the Q[2]Engage documentation model.[1] This model defined five domains of educational activities: teaching; curriculum development; advising and mentoring; educational leadership and administration; and learner assessment, and provided evidence for educational excellence in each domain in the form of quantity, quality, and engagement within the education community. Thanks to the work of Baldwin and coworkers and the AAMC Task force on Educator Evaluation there are now further recommendations for explicit, best-practice criteria with examples in each domain.[2,3,11,12]

These recommended documentation and evaluation standards represent a step forward in legitimizing educational activities as viable evidence of educational excellence. However, to effectively implement these standards requires that medical schools update their promotions criteria and commit to supporting education-focused faculty through mechanisms such as teaching academies and focused promotion pathways.[13] As Gusic et al. previously asserted, "[a]doption of such criteria is now the rate-limiting step in using a fair process to recognize educators through academic promotion."[3(p1006)]

In 2017, the Committee for Advancement of Medical Science Educators (CAMSE), a subcommittee of the International Association for Medical Science Educators (IAMSE) Professional Development Committee, conducted a survey to gather perspectives on the recognition, reward, and promotion of medical science educators.[6] The CAMSE survey reported that 22% of medical science educators perceived their understanding of their institution's P&T guidelines to be at or below average, and 50% of respondents did not know what guidelines their institution used to evaluate educational activities for the purposes of promotion and/or tenure.[6] Out of this work, CAMSE recognized the need for additional research to clarify how universities are documenting and communicating their promotion standards and expectations related to educational excellence.[6] Most recently, in 2019, a survey of U.S. P&T committee chairs and leaders concluded that "… the methods used to assess clinical educators' promotion packets were not reflective of best practices in current literature."[14(p932)] Is this perhaps a consequence of P&T committees not following their documented guidelines, or is it a repercussion of having poorly constructed guidelines to begin with? At present, it remains unclear whether the majority of medical schools' promotion criteria actually embrace the tenets of proposed documentation standards for educational activities related to the promotion and tenure of education-focused faculty.[1]

The main goal of this systematic document analysis was to summarize how United States (U.S.) medical schools conceptualize and disseminate criteria for promotion on the basis of educational excellence. This study sought to answer four research questions:

1. What are the current documented practices of U.S. medical schools as they relate to promotion pathways for education-focused faculty?
2. How prevalent are education-related criteria within schools' promotion and tenure guidelines when compared to a framework of recommended standards?
3. How clear, explicit, and comprehensive are schools' documented criteria for evaluating the work of educators?

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4. Do institutional characteristics influence the quality and quantity of education-related criteria in schools' P&T documents?

To discern the level of adherence to recommended standards,[1,11,12] this study reports the proportion of medical schools that reference education-specific criteria within their promotion and tenure documents. Criteria and promotion expectations (related to context, quantity, quality, and engagement) are explored across five educational domains including: (i) teaching, (ii) curriculum/program development, (iii) mentoring/advising, (iv) educational leadership/administration, and (v) educational measurement and evaluation, as well as research/scholarship and service.

Method

Document collection

In 2018, promotion guidelines and related/supplemental promotion documents were solicited from all U.S. allopathic and osteopathic medical schools via national listserve invitations (i.e., the DR-ED and American Association of Anatomists listserves), institutional website searches, and personal communications. For schools with multiple campuses, each campus website was searched independently for pertinent documents. If separate documents could not be identified across campuses at a single institution, it was presumed that the main-campus documents applied to the school's other campuses. To be included for analysis, P&T documents had to be retrievable from an institution. Otherwise, schools were excluded from the study.

Data extraction form and pilot testing

A data extraction form was generated by adopting and elaborating on published recommendations.[1,11,12] Data related to all three pillars of academic activities (i.e., teaching, research, and service) were extracted for analysis. More specifically, the Q^{2}Engage model,[1] Baldwin et al.'s Educator Evaluation Guidelines,[11] and the Toolbox for Evaluating Educators[12] were used to further refine "teaching" activities into five education-specific domains including: (i) teaching, (ii) curriculum and/or program development, (iii) mentoring and/or advising, (iv) educational leadership and administration, and (v) educational measurement and evaluation. Each set of recommendations also include criteria for evaluating educational scholarship. In the data extraction form, these criteria were placed under a "research/scholarship" heading separate from the five educational domains to maintain consistency with the way criteria are typically organized within promotion and tenure documents. Service criteria were also included under a separate "service" category heading.

The data extraction form was created in Qualtrics and was designed to extract documented information. The majority of items on the form appeared as checkboxes to indicate the presence or absence of promotion criteria (see items in Supporting Information Appendix 1). Other items related to school demographics, the year documents were last revised, and probationary periods appeared as open-ended text boxes or dropdown menus (e.g., Select the school under review). Only two items at the end of the data extraction form used a 5-point rating scale to capture investigators' judgments regarding the overall quality (i.e., "clarity/specificity" and "stringency") of the documents reviewed.

The initial draft of the data extraction form was created by three coauthors (LH, RL, AW), and was subsequently reviewed and revised by all authors. All investigators pilot tested the quality and comprehensiveness of the form by extracting data from randomly selected institutions. As a consequence of pilot testing, revisions were made to the phraseology/language of items to enhance the clarity and interpretability of the form.

Data extraction process

Five groups of paired researchers (10 investigators total) extracted data from the available documents using the finalized form housed within Qualtrics. After extracting data independently, each pair of investigators compared entries, resolved discrepancies through consensus, and submitted a final data extraction form for each medical school reviewed. Two items evaluated the overall "clarity/specificity" and "stringency" of the reviewed documents. Each pair of investigators reached a final rating decision by consensus after reconciling all other form entries. Each research team reviewed documents from approximately 20% of all institutions studied.

Statistical analysis

Data were organized and analyzed using IBM SPSS statistical software, version 22 (IBM Corporation, New York, NY, USA). Medical school demographics and the frequency of cited promotion criteria are reported as percentages. Cronbach's alpha estimated the

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internal consistency of the quality ratings (i.e., "clarity/specificity" and "stringency" ratings). Cohen's kappa (κ) statistic and percent agreement were used to calculate inter-rater reliabilities for these two quality ratings. We refer readers to the following references for typical Cohen's κ ranges.[15–17]

A chi-squared test evaluated whether quality ratings differed by region (as defined by the AAMC), school control (private versus public), and/or degree awarded (allopathic vs. osteopathic). A Kendall's Tau-b analysis assessed whether an association existed between institutions' research activity levels (as determined by their Carnegie classifications) and the quality of their P&T documents. A four-way ANOVA procedure explored whether geographic region, school control, degree awarded, and research activity levels influenced the quantity of referenced education criteria. Lastly, an independent samples *t*-test assessed differences in the number of criteria referenced between schools with explicit education tracks and those without. Alpha was set to 0.05.

Results

Demographics of included U.S. Medical schools

In the U.S., there are a total of 185 medical schools (151 allopathic schools and 34 osteopathic schools) accredited by the Liaison Committee on Medical Education (LCME) and the American Osteopathic Association, respectively. P&T documents were collected and analyzed from 65% (120 of 185) of all U.S. medical schools. Relatively few documents were obtained via listserve invitations (10%, $n = 12$) and personal communications (3%, $n = 4$); the vast majority of documents (87%, $n = 104$) were retrieved from institutional websites. Sixty-five schools were excluded from analysis due to the unavailability of their promotion and tenure documents.

All four U.S. geographic regions were represented by a minimum of 19 schools, public medical schools had higher representation than private schools, and institutions with the highest research activity (i.e., R1 doctoral universities; based on the Carnegie classification of Institutions of Higher Education) were the most represented (Table 1). Table 1 presents a full listing of school demographics.

Table 1. Demographics of 120 U.S. medical schools included for analysis.

Demographic	% (*n* of 120)
[a]**Region**	
• Northeast	31.7% (38)
• Central	26.7% (32)
• Southern	25.8% (31)
• Western	15.8% (19)
School control	
• Public	60.0% (72)
• Private	40.0% (48)
Degree awarded	
• Allopathic (MD)	90.0% (108)
• Osteopathic (DO)	10.0% (12)
Carnegie classification levels	
• R1: Doctoral University – Highest research activity	46.7% (56)
• R2: Doctoral University – Higher research activity	16.7% (20)
• R3: Doctoral University – Moderate research activity	5.0% (6)
• M1: Master's College and University – Larger programs	3.3% (4)
• M2: Master's College and University – Medium programs	0.0% (0)
• M3: Master's College and University – Smaller programs	0.8% (1)
• Special Focus Four-Year: Medical Schools & Centers	27.5% (33)

[a]Regional designations were assigned to schools in accordance with the AAMC Group on Educational Affairs school membership list.

Documented promotion and tenure practices across U.S. Medical schools

Promotion and tenure related documents were last revised between 2000 and 2018, with the mode year for revisions being 2017. The mode probationary period for promotion from assistant to associate professor was 6 years with a mode *minimum* probationary period of 4 years. Because some medical schools do not award promotion and tenure jointly, the mode probationary period for tenure was 7 years, with three schools documenting a maximum tenure probationary period of 11 years. Sixty percent (72 of 120) of schools explicitly outlined an option for delaying the tenure clock.

While no schools omitted education from their promotion criteria, 21% of schools (25 of 120) were cited as lacking explicit direction for education-focused faculty to attain academic advancement. Conversely, 43% of schools (52 of 120) provided explicit evidence of a well-defined education-related pathway for advancement. The education track for 20% of schools was not tenure eligible, and 21% of schools (25 of 120) offered both tenure and non-tenure tracks in educational excellence. In considering how schools organize P&T pathways for basic science educators versus clinician educators, no predominant model was identified. Thirty-five percent of schools (42 of 120) treated these faculty groups differently, while 26% treated them similarly. The remaining 39% of schools were coded as "cannot tell" (28%) or "other" (11%).

Prevalence of education-related criteria

Regarding the comprehensiveness of schools' P&T documents, only 11 schools (9.2%) referenced 50% or more of the investigated criteria across all 7 domains

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Table 2. P&T documentation outcomes for quality ratings and comprehensiveness of 120 U.S. medical schools.

Quality & quantity of documentation	Proportion of schools (*n* of 120)
Clarity/specificity rating	
Very specific; criteria are clearly defined	7.5% (9)
Above average	15.8% (19)
Average clarity/specificity	30.0% (36)
Below average	32.5% (39)
Very vague; criteria not clearly defined	14.2% (17)
Stringency rating	
Very stringent/rigorous	2.5% (3)
Above average	16.7% (20)
Average stringency	41.7% (50)
Below average	29.2% (35)
Very lenient/weak	10.0% (12)
Comprehensiveness	
High: Referenced $\geq$ 50% of criteria across 7 domains	9.2% (11)
Moderate: Referenced 21–49% of criteria across 7 domains	83.3% (100)
Low: Referenced $\leq$ 20% of criteria across 7 domains	7.5% (9)

(Table 2). Figure 1 summarizes the proportion of education-related criteria referenced within each domain by 50% or more of schools. Appendix 1 (Supporting Information) details the proportion of medical schools that referenced (directly or indirectly) each education-related criterion.

Collectively, across the five education-specific domains, only 12 of the 50 investigated criteria (24%) were referenced by at least half of the 120 schools. While several criteria within the *Teaching* domain were well represented across schools, 10 of the 19 teaching criteria were "poorly documented" (Figure 1). The least represented domain within medical schools' P&T documents was *Educational Measurement and Evaluation* with only 43 (36%) schools referencing at least one criterion in this domain (Appendix 1 Supporting Information; Figure 1).

School characteristics and the quality and quantity of documented criteria

Investigators rated the "clarity/specificity" and "stringency" of each school's P&T criteria on a 5-point rating scale. Cronbach's alpha estimated the collective internal consistency of these two quality ratings to be 0.861. Before paired investigators compared the accuracy of their data/criteria selections and reached consensus on the two quality ratings, the percent agreement and inter-rater reliability of their *independent* quality ratings was low (clarity/specificity rating: percent agreement = 45% and Cohen's κ = .283; stringency rating: percent agreement = 52% and Cohen's κ = .321).

Table 2 summarizes the proportion of schools that received each quality rating. Regarding clarity/specificity, the documents of 23% of schools were considered to be above average or to have the highest clarity/specificity. Schools that documented a higher number of criteria across all seven domains had higher clarity/specificity ratings. Nineteen percent of schools were considered to have documents with above average or high stringency (Table 2).

A Pearson's chi-squared test analyzed whether the quality ratings of schools' P&T criteria were independent of geographic region, school control (private vs. public), and degree awarded. Among the 120 schools analyzed, neither "clarity/specificity" nor "stringency" ratings differed on the basis of region, school control, nor degree awarded ($p \geq .080$). After excluding schools classified by Carnegie as "Special focus four-year: Medical Schools and Centers," a Kendall's Tau-b analysis revealed no correlation between an institution's research activity level and the "clarity/specificity" or "stringency" of their P&T related documents ($p \geq .553$).

A four-way ANOVA tested whether the number of P&T criteria (referenced across all 7 domains) was comparable across geographic regions, school control, degree awarded, and research activity levels (i.e., R1, R2, and "other"). No main effects were identified ($p \geq .085$) indicating no difference in the number of referenced criteria across groups. When isolating only education-specific criteria across the five domains, no differences between groups were identified ($p \geq .120$).

Lastly, an independent samples *t*-test revealed that schools which offered an explicit and well-defined education pathway for advancement ($n = 52$, 43%), on average, referenced a significantly higher number ($p = .001$) of criteria across all 7 domains compared to schools that that lacked an explicit education-focused pathway ($n = 68$, 57%; Figure 2) meaning schools either lacked explicit direction for education-focused faculty ($n = 25$, 21%) or the institution acknowledged

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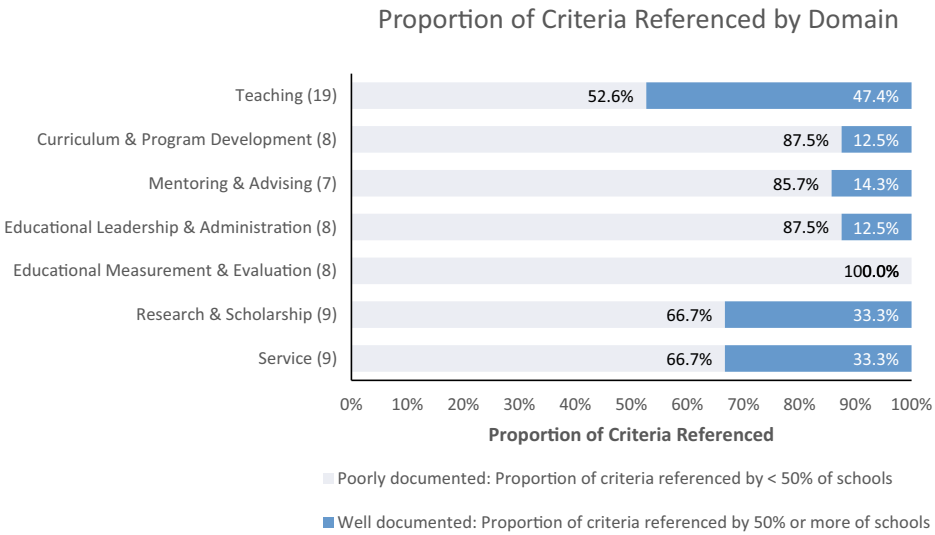

Figure 1. Proportion of criteria referenced by U.S. medical schools in each domain. (*n*) indicates the number of possible criteria per domain.

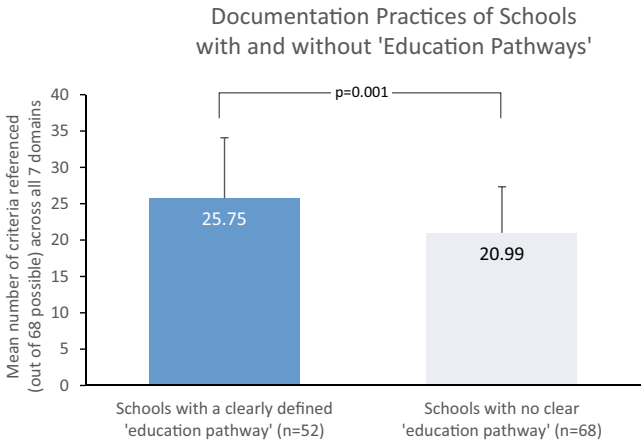

Figure 2. Referenced criteria across all seven domains comparing schools with or without "education pathways." Error bars represent standard deviations.

education-related criteria without offering an explicit education track ($n = 43$, 36%).

Discussion

Interest in the rise of medical science educators and their need for equitable career advancement opportunities prompted the overarching research question, "How well are medical schools following published recommendations for documenting all forms of educational excellence within their P&T guidelines?" At present, it appears that efforts by medical schools to modernize P&T guidelines have been largely stagnant. For example, less than half (43%) of schools offered an explicit education-related pathway for academic advancement. Only a small minority (<10%) of schools have thoroughly embraced and incorporated published recommendations for documenting and evaluating educational activities into their P&T documents (Table 2). Across the five education-specific domains, only 24% (12 of 50) of all investigated criteria were referenced by 50% or more of schools. In light of the current findings, it is imperative for institutions to review the congruence between their historic promotion processes and more contemporary practices for advancing and developing education-focused faculty. Throughout the remainder of this discussion, recommendations for improving P&T guidelines are made based on identified shortcomings revealed through this document analysis.

After one decade, the availability of education advancement pathways increased by 8%

In the early 2000s, institutions began embracing educational excellence/scholarship as an area of

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Table 3. Recommendations to U.S. Medical Schools.

RECOMMENDATIONS
1 **Clearly define all pathways.**
Recommendation: Explicitly describe all available pathways by which education-focused faculty can attain advancement, whether advancement falls within or outside of the tenure stream, and whether promotion and tenure are jointly attained. Explicitly state whether the available pathway(s) and/or promotion criteria/expectations differ between basic science educators and clinical educators. Figures (e.g., flowcharts) or tables showing/describing these pathways are often useful supplements.
Justification: The current study found that 21% of U.S. medical schools lacked explicit direction for education-focused faculty to attain academic advancement.
2 **Reflect on the quality of current P&T documents.**
Recommendation: Conduct a self-study assessment or institutional peer-review to reflect on the quality of a school's P&T documents related to advancement for education-focused faculty. Utilize published recommendations and frameworks as benchmarks to help evaluate the quality and comprehensiveness of promotion criteria.
Justification: Guidelines for documenting and evaluating educational activities and educational scholarship[1,11,12] have existed for over a decade, yet the current analysis found that very few schools are following recommended guidelines based on low quality and quantity ratings.
3 **Be comprehensive in listing criteria and provide examples.**
Recommendation: Provide faculty with a clear and comprehensive listing of all education-related promotion criteria/expectations which the institution endorses as evidence of educational productivity (including context and evidence of quantity, quality, and engagement). List the preferred metrics by which "quality" and "impact" will be judged. List common acceptable forms of educational scholarship and provide examples of scholarly products (i.e., how to demonstrate/document educational scholarship beyond typical research publications), noting the relative importance of scholarly products that are retrievable and peer-reviewed.
Justification: Educator Evaluation Guidelines[11] and a Toolbox for Evaluating Educators[12] provide examples of educational activities and indicators of quality. Such guidelines are necessary to inform faculty of the criteria by which their work will be evaluated and to enable P&T committees to provide rigorous, objective, and evidence-based evaluation of educational activities and scholarship.

concentration for academic advancement as signaled by the increase in the number of schools offering education tracks for faculty who devote a majority of their effort to educational activities, including educational scholarship and administration.[18] However, the implementation of designated education tracks has been slow to gain momentum. In 2009, only 35% of U.S. medical schools (34 of 98 analyzed) offered education tracks, and of these, only 16 were tenure-eligible.[18] Now, a decade later, the current findings suggest 43% (52 of 120) of U.S. MD- and DO-granting medical schools recognize educational excellence as an explicit and well-defined advancement pathway; an 8% increase over the past ten years. This suggests modest forward progress amongst medical institutions despite a growing decline in education-focused tenure streams in higher education.[19] In this study, 57% of U.S. medical schools had no designated education track and/or the option to declare teaching as an area of excellence was ambiguous. Given these findings, we recommend that future documents be more explicit with regard to pathways for advancement for education-focused faculty (Table 3; Recommendation 1).

Better documentation of education criteria in P&T guidelines is needed

Guidelines for documenting and evaluating educational activities and educational scholarship have existed for over a decade.[1,11,12] However, many of these recommended criteria are largely underrepresented in U.S. medical schools' P&T documents (Figure 1), which deviates from the "Good Practice" recommendations jointly set forth by the American Council on Education, the American Association of University Professors (AAUP), and the United Educators Insurance Risk Retention Group.[20] The present study, and prior work by CAMSE,[6] suggests there is an opportunity for medical schools to improve the explicitness and clarity of their P&T documents. Herein, 47% of schools received a "below average" or "very vague" rating for the clarity/specificity of documented promotion criteria. The lack of clarity and comprehensiveness of P&T documents may partly explain faculty's P&T insecurities as reported by the CAMSE study.[6] Overall, these current and related findings demonstrate a pressing need for medical schools to improve the clarity, explicitness, and comprehensiveness of education-related criteria within their P&T documents. The authors acknowledge that intentional ambiguity may offer institutions and P&T committees broader autonomy and freedom to support and advance faculty with unique cases based on individual merit. Conversely, a lack of clarity may limit P&T committees from advancing faculty as a consequence of too little guidance. Therefore, a better solution may be for medical schools to modernize the education sections of their P&T documents by considering current and prior recommendations[1,10,21,22] in the context of the institution's mission, core values, and general promotion expectations (Table 3; Recommendation 2).

Educator Evaluation Guidelines[11] and a Toolbox for Evaluating Educators[12] provide examples of educational activities, along with indicators of quality. Such guidelines are necessary to inform faculty of the criteria by which their work will be evaluated and to enable promotion and tenure committees to provide

rigorous, objective, and evidence-based evaluation of educational activities and scholarship. Given the pre-existence of these resources, we recommend that institutions provide a clear and comprehensive listing of education-related promotion criteria and expectations along with examples of acceptable forms of educational scholarship and scholarly products (Table 3; Recommendations 3).

Institutional characteristics do not influence the quality of P&T guidelines

Given the diversity of U.S. medical schools, there was reason to speculate that certain institutional characteristics might influence the clarity/specificity, stringency, and the comprehensiveness of education-related criteria within promotion documents. Upon analysis, no significant differences were identified when considering geographic regions, school control, medical degree awarded, and institutional research activity levels. In the context of the above findings, this suggests that the poor comprehensiveness of education-related criteria within P&T documents is a systemic problem unlikely attributed to general medical school characteristics.

This outcome is of particular interest as it indicates that education-focused faculty at institutions with the highest research activity (R1) are subject to a similar quality and quantity of promotion criteria as those not at R1 or R2 universities. By extension, the commonly held notion that it may be more difficult for medical science educators to be promoted at research-intensive institutions than at any other type of institution is unlikely. Note, it was beyond the scope of this study to compare promotion success rates between biomedical researchers and medical science educators across various medical institutions.

Future directions

While this work fills a sizable gap in the medical education literature by evaluating the current landscape of U.S. medical schools' P&T documents, additional research is needed to better understand the nuances of P&T practices. Subsequent investigations might explore questions such as, "What is the average level of sustained productivity related to education, scholarship, and service activities that education-focused faculty must document for successful promotion to associate and full professor?" or "How do promotion success rates of biomedical researchers compare to those of medical science educators across various types of medical institutions?"

Additionally, the medical education community may benefit from periodic reviews of P&T documents to better monitor the responsiveness of medical schools to profession-wide changes affecting faculty advancement and development. The present study found that those schools which offer explicit and well-defined education tracks have adopted significantly more promotion criteria than schools lacking explicit education pathways. Periodic monitoring of the availability of education promotion pathways alone is likely a reasonable surrogate for auditing the evolution and the general quality of P&T documents themselves.

The degree to which committees actually adhere to their own P&T policies, procedures, and standards during decision-making processes was not explored in this study. However, by comparing the present study to work by Ryan et al. there are some apparent disparities between what is documented and what is required in the eyes of P&T committee leadership.[14] For example, Ryan et al. survey of P&T committees reported that 30 schools (55%) required faculty to document evidence of learner assessment. However, in the present study, the criteria pertaining to the *Educational Measurement and Evaluation* domain (an expanded version of "learner assessment") were the least documented in P&T guidelines. Additional inquiries are needed to further elucidate these disparate findings.

Limitations

The primary limitation of this study was the inability to access all U.S. medical schools' P&T documents. While some documents were obtained via listserve requests and personal communications, most were retrieved from medical schools' public-facing websites. Some documents were housed behind institutional firewalls making them inaccessible for analysis. Given that many schools disseminate promotion guidelines, policies, templates, and examples across multiple documents, it was not always clear whether all pertinent documents for a particular school were available for review. Second, before paired investigators reached consensus on the two quality ratings, the percent agreement and inter-rater reliability of their independent judgments was low. This was most likely a consequence of documentation ambiguities considering 47% of schools were rated as "below average" or "very vague." As such, the research protocol required each pair of investigators to first reconcile all entries on the

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data extraction form prior to reaching a final rating decision by consensus.

Given that updates to P&T documents are likely to lag behind the most recent literature by several years, it should be noted that 34% of documents (31 of 90) had not been updated within the past 5 years, since 2014. Thirty documents did not report the year of last revision.

Conclusions

This document analysis of P&T guidelines from 120 U.S. medical schools suggests there is still progress to be made regarding how schools structure advancement pathways, evaluate educational activities, and communicate their P&T criteria to faculty. Institutions which overlook current disparities in their P&T documents, and/or elect to discount the value of robust educational criteria, may inadvertently put education-focused faculty at a disadvantage for attaining promotion compared to colleagues at institutions that acknowledge, value, and support the diverse documentation of education-related activities. With this new evidence of meager progress, the authors challenge U.S. medical schools to reflect upon their archetypal P&T guidelines/practices and implore schools' governing committees to take action to ensure the equity of advancement practices for all faculty.

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Disclaimer

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Supplemental Digital Appendix 1: Proportion of U.S. medical schools referencing (directly or indirectly) each indicator/criterion in promotion/tenure related documents as evidence of educational activities.

A. TEACHING

Any activity that fosters learning, including direct teaching (e.g., lecturing, tutoring, precepting, etc.), or the creation of associated instructional materials that accompany the teaching endeavor which are incorporated into a coherent curriculum, yet do not constitute a standalone curriculum.

CONTEXTUAL INFORMATION		% (n of 120)
A.1	Listing of teaching roles for each teaching responsibility (e.g., laboratory instructor, lecturer, guest lecturer, session facilitator, continuing education or faculty development instructor/facilitator, etc.).	76.7% (92)
A.2	Specification of teaching venues/settings (e.g., medical school, health professions, etc.) OR venue/setting is inferred through the specification of the number, type, and level of learners/trainees taught.	73.3% (88)
A.3	Description of system or program level practices that may influence teaching autonomy/versatility (e.g., a medical school program subscribes purely to a team based learning (TBL) approach thereby limiting an educator's exposure and/or ability to autonomously implement a diversity of teaching pedagogies/strategies).	2.5% (3)
QUANTITY INDICATORS		
A.4	Listing of regular teaching responsibilities (e.g., content/courses taught; required versus elective courses, etc.).	72.5% (87)
A.5	Listing of created/innovative instructional materials/products/resources. Listing might entail links to exemplar materials and a rationale for why materials/products/resources were developed for local use.	58.3% (70)
A.6	Listing of *periodic* teaching invitations/responsibilities with contextual information (e.g., visiting professorships, one-off teaching sessions/presentations, annual teaching sessions, CME teaching, etc.)	50.0% (60)
A.7	Indication of volume, duration, and/or frequency of *regular* teaching responsibilities (at local, regional, national, and international levels) as evidenced by course credits, student contact hours, teaching administration hours, and/or allocated full-time equivalency (FTE).	45.8% (55)
QUALITY INDICATORS		
A.8	Reporting of outcomes from educator evaluations (numerical and/or written comments) on teaching and teaching materials completed by students/residents/trainees (preferably with numerical peer comparisons).	95.0% (114)
A.9	Reporting of outcomes from educator evaluations (numerical and/or written comments) on teaching and teaching materials completed by faculty peers,	90.0% (108)

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	supervisors, and/or external reviewers (preferably with numerical peer comparisons).	
A.10	Listing of teaching awards/honors/recognitions with contextual information (at local, regional, national, and/or international levels).	82.5% (99)
A.11	Evidence of learners' perceived and/or actual success as documented through trainee self-reports of learning, performance outcomes (preferably comparative), standardized assessments, observations of applied knowledge or performance, etc.	38.3% (46)
A.12	Indication that candidate's developed teaching methods/practices/resources have been adopted/adapted by others as evidenced by letters of support, educational repository (e.g., MedEd Portal) download/use metrics, or other comparable indicators of adoption.	25.8% (31)
A.13	Demonstration of teaching versatility as evidenced by the diverse use of pedagogical approaches and/or one's ability to teach broadly across multiple subject matters, disciplines, and/or learner levels.	22.5% (27)
A.14	Evidence of revising/updating instructional approaches/curricula based on evaluations/feedback, research evidence, and/or a reflective critique of one's teaching quality as documented through self-reports.	19.2% (23)
A.15	Record of unsolicited statements attesting to the quality of educational practices, innovations, and/or instructional products produced by the candidate.	0.8% (1)
ENGAGEMENT INDICATORS[a]		
A.16	Listing of memberships and/or active participation in education related professional societies/organizations. Listing may entail meeting locations, dates, and nature of participation.	65.8% (79)
A.17	Indication of how teaching approaches are informed by the literature as evidenced by references to proven approaches in a teaching portfolio or in a teaching philosophy statement and/or is confirmed through external review.	18.3% (22)
A.18	Indication of self-development activities related to teaching as evidenced by certificates of completion, attendance, and/or active participation in continuing education or professional development activities. Listing may entail meeting locations, dates, and the nature and extent of participation.	11.7% (14)
A.19	Indication of the candidate's willingness to modify teaching practices based on the input of others in the education community as documented through self-reflections and/or letters of support.	6.7% (8)

[a]Engagement indicators measure how an educator interacts with and draws from one's field within the education community to inform one's own work. Engagement through service activities is captured under the "Service in Education" heading.

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B. CURRICULUM & PROGRAM DEVELOPMENT

*A **curriculum** is a standalone longitudinal set of systematically designed, sequenced, and evaluated educational activities delivered to learners at any training level, in any venue, and in any delivery format. A **program** is a collection of curricula sequenced and/or integrate to yield a coherent and focused course of study.*

CONTEXTUAL INFORMATION & QUANTITY INDICATORS	% (n of 120)
B.1 Listing of role in and/or contributions to local, regional, national, and/or international curriculum/program development activities as evidenced by 1) self-reports of roles, time devoted to developing materials, and/or time devoted to committee involvement, and/or 2) letters from educational/administrative leaders (including committee chairs) confirming the candidates role and engagement in curriculum/program development processes.	82.5% (99)
B.2 Description of curriculum/program purpose/goals, evidence of curriculum/program need, intended/actual audience, duration, context regarding the influence of system level processes (e.g., administrative decisions or accreditation standards) on the candidate's autonomy to design and implement the curriculum/program.	13.3% (16)
QUALITY INDICATORS	
B.3 Impact of curriculum/program on learning (course examinations, standardized tests, observations of learner performance, etc.), impact on field/discipline (e.g., employment rates, accomplishments of graduates, employers' reactions to the quality of graduates, etc.), and/or impact on society.	17.5% (21)
B.4 Reporting of participants'/learners' reactions to (e.g., written comments) and/or numerical ratings of the quality of the curriculum/program.	15.0% (18)
B.5 Validation of quality by peers, content experts, and/or other key stakeholders (e.g., funding agencies, accrediting bodies) as evidenced by letters of curriculum/program evaluation.	11.7% (14)
B.6 Listing of curriculum/program development awards/honors/recognitions with contextual information (at local, regional, national, and/or international levels).	0.0% (0)
ENGAGEMENT INDICATORS[a]	
B.7 Listing of acquired curriculum/programmatic resources as evidenced by grants, internal/external funding, sponsorships, etc.	14.2% (17)
B.8 Description of how curriculum/program goals/objectives are informed by local, national, and/or international reports on need or standards as evidenced by peer or self-appraisal/reflection.	5.8% (7)

[a]Engagement indicators measure how an educator interacts with and draws from one's field within the education community to inform one's own work. Engagement through service activities is captured under the "Service in Education" heading.

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C. MENTORING & ADVISING

A developmental relationship in which the educator facilitates the accomplishment(s) of learners' and/or colleagues' goals.

CONTEXTUAL INFORMATION & QUANTITY INDICATORS		% (n of 120)
C.1	Record of involvement in learning communities, academic/career advising, trainee/junior faculty mentoring, student organizations, and/or counseling as evidenced by self-reported descriptions of relationships with protégés/mentees/advisees/junior faculty (e.g., trainees' names, current status, purpose/goals of mentoring/advising relationship, and total time invested).	57.5% (69)
C.2	Description of candidate developed/initiated mentoring program(s) with evidence of quality or impact.	5.8% (7)
QUALITY INDICATORS		
C.3	Listing of mentees' outcomes (e.g., extent to which protégés accomplished goals, delivered products such as presentations and publications, and received awards related to the goals of the mentor/mentee relationship, postdoctoral placement, etc.) as evidenced by self-reports and supported by documentation, when available.	42.5% (51)
C.4	Reporting of outcomes from mentor evaluations (numerical and/or written comments) completed by mentees/advisees/trainees/junior faculty (preferably with numerical peer comparisons).	9.2% (11)
C.5	Listing of mentoring awards/honors/recognitions with contextual information (at local, regional, national, and/or international levels).	0.8% (1)
ENGAGEMENT INDICATORS[a]		
C.6	Listing of professional development activities to enhance mentoring effectiveness (e.g., mentoring related workshops, webinars, etc.).	10.8% (13)
C.7	Listing of acquired mentoring/advising resources as evidenced by grants, internal/external funding, sponsorships, etc.	8.3% (10)

[a]Engagement indicators measure how an educator interacts with and draws from one's field within the education community to inform one's own work. Engagement through service activities is captured under the "Service in Education" heading.

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D. EDUCATIONAL LEADERSHIP & ADMINISTRATION

Leadership activities that manage and transform educational programs and advance the field.

CONTEXTUAL INFORMATION & QUANTITY INDICATORS		% (n of 120)
D.1	Listing of leadership/administrative roles and responsibilities including, but not limited to, course directorships, program directorships, director of student organizations, vice chair of education, clerkship directorships, deanships, and/or the head of a division, unit, department, center, and/or institute with durations of service.	85.0% (102)
D.2	Descriptions of projects or initiatives led with rationales for change and intended goals.	16.7% (20)
QUALITY INDICATORS		
D.3	Formative and/or summative data demonstrating achievement of goals or efficacy of instituted changes (e.g., met accreditation standards).	11.7% (14)
D.4	Data demonstrating leadership effectiveness (e.g., record of unsolicited statements, leadership performance evaluations preferably with peer comparisons, learner perceptions, faculty satisfaction).	2.5% (3)
D.5	Listing of leadership/administrative awards/honors/recognitions with contextual information (at local, regional, national, and/or international levels).	0.8% (1)
ENGAGEMENT INDICATORS[a]		
D.6	Listing of acquired resources for instituting leadership/administrative initiatives as evidenced by grants, internal/external funding, sponsorships, etc.	17.5% (21)
D.7	Indication that instituted changes are based on best practices in the scientific/educational literature as evidenced through self-appraisal/reflection and/or confirmed through peer/expert review.	6.7% (8)
D.8	Indication that candidate audits comparative and/or continuous quality improvement data for areas of strength and improvement as evidenced through self-appraisal/reflection.	1.7% (2)

[a]Engagement indicators measure how an educator interacts with and draws from one's field within the education community to inform one's own work. Engagement through service activities is captured under the "Service in Education" heading.

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E. EDUCATIONAL MEASUREMENT & EVALUATION

All activities associated with measuring learners' knowledge, skills, behaviors, and attitudes at the learner, session, course, and/or program level. This section also entails the psychometric analysis of educational assessment/evaluation instruments.

	CONTEXTUAL INFORMATION & QUANTITY INDICATORS	% (n of 120)
E.1	Listing of roles and contributions to writing items, assessments, and/or evaluations at the local, regional, national, and/or international level.	35.8% (43)
E.2	Number of items/evaluations/assessments developed outlined by categories and/or type.	1.7% (2)
E.3	Listing of peer-reviewed assessments/evaluations accepted to an educational repository such as DREAM (Directory and Repository of Educational Assessment Measures).	1.7% (2)
E.4	Listing and description of consultations related to educational measurement and evaluation.	0.0% (0)
	QUALITY INDICATORS	
E.5	Indication that scores from developed assessments/evaluations have strong reliability and validity evidence as demonstrated through documented analyses and/or peer-reviewed psychometric related publications.	0.8% (1)
E.6	Report of item writing quality as evidenced by mean discrimination indices, mean item difficulty, mean point biserial, proportion of items classified as "higher level" application-based items, etc.	0.0% (0)
E.7	Listing of awards/honors/recognitions related to educational measurement and evaluation with contextual information (at local, regional, national, and/or international levels).	0.0% (0)
	ENGAGEMENT INDICATORS[a]	
E.8	Evidence that assessment methods follow best practices (e.g., adherence to NBME item-writing guidelines) as validated by peer/expert review.	4.2% (5)

[a]Engagement indicators measure how an educator interacts with and draws from one's field within the education community to inform one's own work. Engagement through service activities is captured under the "Service in Education" heading.

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F. RESEARCH & SCHOLARSHIP IN EDUCATION

Scholarship *includes any activity that produces an outcome that is publicly disseminated, peer-reviewed (or otherwise open to critique), and available for use by other members of the scholarly community.* ***Research*** *is distinct from other forms of scholarship in that it generates new knowledge through the use of rigorous methods which involve the collection and/or analysis of data, and advances the field by providing a platform upon which others can build.*

PRODUCTIVITY & QUALITY INDICATORS		% (n of 120)
F.1	Listing of peer-reviewed publications in print/electronic venues (e.g., journal articles, textbooks, book chapters, editorials, etc.).	100% (120)
F.2	Listing of peer-reviewed or invited presentations in the form of workshops, abstracts, posters, expert panels, and/or oral presentations at local, regional, national, and/or international academic conferences/meetings.	94.2% (113)
F.3	Listing of acquired research/scholarship resources as evidenced by grants, internal/external funding, sponsorships, etc.	90.0% (108)
F.4	Listing of accepted peer-reviewed enduring educational products (i.e., instructional materials) in educational repositories (e.g., Med-Ed Portal, DREAM, Life-Sci TRC, Higher education assets library, Family medicine digital resource library, etc.).	45.8% (55)
F.5	Indication of research/scholarship quality and/or involvement as evidence by impact measures/metrics (e.g., status/ranking of journals, number of citations, h-index, altmetrics (e.g., number of article reads, downloads, tweets, social media views, etc.), and/or letters of comparative evaluation) and one's contributions as a co-investigator/author versus first or senior author.	35.0% (42)
F.6	Listing of non-peer reviewed educational products (e.g., multimedia productions, blogs, social media postings with viewer/follower counts, news articles, etc.).	34.2% (41)
F.7	Listing of schools/institutions where candidate's products (e.g., workshops, teaching methods/materials, assessments, etc.) have been adopted based on one's research/scholarly contributions to the field with documented proof of adoption (e.g., website review, support letters, Med-Ed Portal downloads, etc.).	26.7% (32)
F.8	Validation of research/scholarship expertise by peers, experts, and/or external reviewers as evidence through letters of evaluation and/or documentation/reports of peer comparisons.	15.0% (18)
F.9	Listing of awards/honors/recognitions related to research/scholarship with contextual information (at local, regional, national, and/or international levels).	10.0% (12)

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G. SERVICE IN EDUCATION

Any activities associated with service, which have NOT been captured in sections A-F above.

CONTEXTUAL INFORMATION & QUANTITY INDICATORS		% (n of 120)
G.1	Listing of memberships on institutional (local), regional, national, and/or international committees and/or task forces, indication of whether membership status was a result of election or volunteerism, and estimated time commitment.	90.8% (109)
G.2	Indication of whether candidate chaired/led/organized committee, task force, symposia, and/or professional meeting, whether the leadership role was a result of election or volunteerism, and estimated time commitment.	75.8% (91)
G.3	Listing of contributions as an editor, editorial board member, and/or reviewer of professional journals, grants, multimedia productions, textbooks, review boards, etc.	72.5% (87)
G.4	Listing of invitations to consult for other departments, schools, institutions, societies/organizations, and/or governmental agencies/affiliates in one's area of academic expertise.	43.3% (52)
G.5	Listing of contributions to the development of standards, guidelines, and/or policies as a member of an advisory board, commission, agency, or equivalent. Listings may describe contributions at the local, regional, national, and/or international level with estimated time commitments and examples of product outcomes.	31.7% (38)
G.6	Listing of contributions (e.g., roles, responsibilities, time commitment) to student/resident/trainee/faculty recruitment.	20.0% (24)
G.7	Listing of other/miscellaneous service activities (e.g., uncompensated community service, lobbyist activities, healthcare advocate activities, etc.).	13.3% (16)
G.8	Listing of contributions as an on-site accreditation reviewer or director of accreditation for educational programs with estimated time commitment.	11.7% (14)
QUALITY INDICATORS		
G.9	Listing of service awards/honors/recognitions with contextual information (at local, regional, national, and/or international levels).	4.2% (5)

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RUSH

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Age-Friendly Health Systems

Committed to Care Excellence for Older Adults

Rush System for Health

Teaching and Implementing the 4Ms of an Age-Friendly Health System in Clinical Settings

December 15, 2020

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Disclosure

- The presenters do not have any potential or actual conflicts of interest.

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Learning Objectives

- Describe the 4Ms of an Age-Friendly Health System
- Identify strategies to teach the 4Ms to trainees in clinical settings
- Recognize opportunities for team involvement in the 4Ms

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The 4Ms

The 4Ms	Description
What Matters	Know and align care with each older adult's specific health outcome goals and care preferences including, but not limited to end-of-life, and across settings of care
Mobility	Ensure that older adult move safely every day to maintain function and do What Matters
Medication	If medications are necessary, use Age-Friendly medications that do not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care
Mentation	Identify, treat, and manage dementia, depression, and delirium across care settings of care

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Key Takeaway Points

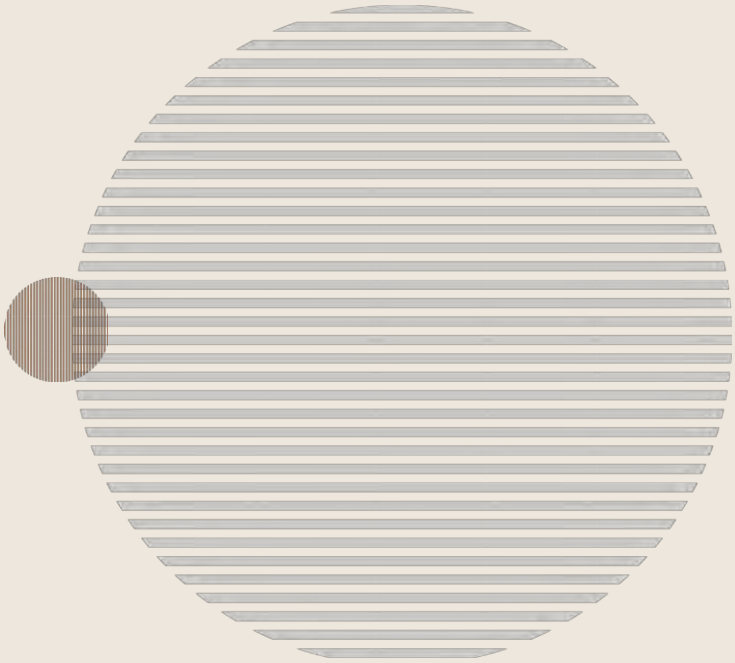
- Understand an individual's motivation and elicit engagement
- Utilize creative and consistent approaches when time may be limited
- Increase awareness of barriers and how culture may impact the 4Ms

Key Takeaway Points

- Take advantage of available resources
- Use patient stories to help clinicians understand the relationship between the 4Ms
- Demonstrate, facilitate, and coach learners through interprofessional communication

Discussion

Institute for Healthcare Improvement



Age-Friendly Health Systems: Guide to Using the 4Ms in the Care of Older Adults

July 2020

This content was created especially for:

Age-Friendly Health Systems

An initiative of The John A. Hartford Foundation and the Institute for Healthcare Improvement in partnership with the American Hospital Association and the Catholic Health Association of the United States

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Age-Friendly Health Systems Overview

The United States is aging. The number of older adults, individuals ages 65 years and older, is growing rapidly. As we age, care often becomes more complex. Health systems are frequently unprepared for this complexity, and older adults suffer a disproportionate amount of harm while in the care of the health system.

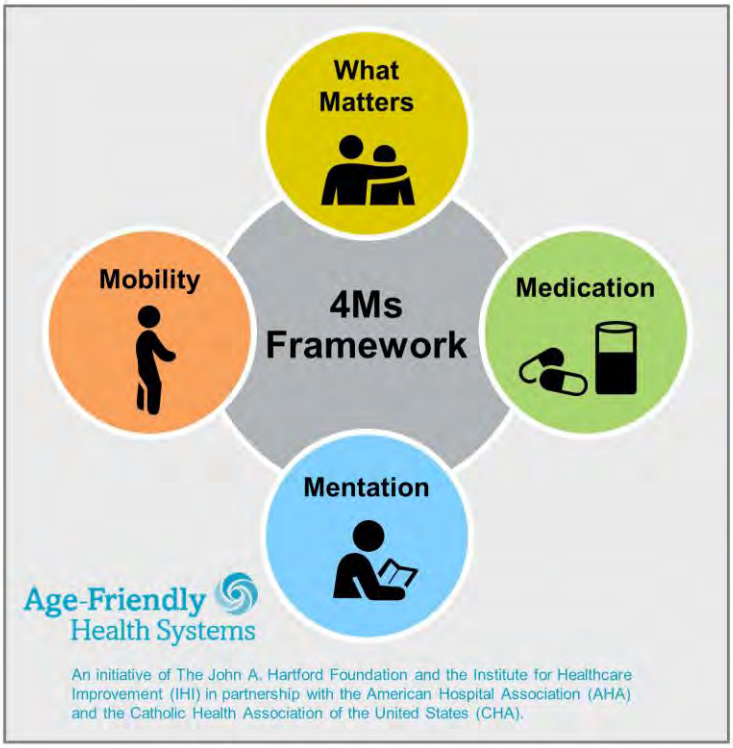
To address these challenges, in 2017, The John A. Hartford Foundation (JAHF) and the Institute for Healthcare Improvement (IHI), in partnership with the American Hospital Association (AHA) and the Catholic Health Association of the United States (CHA), set a bold vision to build a social movement so that all care with older adults is age-friendly care. According to our definition, age-friendly care:

- Follows an essential set of evidence-based practices;
- Causes no harm; and
- Aligns with What Matters to the older adult and their family or other caregivers.

Becoming an Age-Friendly Health System entails reliably providing a set of four evidence-based elements of high-quality care, known as the "4Ms," to all older adults in your system. When implemented together, the 4Ms represent a broad shift by health systems to focus on the needs of older adults (see Figure 1).

The Age-Friendly Health Systems movement now comprises several hundred hospitals, practices, and post-acute long-term care (PALTC) communities working to reliably deliver evidence-based care for older adults. IHI and JAHF celebrate the participation of organizations that have committed to practicing age-friendly 4Ms care. Learn more about how you can join the movement and show your commitment to better care for older adults at ihi.org/AgeFriendly.

Figure 1. 4Ms Framework of an Age-Friendly Health System



What Matters

Know and align care with each older adult's specific health outcome goals and care preferences including, but not limited to, end-of-life care, and across settings of care.

Medication

If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.

Mentation

Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.

Mobility

Ensure that older adults move safely every day in order to maintain function and do What Matters.

The 4Ms — What Matters, Medication, Mentation, and Mobility — make care of older adults, which can be complex, more manageable. The 4Ms identify the core issues that should drive all decision making in the care of older adults. They organize care and focus on the older adult's wellness and strengths rather than solely on disease. The 4Ms are relevant regardless of an older adult's individual disease(s). They apply regardless of the number of functional problems an older adult may have, or that person's cultural, racial, ethnic, or religious background.[1]

The 4Ms are a framework, not a program, to guide all care of older adults wherever and whenever they come into contact with your health system's care and services. The intention is to incorporate the 4Ms into existing care, rather than layering them on top, in order to organize the efficient delivery of effective care. This integration is achieved primarily through redeploying existing health system resources. Many health systems have found they already provide care aligned with one or more of the 4Ms for many of their older adult patients. Much of the effort, then, involves incorporating the other elements and organizing care so that all 4Ms guide every encounter with an older adult and their family or other caregivers.

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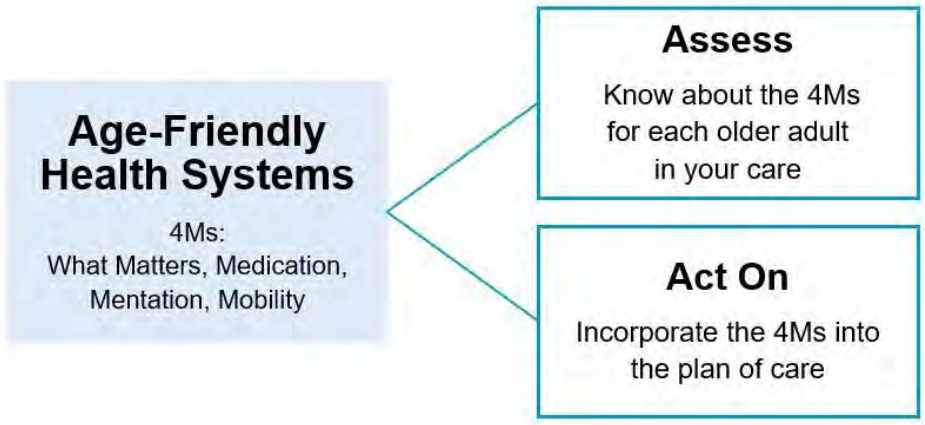
4Ms Framework: Not a Program, But a Shift in Care

- The 4Ms Framework is not a program, but a shift in how we provide care to older adults.
- The 4Ms are implemented together (i.e., all 4Ms as a set of evidence-based elements of high-quality care for older adults).
- Your system probably practices at least a few of the 4Ms in some places, at some times. Engage existing champions for each of the 4Ms, build on what you already do, and spread it across your system.
- The 4Ms must be practiced reliably (i.e., for all older adults, in all settings and across settings, in every interaction).

There are two key drivers of age-friendly care: knowing about the 4Ms for each older adult in your care ("assess"), and incorporating the 4Ms into the plan of care accordingly ("act on") (see Figure 2). Both must be supported by documentation and communication across settings and disciplines.

Figure 2. Two Key Drivers of Age-Friendly Health Systems



Developed with our expert faculty and advisors (see Appendix A) and five pioneering health systems — Anne Arundel Medical Center, Ascension, Kaiser Permanente, Providence, and Trinity Health — this Guide to Using the 4Ms in the Care of Older Adults is designed to help care teams test and implement a specific set of evidence-based, geriatric best practices that correspond to each of the 4Ms. Though assessing and acting on the 4Ms is similar in most care settings, there are some differences. This Guide begins by outlining the 4Ms for hospital-based and ambulatory/primary care-based settings.

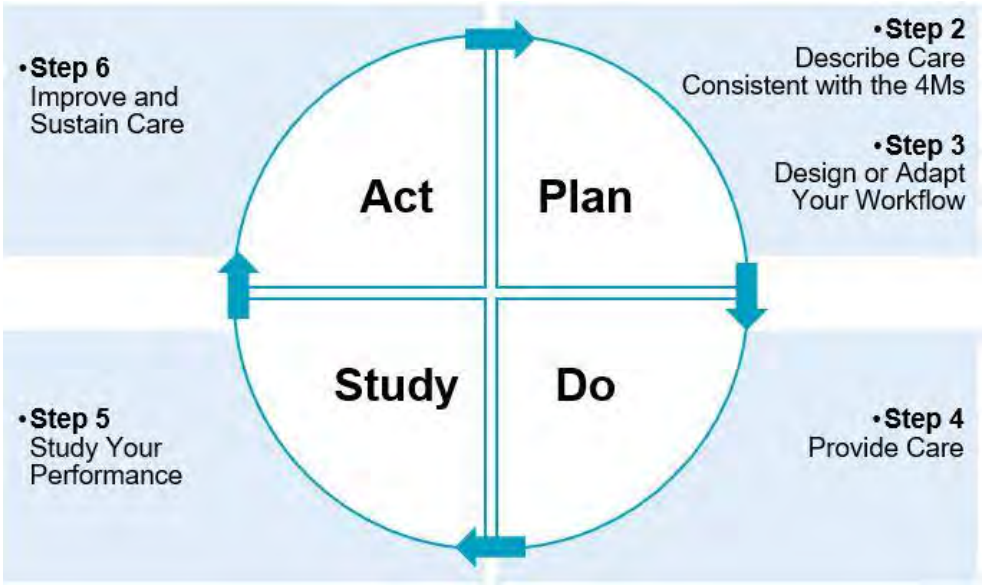
Putting the 4Ms into Practice

A "recipe" for integrating the 4Ms into your standard care has steps and ingredients, just like a recipe. These steps include:

1. Understand your current state
2. Describe care consistent with the 4Ms
3. Design or adapt your workflow
4. Provide care
5. Study your performance
6. Improve and sustain care

While we present the six steps as a sequence, in practice you can approach steps 2 through 6 as a loop aligned with Plan-Do-Study-Act cycles (see Figure 3).

Figure 3. Integrating the 4Ms into Care Using the PDSA Cycle



Step 1. Understand Your Current State

The aim of an Age-Friendly Health System is to reliably apply the two key drivers of age-friendly care: assess and act on the 4Ms with all older adults. Almost all systems integrate some of the 4Ms into care, some of the time, with some older adults, in some place in their system. With an understanding of your current experience and capacity to engage in 4Ms care, you can build on that good work until the 4Ms are reliably practiced with all older adults.

The following steps help you prepare for your journey to becoming an Age-Friendly Health System by understanding your current state – knowing the older adults and the status of the 4Ms in your health system currently — and then selecting a care setting and establishing a team to begin testing.

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Know the Older Adults in Your Health System

Estimate the number of adult patients you served in each age group in the last month (see Table 1).

Table 1. Adult Patients Served in the Last Month (by Age Group)

Age Group	Number	Percent of Total Patients
18–64 years		
65–74 years		
75–84 years		
85+ years		
Total Number of Adult Patients		**100%**

For adult patients ages 65 and older in your care, specify their language, race/ethnicity, religious and cultural preferences (see Table 2), and health literacy levels (see Table 3).

Table 2. Language, Race/Ethnicity, and Religious and Cultural Preferences of Patients 65 Years and Older

Language:	Percent of Total Patients Ages 65+
Race/Ethnicity:	**Percent of Total Patients Ages 65+**
Religious and Cultural Preferences:	**Percent of Total Patients Ages 65+**

Table 3. Health Literacy Levels of Patients 65 Years and Older

Health Literacy Level	Percent of Total Patients Ages 65+
Low	
Moderate	
High	

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Know the 4Ms in Your Health System

To identify where the 4Ms are in practice in your health system, walk through activities as if you were an older adult or family member or other caregiver. In an ambulatory setting, that may include making an appointment for an Annual Wellness Visit, preparing to come to an Annual Wellness Visit, observing an appointment, and understanding who on the care team takes responsibility for each of the 4Ms. In an inpatient setting, go through registration, spend time on a unit, and sit quietly in the hall of a unit. Look for the 4Ms in action. You will find aspects that make you proud and others that leave you disappointed. Try not to be judgmental. Find bright spots, opportunities, and champions of each of the 4Ms in your system.

Use the form provided in Appendix B to note what you learn.

Select a Care Setting to Begin Testing

Once you know about your older adults and identify where the 4Ms currently exist in your health system, select a care setting in which to begin testing age-friendly interventions. Some questions to consider when selecting a site:

- Is there a setting where a larger number of older adults regularly receives care?
- Is there will at this setting to become age-friendly and improve care for older adults? Is there a champion?
- Is this setting relatively stable (i.e., not undergoing major changes already)?
- Does this setting have access to data? (See the “Study Your Performance” section below for more on measurement. Data is useful, though not required.)
- Can this setting be a model for the rest of the organization? (Modeling is not necessary, but useful to scale-up efforts.)
- Is there a setting where your team members have experience with the 4Ms either individually or in combination? Do they already have some processes, tools, and/or resources to support the 4Ms?
- Is there a setting where the health literacy levels, language skills, and cultural preferences of your patients match the assets of the staff and the resources provided by your health system?

Set Up a Team

Based on our experience, teams that include certain roles and/or functions are most likely to succeed (see Table 4).

Table 4. Team Member Roles

Team Member	Description
An Older Adult and Caregiver	Patients and families or other caregivers bring critical expertise to any improvement team. They have a different experience with the system than providers and can identify key issues. We highly recommend that each team has at least one older adult, family member, or other caregiver (ideally more than one), or a way to elicit feedback directly from these individuals (e.g., through a Patient and Family Advisory Council). Additional information about appropriately engaging patients and families in improvement efforts can be found on the Valuing Lived Experience: Why Science Is Not Enough and Institute for Patient- and Family-Centered Care website.
Leader/Sponsor	This person champions, authorizes, and supports team activities, as well as engages senior leaders and other groups within the organization to remove barriers and support implementation and scale-up efforts. Although they may not do the "on-the-ground" work, the leader/sponsor is responsible for: • Building a case for change that is based on strategic priorities and the calculated return on investment; • Encouraging the improvement team to set goals at an appropriate level; • Providing the team with needed resources, including staff time and operating funds; • Ensuring that improvement capability and other technical resources, especially those related to information technology (IT) and electronic health records (EHR), are available to the team; and • Developing a plan to scale up successful changes from the improvement team to the rest of the organization.
Administrative Partner	This person represents the disciplines involved in the 4Ms and works effectively with the clinicians, other technical experts, and leaders within the organization. We recommend placing the manager of the unit where changes are being tested in this role because that individual can likely move nimbly to take necessary action and make the recommended changes in that unit and is invested in sustaining changes that result in improvement.
Clinicians who Represent the Disciplines Involved in the 4Ms	These individuals may include a physician, nurse, physical therapist, social worker, pharmacist, chaplain, and/or others who represent the 4Ms in your context. We strongly encourage interprofessional representation on your team and urge you to enlist more than one clinical champion. These champions should have good working relationships with colleagues and be interested in driving change to achieve an Age-Friendly Health System. Consider professionals who are opinion leaders in the organization, who are sought by others for advice, and who are not afraid to test and implement change.
Others	• Improvement coach • Data analyst/EHR analyst • Finance representative

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Step 2. Describe Care Consistent with the 4Ms

There are many ways to improve care for older adults. However, there is a finite set of key actions, summarized below, that touch on all 4Ms and dramatically improve care when implemented together (see Table 5). This list of actions is considered the gateway to your journey to becoming an Age-Friendly Health System. In Appendix D you will find a list of these key actions and ways to get started with each one in your setting, as well as additional tips and resources. Be sure to plan how you will document and make visible the 4Ms across the care team and settings.

Using the 4Ms Care Description Worksheet provided in Appendix C, describe a plan for how your system will provide care consistent with the 4Ms. This worksheet helps you to assess, document, and act on the 4Ms as a set, while customizing the approach to practicing the 4Ms for your context. To be considered an Age-Friendly Health System, your system must engage or assess people ages 65 and older for all 4Ms, document 4Ms information, and act on the 4Ms accordingly. As you test the 4Ms, you may make updates to your Description based on what you learn about the tools and methods that work best in your context.

Questions to consider:

- How does your current state compare to the actions outlined in the 4Ms Care Description Worksheet?
- Which of the 4Ms do you already incorporate? How reliably are they practiced?
    - For example: Do you already ask and document What Matters, review for high-risk medication use, screen for delirium, dementia, and depression, and screen for mobility for each older adult?
- Where are there gaps in 4Ms? What ideas do you have to fill the gaps? Some ideas for how to get started filling those gaps are provided in Appendix D.

In this step, describe the initial plan for 4Ms care for the older adults you serve.

Set an Aim

Given your current state, set an aim for this initial effort. An aim articulates what you are trying to accomplish — what, how much, by when, for whom. It serves as the focus for your team's work and enables you to measure your progress. Below is an aim statement template that requires you to think about the reach of 4Ms. We suggest starting with what you want to accomplish in the next six months.

> Aim Statement Template
>
> By [DATE], [NAME OF ORGANIZATION] will articulate how it operationalizes 4Ms care and will have provided that 4Ms care in [NUMBER] of encounters with patients 65+ years old.

Step 3. Design or Adapt Your Workflow

Many ideas you may have in place already. You can maintain, improve, and expand them where necessary. Other ideas you may still need to test and implement. The key is to ensure that these practices are reliable — happening every time in every setting for every older adult you serve (and their caregives).

Table 5. Age-Friendly Health Systems Summary of Key Actions

	Assess	Act On
	Know about the 4Ms for each older adult in your care	Incorporate the 4Ms into the plan of care
Hospital	**Key Actions (to occur at least daily):**	
	• Ask the older adult What Matters • Document What Matters • Review for high-risk medication use • Screen for delirium at least every 12 hours • Screen for mobility limitations	• Align the care plan with What Matters • Deprescribe and dose-adjust high-risk medications and avoid their use whenever possible • Ensure sufficient oral hydration • Orient older adults to time, place, and situation • Ensure that older adults have their personal adaptive equipment • Prevent sleep interruptions; use nonpharmacological interventions to support sleep • Ensure early, frequent, and safe mobility
Ambulatory	**Key Actions (to occur at least annually or after change in condition):**	
	• Ask the older adult What Matters • Document What Matters • Review for high-risk medication use • Screen for cognitive impairment • Screen for depression • Screen for mobility limitations	• Align the care plan with What Matters • Deprescribe and dose-adjust high-risk medications, and avoid their use whenever possible • If cognitive impairment screen is positive, refer for further evaluation and manage manifestations of cognitive impairment • If depression screen is positive, identify and manage factors contributing to depression and initiate, or refer out, for treatment • Ensure safe mobility

Supporting Actions:

- Use the 4Ms to organize care and focus on the older adult, wellness, and strengths rather than solely on disease or lack of functionality.
- Integrate the 4Ms into care or existing workflows.
- Identify which activities you can stop doing to reallocate resources to reliably practice the 4Ms.
- Document all 4Ms and consider grouping the 4Ms together in the medical record.
- Make the 4Ms visible across the care team and settings.
- Form an interdisciplinary care team that reviews the 4Ms in daily huddles and/or rounds.
- Educate older adults, caregivers, and the community about the 4Ms.
- Link the 4Ms to community resources and supports to achieve improved health outcomes.

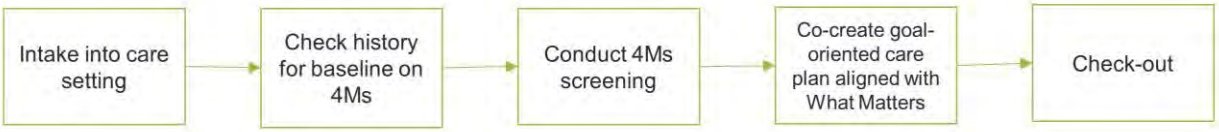
Overall, look for opportunities to combine or redesign activities, processes, and workflows around the 4Ms. In this effort you may find that you can stop certain activities and reallocate resources to support age-friendly care.

If you have process flow diagrams or value-stream maps of your daily care, edit these views of your workflow to include the key actions above and your description of age-friendly care.

You may start with a high-level workflow like the examples shown below (see Figures 4 and 5).

Figure 4. Age-Friendly Care Workflow Example for Hospitals: Core Functions

Figure 5. Age-Friendly Care Workflow Example for Primary Care: Core Functions for New Patient, Annual Visit, or Change in Health Status



Then work through the details in the space below each high-level block to show how you will incorporate the 4Ms. Be specific about who will do what, where, when, how, and how it will be documented. Examples are included in Appendix E.

Outline what you still need to learn and identify what you will test (e.g., using the Timed Up & Go Test to evaluate mobility and fall risk).

Step 4. Provide Care

Learn as you move toward reliable 4Ms care. Begin to test the key actions with one older adult and their family or other caregivers as soon as you have notes for step 2, Describe Care Consistent with the 4Ms, and step 3, Design or Adapt Your Workflow. Do not wait to have your forms or EHR screens finalized before you test with one older adult. Use the Plan-Do-Study-Act tool to learn more from your tests. Then, scale up your tests. For example:

- Apply your draft standard procedure and workflow first with one patient. Can your team follow the procedure in your work environment?
- If necessary, modify your procedure. Then, apply it with five patients. What lessons do you learn from applying 4Ms care with these patients? What impact does learning about all 4Ms have on care plans?
- If necessary, modify your procedure. Then, apply with 25 patients and keep going. Are you getting close to being able to use your procedure for every patient? Are you getting good results?
- Examples of PDSA cycles can be found in Appendix F.

Step 5. Study Your Performance

How reliable is your 4Ms care? What impact does your 4Ms care have? Here is an approach to study your performance.

Observe and Seek to Understand

Observe: Start your study with direct observation of your draft 4Ms Care Description in action.

- Can your team follow the Care Description and successfully assess and act on the 4Ms with the older adults in your care?
- Do your care plans reflect 4Ms care?

In the first month, do this for at least one patient each week. Then, for the next six months, observe 4Ms care for at least five patients each month.

Ask Your Team: At least once per month for the seven months of your efforts, ask your team two open-ended questions and reflect on the answers:

- What are we doing well to assess and act on the 4Ms?
- What do we need to change to translate the 4Ms into more effective care?

Plan with your team how and when you will continue to reflect together using open-ended questions on an ongoing basis.

Ask Older Adults and Caregivers: At least once in the first month of your effort, ask an older adult and family or other caregiver two open-ended questions and reflect on the answers:

- What went well in your care today?
- What could we do better to understand what age-friendly care means to you?

Then try the questions with five additional older adults in the second month. Plan with your team how and when you will continue to talk with older adults using open-ended questions on an ongoing basis. Consider engaging an older adult as a member of the team that is working to adopt the 4Ms.

Measure How Many Patients Receive 4Ms Care

There are three options to start measuring the number of patient encounters that include 4Ms care. We recommend Option 1 because it forces close attention to the 4Ms work and takes less effort than conducting retrospective chart audits or building a specific EHR report.

Option 1: Real-Time Observation

Use real-time observation and staff reporting of the work to tally your 4Ms counts on a whiteboard or paper. An example for patients seen in the primary care clinic might look like the chart below (see Figure 6).

Figure 6. Example of Real-Time Observation in a Primary Care Clinic

Date	*4Ms Care according to our site description*					
	All 4Ms	**What Matters**	**Medications**	**Depression**	**Dementia**	**Mobility**
Pt ID	if N, check details					
101	Y N	Y N	Y N	Y N	Y N	Y N
102	Y N	Y N	Y N	Y N	Y N	Y N
103	Y N	Y N	Y N	Y N	Y N	Y N
104	Y N	Y N	Y N	Y N	Y N	Y N
105	Y N	Y N	Y N	Y N	Y N	Y N
106	Y N	Y N	Y N	Y N	Y N	Y N
107	Y N	Y N	Y N	Y N	Y N	Y N
108	Y N	Y N	Y N	Y N	Y N	Y N
109	Y N	Y N	Y N	Y N	Y N	Y N
110	Y N	Y N	Y N	Y N	Y N	Y N
111	Y N	Y N	Y N	Y N	Y N	Y N
112	Y N	Y N	Y N	Y N	Y N	Y N
113	Y N	Y N	Y N	Y N	Y N	Y N
114	Y N	Y N	Y N	Y N	Y N	Y N
115	Y N	Y N	Y N	Y N	Y N	Y N

Option 2: Chart Review

Using a tally sheet like the example discussed in Option 1, review charts for evidence of 4Ms care. At the start of your work using the 4Ms, review charts of patients with whom you have tested 4Ms care (M) to confirm proper documentation. To estimate the number of patient encounters that include 4Ms care in a particular time period (e.g., monthly), randomly sample 20 charts from patients who received care during that time (out of M). Observe out of the 20 how many received your described care (C).

Calculate the approximate number of patient encounters that include 4Ms care in the time period as follows:

Estimated number of patient encounters including 4Ms care = (M x C) divided by 20

Option 3: EHR Report

You may be able to run EHR reports, especially on assessment of the 4Ms, to estimate the number of patient encounters that include 4Ms care in a particular time period. It may take a lot of effort to create a suitable report, so we do not recommend this option as your first choice. However, for ongoing process control, some organizations may wish to develop reports that show 4Ms performance; you can request report development from your IT service while starting with Option 1 or 2.

Routine Counting of Patients

Once your site provides 4Ms care with high reliability (see Appendix G), then the estimate of the number of patient encounters that include 4Ms care is simple: Report the volume of patients receiving care from your site during the measurement period.

Additional Measurement Guidance and Recommendations

The tables below provide additional guidance for counting the number of patients receiving age-friendly (4Ms) care.

Hospital Site of Care	
Measure Name	Number of Patients Who Receive Age-Friendly (4Ms) Care
Measure Description	Number of patients 65+ who receive 4Ms care as described by the hospital
Site	Hospital
Population Measured	Adult patients 65+
Measurement Period	Monthly
Count	Inclusion: Patients 65+ with LOS>=1 day present on the unit between 12:01 AM on the first day of the measurement period and 11:59 PM on the last day of the measurement period who receive the unit's description of 4Ms care

Measure Notes	• The measure may be applied to units within a system as well as the entire system. See the 4Ms Care Description Worksheet to describe 4Ms care for your unit. To be considered age-friendly (4Ms) care, you must engage or screen all patients 65+ for all 4Ms, document the results, and act on them as appropriate. • If a total count is not possible, you can sample (e.g., audit 20 patient charts) and estimate the total number of patient encounters using 4Ms care/20 x total number of patients cared for in the measurement period. If you are sampling, please note that when sharing data. • Once you have established 4Ms care as the standard of care on your unit, validated by regular observation and process review, you can estimate the number of patients receiving 4Ms care as the number of patients cared for by the unit. • You do not need to filter the number of patients by unique medical record number (MRN).

Ambulatory/Primary Care Site of Care	
Measure Name	Number of Patients Who Receive Age-Friendly (4Ms) Care
Measure Description	Number of patients 65+ who receive 4Ms care as described by the measuring unit
Site	Ambulatory
Population Measured	Adult patients 65+
Measurement Period	Monthly
Count	Inclusion: All patients 65+ in the population considered to be patients of the ambulatory or primary care practice (e.g., patient assigned to a care team panel and seen by the practice within the past three years) who have an office visit, home visit, or tele-medicine visit with the practice during the measurement period and who receive 4Ms care as described by the site. Exclusions: None
Measure Notes	• The measure may be applied to units within a system as well as the entire system. • See the 4Ms Care Description Worksheet to describe 4Ms care for your unit. To be considered age-friendly (4Ms) care, you must engage or screen all patients 65+ for all 4Ms, document the results, and act on them as appropriate. Note that the 4Ms screening in primary care may be defined as screening within the previous 12 months. • If a total count is not possible, you can sample (e.g., audit 20 patient charts) and estimate the total as the number of patients receiving 4Ms care/20 x total number of patients cared for in the measurement period. If you are sampling, please note that when sharing data. • Once you have established 4Ms care as the standard of care on your unit, validated by regular observation and process review, you can estimate the number of patients receiving 4Ms care as the number of patients cared for by the unit. • You do not need to filter the number of patients by unique MRN.

See Appendix H for additional recommendations on measuring the impact of 4Ms care.

Step 6. Improve and Sustain Care

For more information about how to sustain your 4Ms care, please see the IHI White Paper, *Sustaining Improvement*.

> Reminder: Integrating the 4Ms as a Cycle
>
> While we present the steps as a sequence, in practice steps 2 through 6 are a cycle aligned with the Plan-Do-Study-Act method. As you establish your age-friendly care, you may cycle through these steps many times over the course of several months in order to achieve reliability and then turn your efforts to sustainability and monitoring (quality control) over time.

Appendix A: Age-Friendly Health Systems Advisory Groups and Faculty

Age-Friendly Health Systems Advisory Group

- Don Berwick, MD, MPP (co-chair), President Emeritus and Senior Fellow, Institute for Healthcare Improvement; Former Administrator, Centers for Medicare & Medicaid Services
- Faith Mitchell (co-chair), PhD, Institute Fellow, Urban Institute
- Jonathan Perlin, MD (co-chair), CMO & President Clinical Services, HCA
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Appendix B: Process Walk-Through: Know the 4Ms in Your Health System

There are two key drivers to age-friendly care: knowing about the 4Ms for each older adult in your care ("assess") and incorporating the 4Ms into the plan of care ("act on"). The aim in an Age-Friendly Health System is to reliably assess and act on the 4Ms with all older adults. Just about all systems have integrated some of the 4Ms into care, some of the time, with some older adults, in some places in their systems. The work now is to understand where that is happening and build on that good work so that all 4Ms occur reliably for all older adults in all care settings.

How do you already assess and act on each of the 4Ms in your setting? One way to find out is to spend time in your unit, your practice, or your hospital observing the care. As you do, note your observations to the questions below as you learn more about how the 4Ms are already in practice in your system.

- ☐ What are current activities and services related to each of the 4Ms? What processes, tools, and resources to support the 4Ms do we already have in place here or elsewhere in the system?
- ☐ Where is the prompt or documentation available in the EHR or elsewhere for all clinicians and the care team? Is there a place to see the 4Ms (individually or together) accessible to all team members? Across settings?
- ☐ What experience do your team members have with the 4Ms? What assets do you already have on the team? What challenges have they faced? How have they overcome them?
- ☐ What internal or community-based resources do you commonly refer to, and for which of the 4Ms? For which of the 4Ms do you need additional internal and/or community-based resources?
- ☐ Do your current 4Ms activities and services appear to be having a positive impact on older adults and/or family or other caregivers? Do you have a way to hear about the older adults' experience?
- ☐ Do your current 4Ms activities and services appear to be having a positive impact on the clinicians and staff?
- ☐ Which languages do the older adults and their family or other caregivers speak? Read?
- ☐ Do the health literacy levels, language skills, and cultural preferences of your patients match the assets of your team and the resources provided by your health system?
- ☐ What works well?
- ☐ What could be improved?

4Ms	Specifically, Look for How Do We…	Current Practice and Observations
What Matters: Know and align care with each older adult's specific health outcome goals and care preferences, including, but not limited to, end-of-life care, and across settings of care.	• Ask the older adult What Matters most, document it, and share What Matters across the care team. • Align the care plan with What Matters most.	
Medication: If medication is necessary, use age-friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.	• Review for high-risk medication use and document it. • Deprescribe and dose-adjust high-risk medications, and avoid their use whenever possible.	
Mentation: Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.	**Hospital:** • Screen for delirium at least every 12 hours and document the results. • Ensure sufficient oral hydration. • Orient to time, place, and situation. • Ensure that older adults have their personal adaptive equipment. • Prevent sleep interruptions; use nonpharmacological interventions to support sleep. **Ambulatory:** • Screen for cognitive impairment and document the results. • If cognitive impairment screen is positive, refer for further evaluation and manage manifestations of cognitive impairment. • Screen for depression and document the results. • If depression screen is positive, identify and manage factors contributing to depression, and initiate, or refer out for, treatment.	
Mobility: Ensure that each older adult moves safely every day to maintain function and do What Matters.	• Screen for mobility limitations and document the results. • Ensure early, frequent, and safe mobility.	

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Appendix C: 4Ms Age-Friendly Care Description Worksheet — Hospital and Post-Acute and Long-Term Care

Age-Friendly Health Systems is a movement of hundreds of hospitals, practices, and post-acute and long-term care (PALTC) communities working to ensure the best possible care for older adults. IHI recognizes organizations that have committed to practicing 4Ms care and have described 4Ms care for their setting. Learn more at ihi.org/AgeFriendly or email AFHS@ihi.org.

The Age-Friendly Health Systems teams at IHI is reviewing practice standards for PALTC communities and will develop a new worksheet for those teams by Winter 2021. For now, a PALTC community may use either worksheet to support their 4Ms work. We recommend the Hospital Setting worksheet for most PALTC communities.

	What Matters	Medication	Mentation	Mobility
Aim	Know and align care with each older adult's specific health outcome goals and care preferences, including, but not limited to, end-of-life care, and across settings of care.	If medication is necessary, use age-friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.	Prevent, identify, treat, and manage delirium across settings of care.	Ensure that each older adult moves safely every day to maintain function and do What Matters.
Engage / Screen / Assess Please check the boxes to indicate items used in your care or fill in the blanks if you check "Other."	List the question(s) you ask to know and align care with each older adult's specific outcome goals and care preferences:	Check the medications you screen for regularly: ☐ Benzodiazepines ☐ Opioids ☐ Highly-anticholinergic medications (e.g., diphenhydramine) ☐ All prescription and over-the-counter sedatives and sleep medications ☐ Muscle relaxants	Check the tool you use to screen for delirium: ☐ UB-2 ☐ CAM ☐ 3D-CAM ☐ CAM-ICU ☐ bCAM ☐ Nu-DESC ☐ Other: _____	Check the tool you use to screen for mobility limitations: ☐ Timed Up & Go (TUG)[2] ☐ JH-HLM ☐ POMA ☐ Refer to physical therapy (PT) ☐ Other: _____ **Back to Top**

	What Matters	Medication	Mentation	Mobility
	Minimum requirement: One or more What Matters question(s) must be listed. Question(s) cannot focus only on end-of-life forms.	☐ Tricyclic antidepressants ☐ Antipsychotics ☐ Other: _____ *Minimum requirement: At least one of the first seven boxes must be checked.*	*Minimum requirement: At least one of the first six boxes must be checked. If only "Other" is checked, will review.*	*Minimum requirement: One box must be checked. If only "Other" is checked, will review.*
Frequency	☐ Once per stay ☐ Daily ☐ Other: _____ *Minimum frequency is once per stay.*	☐ Once per stay ☐ Daily ☐ Other: _____ *Minimum frequency is once per stay.*	☐ Every 12 hours ☐ Other: _____ *Minimum frequency is every 12 hours.*	☐ Once per stay ☐ Daily ☐ Other: _____ *Minimum frequency is once per stay.*
Documentation Please check the "EHR" (electronic health record) box or fill in the blank for "Other."	☐ EHR ☐ Other: _____ *One box must be checked; preferred option is EHR. If "Other," will review to ensure documentation method is accessible to other care team members for use during the hospital stay.*	☐ EHR ☐ Other: _____ *One box must be checked; preferred option is EHR. If "Other," will review to ensure documentation method is accessible to other care team members for use during the hospital stay.*	☐ EHR ☐ Other: _____ *One box must be checked; preferred option is EHR. If "Other," will review to ensure documentation method can capture assessment to trigger appropriate action.*	☐ EHR ☐ Other: _____ *One box must be checked; preferred option is EHR. If "Other," will review to ensure documentation method can capture assessment to trigger appropriate action.*
Act On Please describe how you use the information obtained from Engage/Screen/Assess to design and provide care.	☐ Align the care plan with What Matters most ☐ Other: _____	☐ Deprescribe (includes both dose reduction and medication discontinuation) ☐ Pharmacy consult	Delirium prevention and management protocol, including, but not limited to: ☐ Ensure sufficient oral hydration	☐ Ambulate 3 times a day ☐ Out of bed or leave room for meals

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	What Matters	Medication	Mentation	Mobility
Refer to pathways or procedures that are meaningful to your staff in the "Other" field.	*Minimum requirement: First box must be checked.*	☐ Other: ________________ *Minimum requirement: At least one box must be checked.*	☐ Orient older adult to time, place, and situation on every nursing shift ☐ Ensure that older adult has their personal adaptive equipment (e.g., glasses, hearing aids, dentures, walkers) ☐ Prevent sleep interruptions; use nonpharmacological interventions to support sleep ☐ Avoid high-risk medications ☐ Other: ________________ *Minimum requirement: First five boxes must be checked.*	☐ Physical therapy (PT) intervention (balance, gait, strength, gait training, exercise program) ☐ Ambulate 3 times a day ☐ Out of bed or leave room for meals ☐ Avoid restraints ☐ Remove catheters and other tethering devices ☐ Avoid high-risk medications ☐ Other: ________________ *Minimum requirement: Must check first box and at least one other box.*
Primary Responsibility Indicate which care team member has primary responsibility for the older adult. **Back to Top**	☐ Nurse ☐ Clinical Assistant ☐ Social Worker ☐ MD ☐ Pharmacist ☐ Other: ________________ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant ☐ Social Worker ☐ MD ☐ Pharmacist ☐ Other: ________________ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant ☐ Social Worker ☐ MD ☐ Pharmacist ☐ Other: ________________ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant ☐ Social Worker ☐ MD ☐ Pharmacist ☐ Other: ________________ *Minimum requirement: One role must be selected.*

Appendix C: 4Ms Age-Friendly Care Description Worksheet — Ambulatory/ Primary Care

Age-Friendly Health Systems is a movement of hundreds of hospitals, practices, and post-acute and long-term care (PALTC) communities working to ensure the best possible care for older adults. IHI recognizes organizations that have committed to practicing 4Ms care and have described 4Ms care for their setting. Learn more at ihi.org/AgeFriendly or email AFHS@ihi.org.

The Age-Friendly Health Systems teams at IHI is reviewing practice standards for PALTC communities and will develop a new worksheet for those teams by Winter 2021. For now, PALTC communities may use either worksheet to support their 4Ms work. We recommend the Hospital Setting worksheet for most PALTC communities.

	What Matters	Medication	Mentation: Dementia	Mentation: Depression	Mobility
Aim	Know and align care with each older adult's specific health outcome goals and care preferences, including, but not limited to, end-of-life care, and across settings of care.	If medication is necessary, use age-friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.	Prevent, identify, treat, and manage dementia across settings of care.	Prevent, identify, treat, and manage depression across settings of care.	Ensure that each older adult moves safely every day to maintain function and do What Matters most.
Engage / Screen / Assess Please check the boxes to indicate items used in your care or fill in the blanks if you check "Other."	List the question(s) you ask to know and align care with each older adult's specific outcome goals and care preferences:	Check the medications you screen for regularly: ☐ Benzodiazepines ☐ Opioids ☐ Highly-anticholinergic medications (e.g., diphenhydramine)	Check the tool you use to screen for dementia: ☐ Mini-Cog ☐ SLUMS ☐ MOCA ☐ Other: _____	Check the tool you use to screen for depression: ☐ PHQ-2 ☐ PHQ-9 ☐ GDS – short form ☐ GDS ☐ Other: _____	Check the tool you use to screen for mobility limitations: ☐ Timed Up & Go Test (TUG) ☐ JH-HLM ☐ POMA ☐ Refer to physical therapy (PT)

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	What Matters	Medication	Mentation: Dementia	Mentation: Depression	Mobility
	One or more What Matters question(s) must be listed. Question(s) cannot focus only on end-of-life forms.	☐ All prescription and over-the-counter sedatives and sleep medications ☐ Muscle relaxants ☐ Tricyclic antidepressants ☐ Antipsychotics ☐ Other: _____ *Minimum requirement: At least one of the first seven boxes must be checked.*	*Minimum requirement: At least one of the first three boxes must be checked. If only "Other" is checked, will review.*	*Minimum requirement: At least one of the first four boxes must be checked. If only "Other" is checked, will review.*	☐ Other: _____ *Minimum requirement: One box must be checked. If only "Other" is checked, will review.*
			Optional: Check the tool used for functional assessment: ☐ Barthel Index of ADLs (in EPIC) ☐ Lawton IADLs ☐ Katz ADL ☐ Not Available ☐ Other: _____		
Frequency	☐ At least annually ☐ Other: _____ *Minimum frequency is annually.*	☐ At least annually ☐ At change of medication ☐ Other: _____ *Minimum frequency is annually.*	☐ At least annually ☐ Other: _____ *Minimum frequency is annually.*	☐ At least annually ☐ Other: _____ *Minimum frequency is annually.*	☐ At least annually ☐ Other: _____ *Minimum frequency is annually.*

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	What Matters	Medication	Mentation: Dementia	Mentation: Depression	Mobility
Documentation Please check the "EHR" box (electronic health record) or fill in the blank for "Other."	☐ EHR ☐ Other: _____ *One box must be checked; preferred option is "EHR." If "Other," will review to ensure documentation method is accessible to other care team members for use during care.*	☐ EHR ☐ Other: _____ *One box must be checked; preferred option is "EHR." If "Other," will review to ensure documentation method is accessible to other care team members for use during care.*	☐ EHR ☐ Other: _____ *One box must be checked; preferred option is "EHR." If "Other," will review to ensure documentation method can capture assessment to trigger appropriate action.*	☐ EHR ☐ Other: _____ *One box must be checked; preferred option is "EHR." If "Other," will review to ensure documentation method can capture assessment to trigger appropriate action.*	☐ EHR ☐ Other: _____ *One box must be checked; preferred option is "EHR." If "Other," will review to ensure documentation method can capture mobility status in a way that other care team members can use.*
Act On Please describe how you use the information obtained from Engage/Screen/Assess to design and provide care. Refer to pathways or procedures that are meaningful to your staff in the "Other" field.	☐ Align the care plan with What Matters most ☐ Other: _____ *Minimum requirement: First box must be checked.*	☐ Educate older adult and family or other caregivers ☐ Deprescribe (includes both dose reduction and medication discontinuation) ☐ Refer to: _____ ☐ Other: _____ *Minimum requirement: At least one box must be checked.*	☐ Share results with older adult ☐ Provide educational materials to older adult and family or other caregivers ☐ Refer to community organization for education and/or support ☐ Refer to: _____ ☐ Other: _____ *Minimum requirement: Must check first box and at least one other box.*	☐ Educate older adult and family or other caregivers ☐ Prescribe anti-depressant ☐Refer to: _____ ☐ Other: _____ *Minimum requirement: At least one of the first three boxes must be checked.*	☐ Multifactorial fall prevention protocol (e.g., STEADI) ☐ Educate older adult and family or other caregivers ☐ Manage impairments that reduce mobility (e.g., pain, balance, gait, strength) ☐ Ensure safe home environment for mobility ☐ Identify and set a daily mobility goal with older adult that supports What Matters; review and

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	What Matters	Medication	Mentation: Dementia	Mentation: Depression	Mobility
					support progress toward the goal ☐ Avoid high-risk medications ☐ Refer to PT ☐ Other: ___________ *Minimum requirement: Must check the first box or at least 3 of the remaining boxes.*
Primary Responsibility Indicate which care team member has primary responsibility for the older adult.	☐ Nurse ☐ Clinical Assistant ☐ Social Worker ☐ MD ☐ Pharmacist ☐ Other: ___________ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant ☐ Social Worker ☐ MD ☐ Pharmacist ☐ Other: ___________ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant ☐ Social Worker ☐ MD ☐ Pharmacist ☐ Other: __________ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant ☐ Social Worker ☐ MD ☐ Pharmacist ☐ Other: ___________ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant ☐ Social Worker ☐ MD ☐ Pharmacist ☐ Other: ___________ *Minimum requirement: One role must be selected.*

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Appendix D: Key Actions and Getting Started with Age-Friendly Care — Hospital

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
Ask the older adult What Matters	If you do not have existing questions to start this conversation, try the following, and adapt as needed: *"What do you most want to focus on while you are in the hospital/emergency department for_____ (fill in health problem) so that you can do_____ (fill in desired activity) more often or more easily?"*[3,4,5] For older adults with advanced or serious illness, consider: *"What are your most important goals if your health situation worsens?"*[6]	**Tips** • This action focuses clinical encounters, decision making, and care planning on What Matters most to the older adults. • Consider segmenting your population by healthy older adults, those with chronic conditions, those with serious illness, and individuals at the end of life. How you ask What Matters of each segment may differ. • Consider starting these conversations with *who* matters to the patient. Then ask the patient what their plans are related to life milestones, travel plans, birthdays, and so on in the next six months to emphasize, "I matter, too." Once "who matters" and "I matter, too" are discussed, then *what* matters becomes much easier to discuss. The What Matters Most letter template (Stanford Letter Project) can guide this discussion. • Responsibility for asking What Matters can rest with any member of the care team; however, one person needs to be identified as responsible to ensure it is reliably done. • You may decide to include family members or other caregivers in a discussion about What Matters; however, it is important to also ask the older adult individually. • Ask people with dementia What Matters. Ask people with delirium What Matters at a time when they are suffering least from delirium symptoms. **Additional Resources** • "What Matters" to Older Adults?: A Toolkit for Health Systems to Design Better Care with Older Adults • The Conversation Project and "Conversation Ready" • Patient Priorities Care • Serious Illness Conversation Guide • Stanford Letter Project • "What Matters to You?" Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council)

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Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
		We recognize that members of different groups have diverse needs. There are resources available that are specific to various communities. For example, the following resources can help to integrate an LGBTQ lens into this action: • Caregiving in the LGBT Community: https://www.lgbtagingcenter.org/resources/resource.cfm?r=883 • Create Your Care Plan: https://www.lgbtagingcenter.org/resources/resource.cfm?r=879 • My Personal Directions: https://www.lgbtagingcenter.org/resources/resource.cfm?r=916 • Advocating for Yourself: https://www.lgbtagingcenter.org/resources/resource.cfm?r=950 • Supporting LGBT People Living with Dementia: • https://www.lgbtagingcenter.org/resources/resource.cfm?r=967 • Issue Brief: LGBT People and Dementia: https://www.lgbtagingcenter.org/resources/resource.cfm?r=945 Inclusive Services for LGBT Older Adults: A Practical Guide to Creating Welcoming Agencies: https://www.lgbtagingcenter.org/resources/resource.cfm?r=487
Document What Matters	Documentation can be on paper, on a whiteboard, or in the electronic health record (EHR) where it is accessible to the whole care team across settings.[7]	**Tips** • Convert whiteboards to What Matters boards and include information about the older adults (e.g., what name they like to be called, the pronouns they use, favorite foods, favorite activities, what concerns or upsets them, what soothes them, assistive devices, and the names and phone numbers of family members or other caregivers). Identify who on the care team is responsible for ensuring that the information is updated. • Consider documentation of What Matters to the older adult on paper that they can bring to appointments and other sites of care. • Identify where health and health care goals and priorities can be captured in your EHR and available across care teams and settings. • Review What Matters documentation across older adult patients to ensure they are specific to each person (i.e., watch out for generic or the same answers across all patients, which suggests a deeper discussion of What Matters is warranted). **Additional Resources** • "What Matters to You?" Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council)

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Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
Review for high-risk medication use	Specifically, look for: • Benzodiazepines • Opioids • Highly-anticholinergic medications (e.g., diphenhydramine) • All prescription and over-the-counter sedatives and sleep medications • Muscle relaxants • Tricyclic antidepressants • Antipsychotics[8,9,10]	**Tips** • If you decide to limit the number of medications to focus on, identify those most frequently dispensed in your hospital or unit, or those for which there is a champion to deprescribe. **Additional Resources** • American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults • AGS 2019 Beers Criteria Pocketcard • Reducing Inappropriate Medication Use by Implementing Deprescribing Guidelines
Screen for delirium at least every 12 hours	If you do not have an existing tool, try using Ultra-Brief 2-Item Screener (UB-2).[11,12]	**Tips** • Decide on the tool that best fits your care team culture. • Be aware that low prevalence rates of delirium before the 4Ms are in place may indicate inaccurate use of a screening or assessment tool. • It is critical to use any tool only as instructed and to do ongoing training (yearly competency) to make sure it is being used correctly. • Ask questions in a way that emphasizes the older adults' strengths (e.g., "Please tell me the day of the week" rather than "Do you know what day it is today?"). • Educate family members or other caregivers on the signs of delirium and enlist their support to alert the care team to any changes as soon as they notice them. Ask them if their loved one seems "like themselves." • Document mental status in the chart to measure changes shift-to-shift. • Until ruled out, consider a change in mental status to be delirium and raise awareness among care team and family members or other caregivers about the risk of delirium superimposed on dementia. • Note: Delirium has an underlying cause and is preventable and treatable in most cases. Care teams need to: 1. Remove or treat underlying cause(s) if it occurs 2. Restore or maintain function and mobility 3. Understand delirium behaviors 4. Prevent delirium complications

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Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
		Additional Resources • Confusion Assessment Method (CAM) and its variations: 3D-CAM for medical-surgical units, CAM-ICU for intensive care units, bCAM for emergency departments • Nursing Delirium Screening Scale (Nu-DESC) • Hospital Elder Life Program (HELP) • www.idelirium.org
Screen for mobility limitations	If you do not have an existing tool, try using Timed Up & Go (TUG).[13,14]	**Tips** • Recognize that older adults may be embarrassed or worried about having their mobility screened. • Underscore that a mobility screen allows the care team to know the strengths of the older adult. **Additional Resources** • Johns Hopkins – Highest Level of Mobility (JH-HLM) Scale • Performance-Oriented Mobility Assessment (POMA)[15]

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Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	**Getting Started**	**Tips and Resources**
Align the care plan with What Matters	Incorporate What Matters into the goal-oriented plan of care and align the care plan with the older adult's goals and preferences[16,17,18] (i.e., What Matters).	**Tips** • Health outcome goals are the activities that matter most to an individual, such as babysitting a grandchild, walking with friends in the morning, or continuing to work as a teacher. Health care preferences include the medications, health care visits, testing, and self-management tasks that an individual is able and willing to do. • When you focus on the patient's priorities, Medication, Mentation, and Mobility usually come up so the patient can do more of What Matters. • Consider how care while in the hospital can be modified to align with What Matters. • Consider What Matters to the older adult when deciding to where they will be discharged. • Use What Matters to develop the care plan and navigate trade-offs. For example, you may say, "There are several things we could do, but knowing what matters most to you, I suggest we…" • Use the patient's priorities (not just diseases) in communicating, decision making, and assessing benefits. • Use collaborative negotiations; agree there is no best answer and brainstorm alternatives together. For example, you may say, "I know you don't like the CPAP mask, but are you willing to try it for two weeks to see if it helps you be less tired, so you can get back to volunteering, which you said was most important to you?" • Care options likely involve input from many disciplines (e.g., physical therapy, social work, community organizations, and so on). **Additional Resources** • "What Matters" to Older Adults?: A Toolkit for Health Systems to Design Better Care with Older Adults • Patient Priorities Care • Serious Illness Conversation Guide • "What Matters to You?" Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council)
Deprescribe or do not prescribe high-risk medications** **Back to Top**	Specifically avoid or deprescribe the high-risk medications listed below. • Benzodiazepines • Opioids	**Tips** • These medications, individually and in combination, may interfere with What Matters, Mentation, and safe Mobility of older adults because they increase the risk of confusion, delirium, unsteadiness, and falls.[24] • Deprescribing includes both dose reduction and medication discontinuation. • Deprescribing is a positive, patient-centered approach, requiring informed patient consent, shared decision making, close monitoring, and compassionate support.

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	**Getting Started**	**Tips and Resources**
	• High-anticholinergic medications (e.g., diphenhydramine) • All prescription and over-the-counter sedatives and sleep medications • Muscle relaxants • Tricyclic antidepressants • Antipsychotics[19,20,21,22] If the older adult takes one or more of these medications, discuss any concerns the patient may have, assess for adverse effects, and discuss deprescribing with the older adult.[23]	• When possible, avoid prescribing these high-risk medications (prevention); consider changing order sets in the EHR to change prescribing patterns (e.g., adjust/reduce doses, change medications available). • Your institution should have delirium and falls prevention and management protocols that include guidance to avoid high-risk medications. • Offer nonpharmacological options to support sleep and manage pain. • Upon discharge, do not assume all medications should be sustained. Remove medications the older adult can stop taking upon discharge. • Include a medication list printout as part of standard check-out steps and ensure that the older adult and family or other caregivers understand what their medications are for, how to take them, why they are taking them, and how to monitor whether they are helping or possibly causing adverse effects. • Inform the patient's ambulatory clinicians of medication changes. • Consult pharmacy. • When instituting an age-friendly approach to medications: o Identify who on your team is going to be the champion of this "M." The champion may not be a pharmacist, but it is vital to have a pharmacist or physician, as well as a patient, work on the plan. o Review your setting or system's data, if possible, to identify medications that may be high-risk (e.g., anticoagulants, insulin, opioids) or potentially inappropriate (e.g., anticholinergics). o Determine your goal(s) with respect to your medication(s) identified in the previous step. o Conduct a series of PDSA cycles to achieve your goal(s). **Additional Resources** • deprescribing.org • Reducing Inappropriate Medication Use by Implementing Deprescribing Guidelines • Alternative Medications for Medications Included in the Use of High-Risk Medications in the Elderly and Potentially Harmful Drug–Disease Interactions in the Elderly Quality Measures • HealthinAging.org provides expert health information for older adults and caregivers about critical issues we all face as we age • Crosswalk: Evidence-Based Leadership Council Programs and the 4Ms

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Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	**Getting Started**	**Tips and Resources**
Ensure sufficient oral hydration**	Identify a target amount of oral hydration appropriate for the older adult and monitor to confirm it is met.	**Tips** • Ensure that water and other patient-preferred, noncaffeinated fluids are available at the bedside and accessible to the older adult. • The focus here is on oral hydration so that the patient is not on an IV that may interfere with Mobility. • Establish a delirium prevention and management protocol that includes oral hydration. • Replace pitchers with straw water bottles for easier use by older adults.
Orient older adults to time, place, and situation**	Make sure day and date are updated on the whiteboard. Provide an accurate clock with large face visible to older adults. Consider using tools such as an "All About Me" board or poster/card that shows what makes the older adults calm and happy, who is important to them, names of pets, etc. Make newspapers and periodicals available in patient rooms. Invite family or other caregivers to bring familiar and orienting items from home (e.g., family pictures).	**Tips** • For older adults with dementia, consider gentle re-orientation or use of orienting cues; avoid repeated testing of orientation if the older adult appears agitated.[25] • Conduct orientation during every nursing shift. • Establish a delirium prevention and management protocol that includes orientation. • Identify person-centered environmental and personal approaches to orienting the older adult.
Ensure older adults have their personal adaptive equipment**	Incorporate routine intake and documentation of the older adults' personal adaptive equipment. At the start of each shift, check for sensory aides and offer to clean them. If needed, offer a listening device or hearing amplifier from the unit.	**Tips** • Personal adaptive equipment includes glasses, hearing aids, dentures, and walkers. • Establish a delirium prevention and management protocol that includes personal adaptive equipment. • Note use of personal adaptive equipment on the whiteboard. • Confirm need for personal adaptive equipment with family or other caregivers.

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Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	**Getting Started**	**Tips and Resources**
Prevent sleep interruptions; use nonpharmacological interventions to support sleep**	Avoid overnight vital checks and blood draws unless absolutely necessary. Create and use sleep kits[26,27] that include items such as a small CD player, CD with relaxing music, lotion for a backrub or hand massage, noncaffeinated tea, lavender, sleep hygiene educational cards (e.g., no caffeine after 11:00 AM or promote physical activity). These can be placed in a box on the unit to use in patient rooms as needed.	**Tips** • Nonpharmacological sleep aids include earplugs, sleeping masks, muscle relaxation such as hand massage, posture and relaxation training, white noise and music, and educational strategies. • Your institution should have a delirium prevention and management protocol that includes nonpharmacological sleep support. • Make a sleep kit available for order in the EHR. • Engage family or other caregivers to support sleep with methods that are familiar to the older adult.
Ensure early, frequent, and safe mobility[28,29,30]	Ambulate three times a day. Set and meet a daily mobility goal with each older adult. Get patients out of bed or have them leave the room for meals.	**Tips** • Assess and manage impairments that reduce mobility; for example: o Manage pain o Assess impairments in strength, balance, or gait o Remove catheters, IV lines, telemetry, and other tethering devices as soon as possible o Avoid restraints o Avoid sedatives and drugs that immobilize the older adult • Refer to physical therapy; have physical therapy interventions to help with balance, gait, strength, gait training, or an exercise program if needed. • Establish a delirium prevention and management protocol that includes mobility. • Engage the older adult and family or other caregivers directly by offering exercises that can be done in bed (e.g., put appropriate exercises on a placemat that remains in the room). **Additional Resources** • Hospital Elder Life Program (HELP) Mobility Change Package and Toolkit

**These activities are also key to preventing delirium[31] and falls.

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Appendix D: Key Actions and Getting Started with Age-Friendly Care — Ambulatory/Primary Care

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
Ask the older adult What Matters **Back to Top**	If you do not have existing questions to start this conversation, try the following, and adapt as needed. *"What is the one thing about your health or health care you most want to focus on related to_____ (fill in health problem OR the health care task) so that you can do_____ (fill in desired activity) more often or more easily?"*[32,33,34] For older adults with advanced or serious illness, consider: *"What are your most important goals if your health situation worsens?"*[35]	**Tips** • This action focuses clinical encounters, decision making, and care planning on What Matters most to older adults. • Consider segmenting your population by healthy older adults, those with chronic conditions, those with serious illness, and individuals at the end of life. How you ask What Matters of each segment may differ. • Consider starting these conversations with *who* matters to the patient. Then ask the patient what their plans are related to life milestones, travel plans, birthdays, and so on in the next six months to emphasize, "I matter too." Once "who matters" and "I matter too" are discussed, then *what* matters becomes much easier to discuss. The What Matters Most letter template (Stanford Letter Project) can guide this discussion. • Responsibility for asking What Matters can rest with any member of the care team; however, one person needs to be identified as responsible to ensure it is reliably done. • You may decide to include family or other caregivers in a discussion about What Matters; however, it is important to also ask the older adult individually. • Ask people with dementia What Matters. • Integrate asking What Matters into the Welcome to Medicare and Medicare Annual Wellness Visit. • You may include What Matters questions in pre-visit paperwork and verify the answers during the visit. **Additional Resources** • "What Matters" to Older Adults?: A Toolkit for Health Systems to Design Better Care with Older Adults • The Conversation Project and "Conversation Ready" • Patient Priorities Care • Serious Illness Conversation Guide • Stanford Letter Project • "What Matters to You?" Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council) • End-of-Life Care Conversations: Medicare Reimbursement FAQs

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
Document What Matters	Documentation can be on paper or in the electronic health record (EHR) where it is accessible to the whole care team across settings[36]	**Tips** • Identify where health and health care goals and priorities can be captured in your EHR and available across care teams and settings. • Consider documentation of What Matters to the older adult on paper that they can bring to appointments and other sites of care. • Invite older adults to enter What Matters to them on your patient portal. **Additional Resources** • MY STORY© • Community Library for your EHR • "What Matters to You?" Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council)
Review for high-risk medication use	Specifically, look for: • Benzodiazepines • Opioids • Highly-anticholinergic medications (e.g., diphenhydramine) • All prescription and over-the-counter sedatives and sleep medications • Muscle relaxants • Tricyclic antidepressants • Antipsychotics[37,38,39]	**Tips** • Consider this review a medication risk assessment and be sure to include over-the-counter medications at least annually. • Engage the older adult and family member or other caregiver in providing all medications (including over-the-counter medicines) for review. • Medicare beneficiaries may be eligible for an annual comprehensive medication review. • Medication reconciliation, part of the Medicare Annual Wellness Visit, may be an important step in identifying high-risk medications. **Additional Resources** • American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults • AGS 2019 Beers Criteria Pocketcard • Reducing Inappropriate Medication Use by Implementing Deprescribing Guidelines • Medicare Interactive, Annual Wellness Visit • CDC Medication Personal Action Plan • CDC Personal Medicines List

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Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
Screen for dementia / cognitive impairment	If you do not have an existing tool, try using the Mini-Cog©[40]	**Tips** • Normalize cognitive screening for patients. For example, say "I'm going to assess your cognitive health like we check your blood pressure, or your heart and lungs." • Emphasize an older adult's strengths when screening and document it so that all providers have a baseline cognitive screen. • If they have a sudden change (day, weeks) in cognition, consider and rule out delirium. • Screening for cognitive impairment is part of Welcome to Medicare and the Medicare Annual Wellness Visit. **Additional Resources** • Saint Louis University Mental Status (SLUMS) Exam • Montreal Cognitive Assessment (MoCA)
Screen for depression	If you do not have an existing tool, try using the Patient Health Questionnaire – 2 (PHQ-2).[41]	**Tips** • Screen if there is concern for depression. • Screening for depression is part of Welcome to Medicare and the Medicare Annual Wellness Visit. **Additional Resources** • Patient Health Questionnaire – 9 (PHQ-9) • Geriatric Depression Scale (GDS) and GDS: Short Form
Screen for mobility limitations **Back to Top**	If you do not have an existing tool, try using Timed Up & Go (TUG).[42,43]	**Tips** • Recognize that older adults may be embarrassed or worried about having their mobility screened. • Underscore that a mobility screen allows the care team to know the strengths of the older adult. • Screening for mobility is part of Welcome to Medicare and the Medicare Annual Wellness Visit. • Considering engaging the full care team in assessing mobility. Does the person walk into the waiting room? Are they able to stand up from the waiting room chair when called? Can they walk to the exam room? • Consider also conducting a functional assessment. Common tools include: o Barthel Index of ADLs (in EPIC)

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
		o The Lawton Instrumental Activities of Daily Living (IADL) Scale o Katz Index of Independence in Activities of Daily Living (ADL) **Additional Resources** • Johns Hopkins – Highest Level of Mobility (JH-HLM) Scale • Performance-Oriented Mobility Assessment (POMA)[44]

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	**Getting Started**	**Tips and Resources**
Align the care plan with What Matters **Back to Top**	Incorporate What Matters in the goal-oriented plan of care and align the care plan with the older adult's goals and preferences[45,46,47] (i.e., What Matters).	**Tips** • Health outcome goals are the activities that matter most to an individual, such as babysitting a grandchild, walking with friends in the morning, or continuing to work as a teacher. Health care preferences include the medications, health care visits, testing, and self-management tasks that an individual is able and willing to do. • When you focus on the patient's priorities, Medication, Mentation (cognition and depression), and Mobility usually come up so the patient can do more of What Matters. • Use What Matters to develop the care plan and navigate trade-offs. For example, you may say, "There are several things we could do, but knowing what matters most to you, I suggest we…" • Consider the patient's priorities (not just diseases) in communicating, decision making, and assessing benefits. • Use collaborative negotiations; agree there is no best answer and brainstorm alternatives together. For example, you may say, "I know you don't like the CPAP mask, but are you willing to try it for two weeks to see if it helps you be less tired, so you can get back to volunteering, which you said was most important to you?" • Care options likely involve input from many disciplines (e.g., physical therapy, social work, community organizations, and so on).

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	**Getting Started**	**Tips and Resources**
		Additional Resources • "What Matters" to Older Adults?: A Toolkit for Health Systems to Design Better Care with Older Adults • Patient Priorities Care • Serious Illness Conversation Guide • "What Matters to You?" Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council)

Deprescribe or avoid prescribing high-risk medications**
 	
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	Specifically avoid or deprescribe the high-risk medications listed below:
	• Benzodiazepines
	• Opioids
	• High-anticholinergic medications (e.g., diphenhydramine)
	• All prescription and over-the-counter sedatives and sleep medications
	• Muscle relaxants
	• Tricyclic antidepressants
	• Antipsychotics[48,49,50,51]
	
	If the older adult takes one or more of these medications, discuss any concerns the patient may have, assess for adverse effects, and discuss deprescribing with the older adult.[52]
		Tips
		• These medications, individually and in combination, may interfere with What Matters, Mentation, and safe Mobility of older adults because they increase the risk of confusion, delirium, unsteadiness, and falls.[53]
		• Deprescribing includes both dose reduction and medication discontinuation.
		• Deprescribing is a positive, patient-centered approach, requiring informed patient consent, shared decision making, close monitoring, and compassionate support.
		• When possible, avoid prescribing these high-risk medications (prevention). Consider changing order sets in the EHR to change prescribing patterns (e.g., adjust/reduce doses or change medications available).
		• Provide ongoing patient/caregiver education about potentially high-risk medications through all care settings (e.g., outpatient pharmacy) to help improve safe medication use and informed decision making.
		• Consider community resources to support pain management with nonpharmacological interventions, including referral to community-based resources.
		• Communicate changes in medications across clinicians and settings of care, and with the primary pharmacy working with the older adult.
		• When instituting an age-friendly approach to medications:
		  o Identify who on your team is going to be the champion of this "M." The champion may not be a pharmacist, but it is vital to have a pharmacist or physician, as well as a patient, work on the plan.
		  o Review your setting or system's data, if possible, to identify medications that may be high-risk (e.g., anticoagulants, insulin, opioids) or potentially inappropriate (e.g., anticholinergics)
		  o Determine your goal(s) with respect to your medication(s) identified in the previous step.
		  o Conduct a series of PDSA cycles to achieve your goal(s).

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	**Getting Started**	**Tips and Resources**
		Additional Resources • deprescribing.org • Reducing Inappropriate Medication Use by Implementing Deprescribing Guidelines • Alternative Medications for Medications Included in the Use of High-Risk Medications in the Elderly and Potentially Harmful Drug–Disease Interactions in the Elderly Quality Measures • HealthinAging.org (expert health information for older adults and caregivers about critical issues we all face as we age) • Crosswalk: Evidence-Based Leadership Council Programs and the 4Ms
Consider further evaluation and manage manifestations of dementia, or refer to geriatrics, psychiatry, or neurology	Share the results with the older adult and caregiver. Assess for modifiable contributors to cognitive impairment. Consider further diagnostic evaluation if appropriate. Follow current guidelines for treatment of dementia and resulting behavioral manifestations OR refer to geriatrics, psychiatry, or neurology for management of dementia-related issues. Provide educational materials to the older adult and family member or other caregiver. Refer the older adult, family, and other caregivers to supportive resources, such as the Alzheimer's Association.[54]	**Tips** • Know about and refer older adults and their caregivers to local community-based organizations and resources to support them with education and/or support. • Include family caregivers. They provide a source of information and support. To identify these individuals, ask the older adult, "Who would you go to for help?" and recommend they bring that person to the next visit. • Consider also assessing and managing caregiver burden. • Ensure follow-through on any referrals. • If a memory disturbance is found, avoid medications that will make cognitive health worse. • If there is a diagnosis of dementia, include it on the problem list. If not, include cognitive impairment. • Do not prescribe medications that can exacerbate cognitive impairment, such as benzodiazepines and anticholinergics. • Older adults with dementia will be at high risk of delirium, especially if hospitalized, so educate family or other caregivers and providers on delirium prevention. **Additional Resources** • Local Area Agency on Aging • Community Resource Finder • Zarit Burden Interview (for caregivers)

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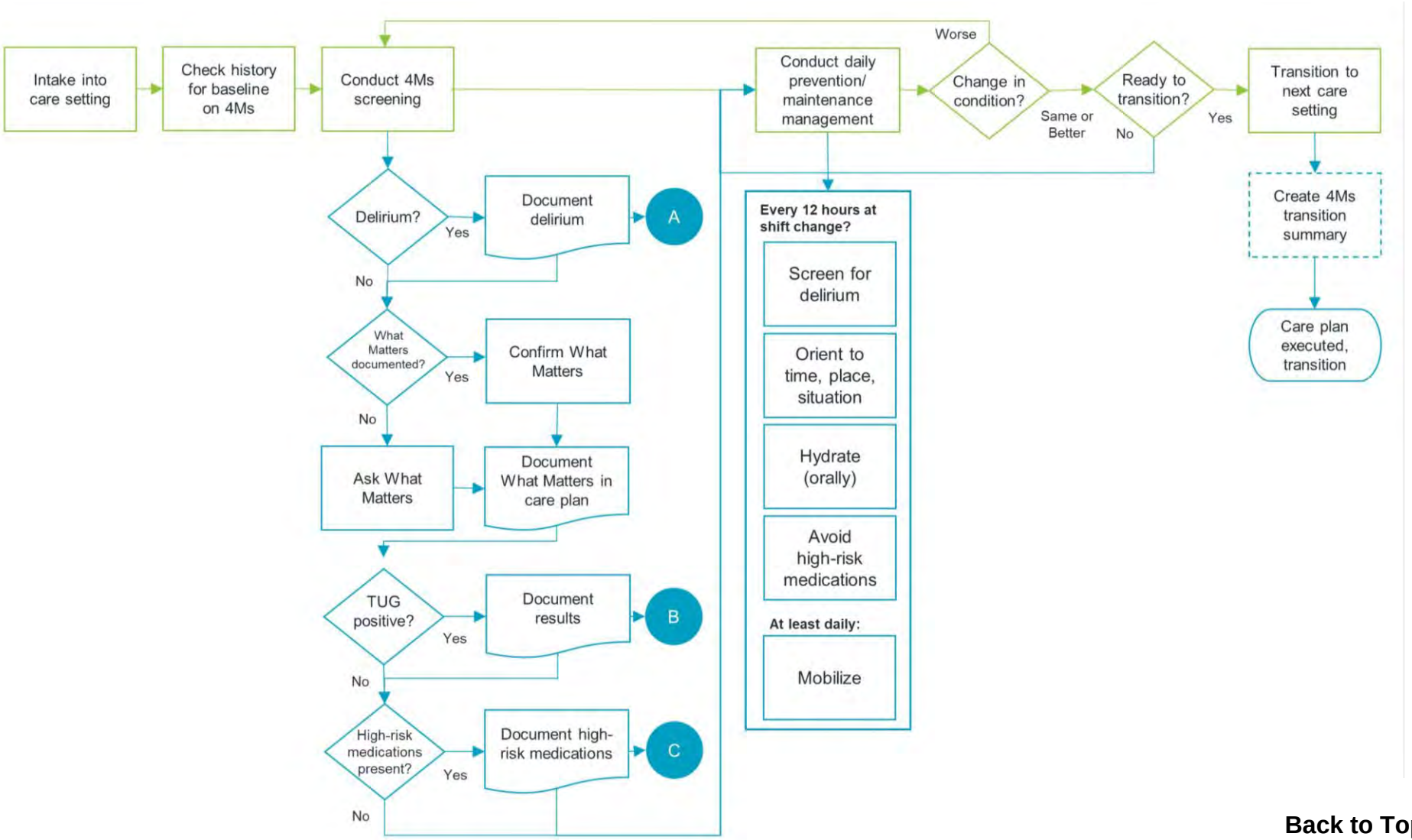
Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	**Getting Started**	**Tips and Resources**
Identify and manage factors contributing to depression	Identify and manage factors that contribute to depressive symptoms, including sensory limitations (vision, hearing), social isolation, losses associated with aging (job, income, societal roles), bereavement, and medications. Consider the need for counseling and/or pharmacological treatment of depression, or refer to a mental health provider if appropriate.	**Tips** • Educate the patient and caregiver about depression in older adults. • Recognize social isolation as a risk factor for depression and identify community-based resources that support social connections. **Additional Resources** • Your local Area Agency on Aging • Crosswalk: Evidence-Based Leadership Council Programs and the 4Ms
Ensure safe mobility[55,56,57]	Assess and manage impairments that reduce mobility; such as: • Pain • Impairments in strength, balance, or gait • Hazards in home (e.g., stairs, loose carpet or rugs, loose or broken handrails) • High-risk medications Refer to physical therapy. Support older adults, families, and other caregivers to create a home environment that is safe for mobility.[58] Support older adults to identify and set a daily mobility goal that supports What Matters. Review and support progress toward the mobility goal in subsequent interactions.	**Tips** • Have a multifactorial falls prevention protocol (e.g., STEADI) that includes: o Educating the patient/family/other caregivers o Managing impairments that reduce mobility (e.g., pain, balance, gait, strength) o Ensuring a safe home environment for mobility o Identifying and setting a daily mobility goal with the patient that supports What Matters, and then review and support progress toward the mobility goal o Avoiding high-risk medications o Referring to physical therapy **Additional Resources** • Stopping Elderly Accidents, Deaths & Injuries (STEADI) • CDC My Mobility Plan **Back to Top**

Appendix E: Age-Friendly Care Workflow Examples

Hospital-Based Care Workflows: Core Functions



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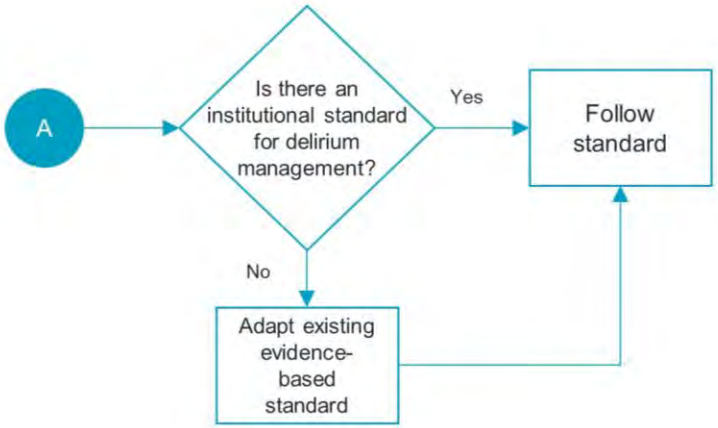
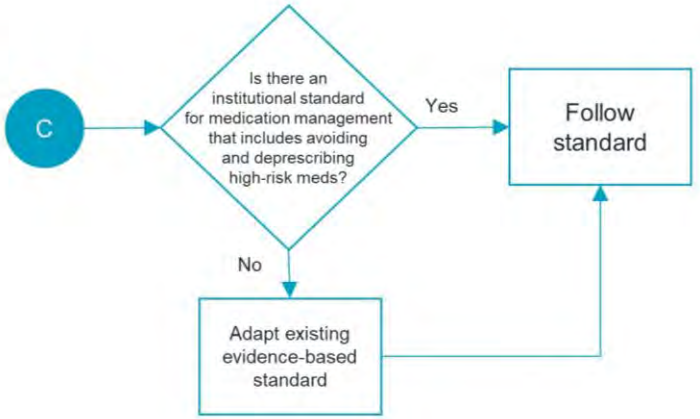
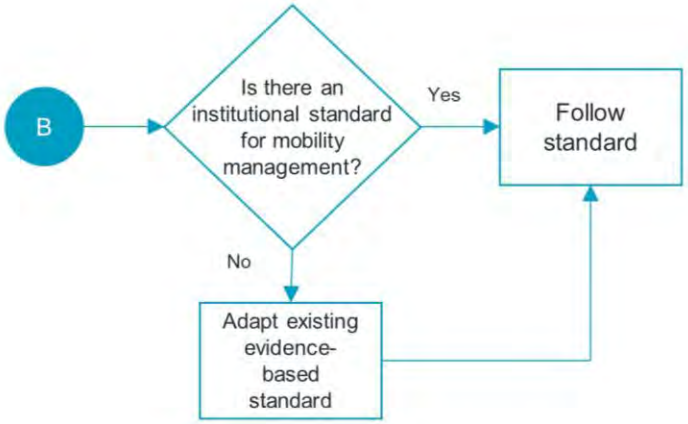
Delirium Workflow



Medication Management Workflow



Mobility Workflow



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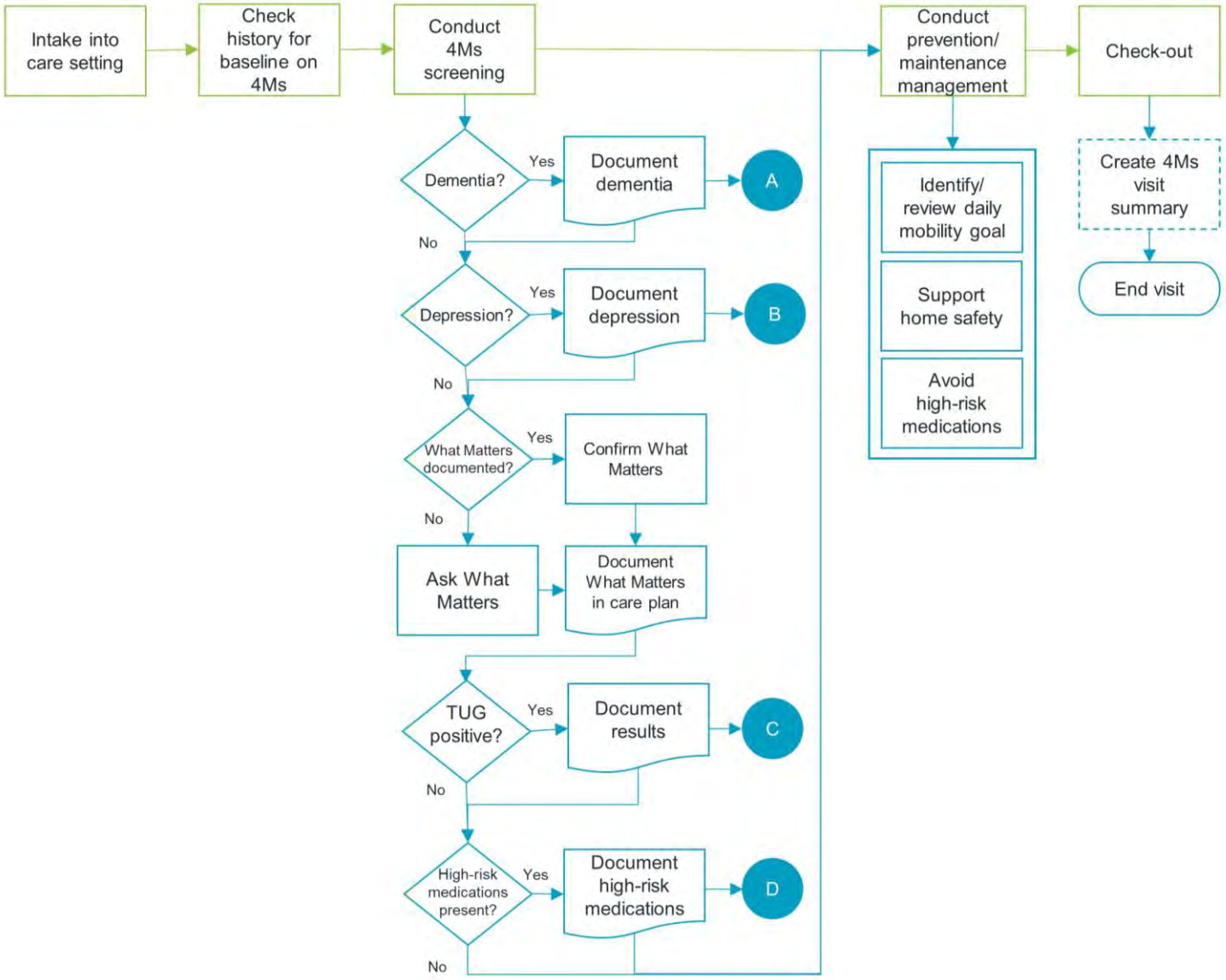
Ambulatory/Primary Care Workflows:
Core Functions for New Patient, Annual Visit, or Change in Health Status



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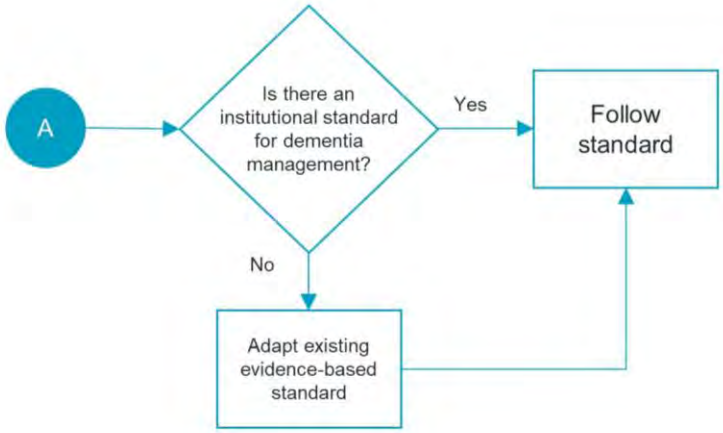
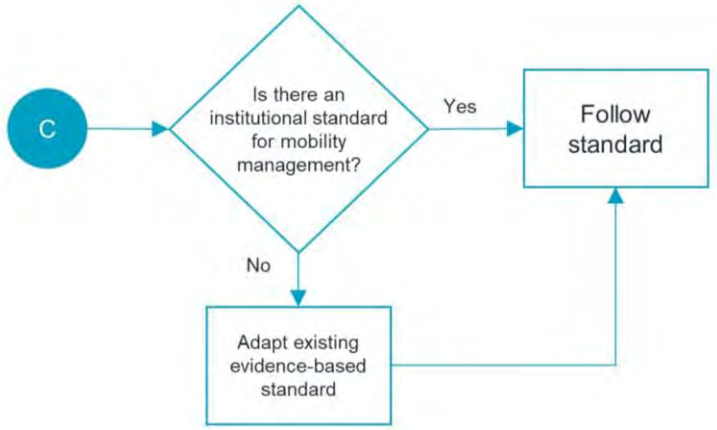
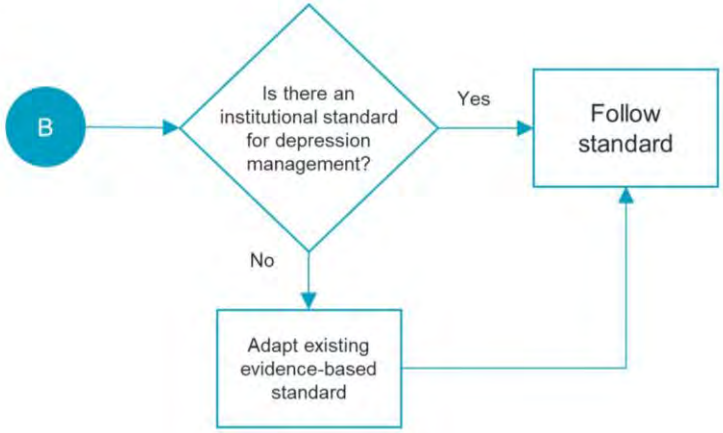
Dementia Workflow



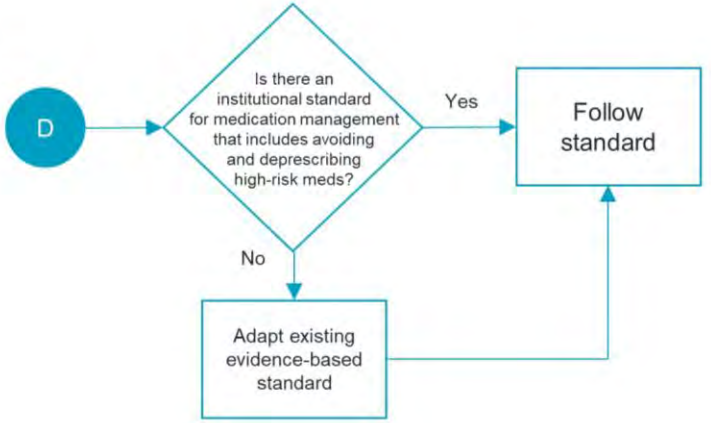
Mobility Workflow



Depression Workflow



Medication Management Workflow



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Appendix F: Examples of PDSA Cycles for Age-Friendly Care

Example: Testing What Matters Engagement with Hospitalized Older Adult Patients

Plan-Do-Study-Act Record	**NAME OF HEALTH SYSTEM:** Camden University Medical Center **NAME OF PERSON COMPLETING FORM:** Erin Rush, RN **DATE:** March 29, 2019
	**Change Idea to ____develop or _X_ test or ____ implement**
	Description: Cycle 1: Test a What Matters engagement with a hospitalized patient. **Essential Ingredients** 

PLAN:

Questions: What do we want to know?

- Can physicians incorporate What Matters engagements into rounds with older adult patients?
- Will physicians learn something useful from this What Matters engagement relevant to care planning?

Predictions: What do we think will happen?

- Physicians can incorporate What Matters engagements into rounds with older adult patients.
- Physicians can learn something useful from What Matters engagements relevant to care planning.

Plan for the change or test: Who, What, When, Where. What are we going to do to make our test happen?

List the tasks necessary to complete this test (what)	Person responsible	When	Where
Orient Dr. M (hospitalist) to this test	Erin	Monday morning	4 South
Select older adult patient for test	Erin and Dr. M	Monday morning	4 South
Ask older adult patient, "What's important to you in the next few days as you recover from your illness?"	Dr. M	Monday	TBD
Debrief test and complete PDSA cycle	Erin and Dr. M	Tuesday morning	4 South

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Plan for data collection: Who, What, When, Where. How will we compare predictions to actual?

Erin and Dr. M to meet the next day to debrief test, capture what happened, impressions, how that compared to predictions, next steps.

DO: Carry out the change or test; collect data and begin analysis; describe the test/what happened.

- Dr. M asked 1, and then 4 more, older patients — went beyond testing with just 1 patient!
- Some answers were very health/condition related (e.g., a patient with shortness of breath/cough stated, "I just want my cough to be better and to be able to breathe.").
- Other answers were more life related, for example:
  - A patient being treated for stroke, who is a performance artist, shared a video of performance and indicated what matters is to be able to return to performing.
  - A patient with multiple falls wants to be able to stand to cook again.

STUDY: Complete analysis of data; summarize what was learned; compare what happened to predictions above.

- Asking a single question is not sufficient. Need the opportunity for follow-up questions and listening.
  For example: A patient with congestive heart failure and arthritis has an immediate goal to reduce swelling in her legs. Further probing revealed a desire to stay in her home and be able to cook to avoid delivered salty foods and to avoid rehospitalization. Possible solution: Prescription for homemaker assistance.
- Dr. M regularly engages patients with What Matters in an outpatient setting. New for inpatient rounds, but feasible to include.
- Worthwhile if there is time for follow-up (not just one question and one answer in 30 seconds).
- No patients responded with goals or needs that could not be addressed somehow in the care plan.
- Asking a What Matters question feels awkward. Need to build a relationship first before asking an "intimate" question. For example, asking on the second day of rounding feels better than asking on the first day.
- Asking a What Matters question helped Dr. M bond with the patients.
- There was a lack of clarity on what to do with the information learned from the What Matters engagement (e.g., how to document, how to share).
- Still have a concern about not knowing what to do if a patient expresses a need or goal beyond the specific health condition or issues that the physician (Dr. M) is trained to address.

ACT: Are we ready to make a change? Plan for the next cycle.

Test again. Questions to explore through more testing include:

- Is it better to ask the What Matters question at the beginning or end of the encounter?
- How can we get at What Matters for our patients with cognitive impairment?
- Where is the best place to document the information from the What Matters engagement?
  - Whiteboard: "Anyone" can use the whiteboard. Can this be done effectively?
  - Epic documentation agreement (meetings underway with Epic team to discuss options).
- Are the daily multidisciplinary rounds/huddles the best place to discuss what's learned from What Matters engagements?
  - Do we need to coordinate our engagement about What Matters? Nursing, care management, and physicians all could be asking variants of What Matters.
- Could the nurse or case manager have a What Matters conversation and document it so that it is available for physicians to reference in a consult visit or rounding?

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Example: Testing a 4Ms Screening for Older Adults in Primary Care

Plan-Do-Study-Act Record	**NAME OF HEALTH SYSTEM:** Name **NAME OF PERSON COMPLETING FORM:** Name **DATE:** Date
	**Change Idea to ____develop or _X_ test or ____ implement** **Description:** Cycle 1: Test a 4Ms "screening set" with one older adult patient in your care. • What Matters: o Ask, "What makes life worth living?"; "What would make tomorrow a really great day for you?"; "What concerns you most when you think about your health and health care in the future?" o Confirm the presence of a health care proxy (proxy's name, contact information) • Medication: o Identify use of high-risk medications • Mentation: o Administer the Mini-Cog o Administer the PHQ-2 • Mobility: o Conduct the TUG Test

PLAN:

Questions: What do we want to know? [Add or edit questions below, as needed.]

1. Can we practice all 4Ms items (above) on intake for one older adult patient?
2. How long does it take?
3. How does it feel for the staff conducting the assessment? (e.g., What went well? What could be improved?)
4. How does it feel for the patient/family receiving the assessment? (e.g., What went well? What could be improved?)
5. What are we learning from conducting this 4Ms screening set? Did we learn anything about this patient that will improve our care, service, and/or processes?

Predictions: What do we think will happen? [Edit draft answers below, as needed.]

1. Yes
2. 10 minutes
3. Staff will give at least two ideas/identify two issues with the 4Ms screening set.
4. Patient/family will give at least one idea/issue with the screening set use.
5. Staff will get at least one insight/"aha" regarding care for the patient from the screening set.

Plan for the change or test: Who, What, When, Where. What are we going to do to make our test happen? [Edit the draft tasks below, as needed.]

List the tasks necessary to complete this test (What)	Person responsible	When	Where
1. Select an older adult patient with whom we are likely to be able to conduct this test in the next 3 days. Identify a patient who we might "easily" engage on all items of the 4Ms screening set.			

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2. Select a staff person who will conduct the test, and brief her/him.			
3. Decide on what you will say to invite the patient/family to participate in testing the 4Ms screening set. For example, "We are testing ways to know our patients better to develop the right care plan. Would you be willing to test a set of questions today and give your opinion about this experience?"			

Plan for data collection: Who, What, When, Where. How will we compare predictions to actual? [Adapt or edit the sample data collection form below, as needed.]

- Fill in data collection plan (Who, What, When, Where) [example below]:

4Ms Screening Set Test: NAME OF HEALTH SYSTEM												
4Ms Screening Set Test: NAME OF CONTACT PERSON		Patient 1		Patient 2		Patient 3		Patient 4		Patient 5		Patient 6	
Date													
What Matters	Asked: What makes life worth living? (yes/no)	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
	Asked: What would make tomorrow a really great day for you? (yes/no)	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
	Asked: What concerns you most when you think about your health and health care in the future? (yes/no)	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
	Has health care agent? (yes/no/didn't review)	Y	N DR	Y	N DR	Y	N DR	Y	N DR	Y	N DR	Y	N DR
Medication	Identified use of high-risk medication (yes/no/didn't review)	Y	N DR	Y	N DR	Y	N DR	Y	N DR	Y	N DR	Y	N DR
Mentation	Administered the Mini-Cog (yes/no)	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
	Administered the PHQ-2 (yes/no)	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Mobility	Conducted TUG Test (yes/no)	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Amount of time to complete													
Staff feedback													
Patient/family feedback													
Other notes and/or questions that came up from this test													

DO: Carry out the change or test; collect data and begin analysis; describe the test/what happened.

- Fill in during or after conducting the test

STUDY: Complete analysis of data; summarize what was learned; compare what happened to predictions above.

- Fill in after conducting the test

ACT: Are we ready to make a change? Plan for the next cycle.

- Fill in after conducting the study. Will you adopt, adapt, abandon, or run the test again? For example, PDSA cycle 2: Conduct test again with 5 patients making the following adjustments…

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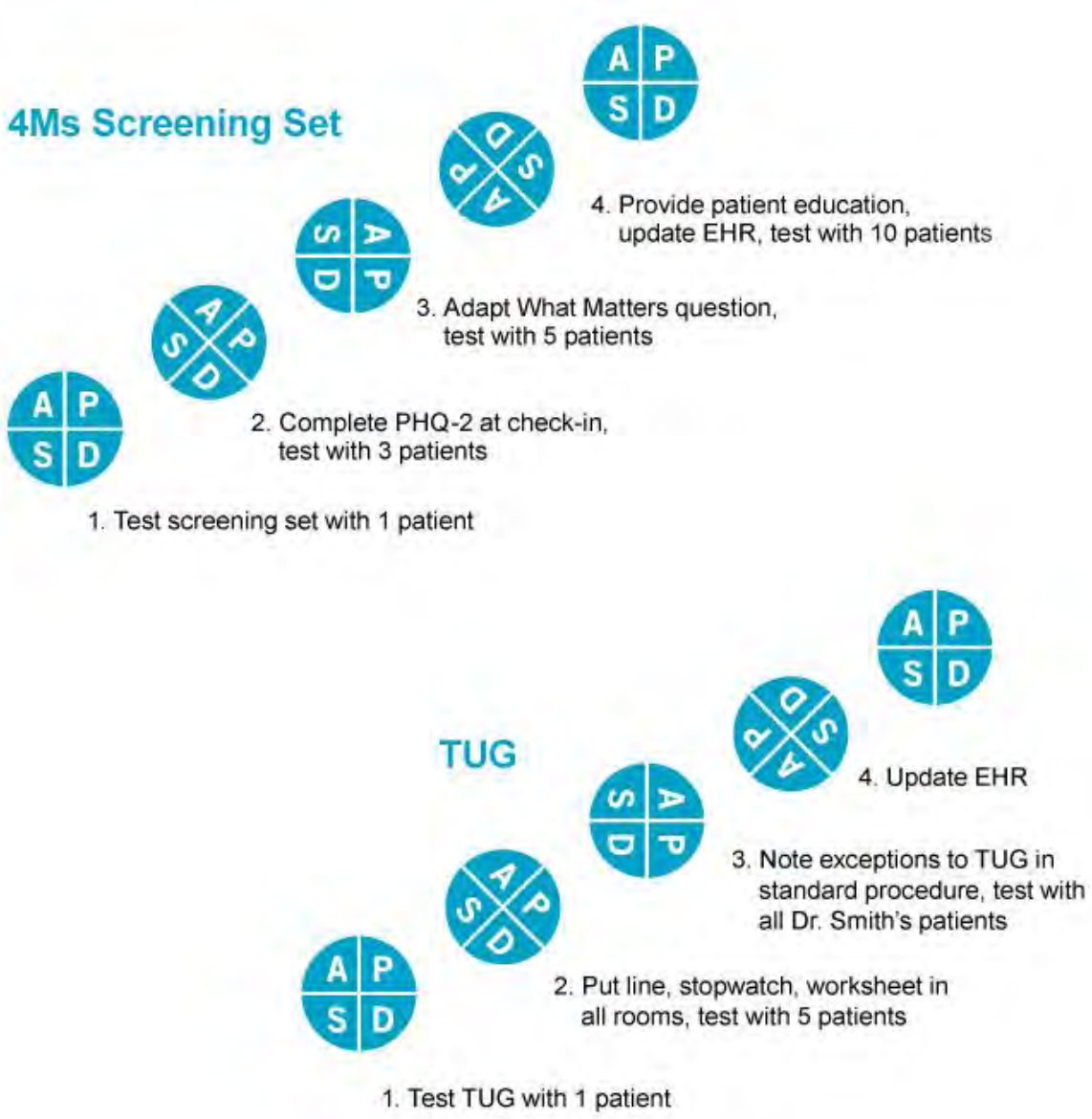
Example: Ambulatory/Primary Care Multiple PDSA Cycles



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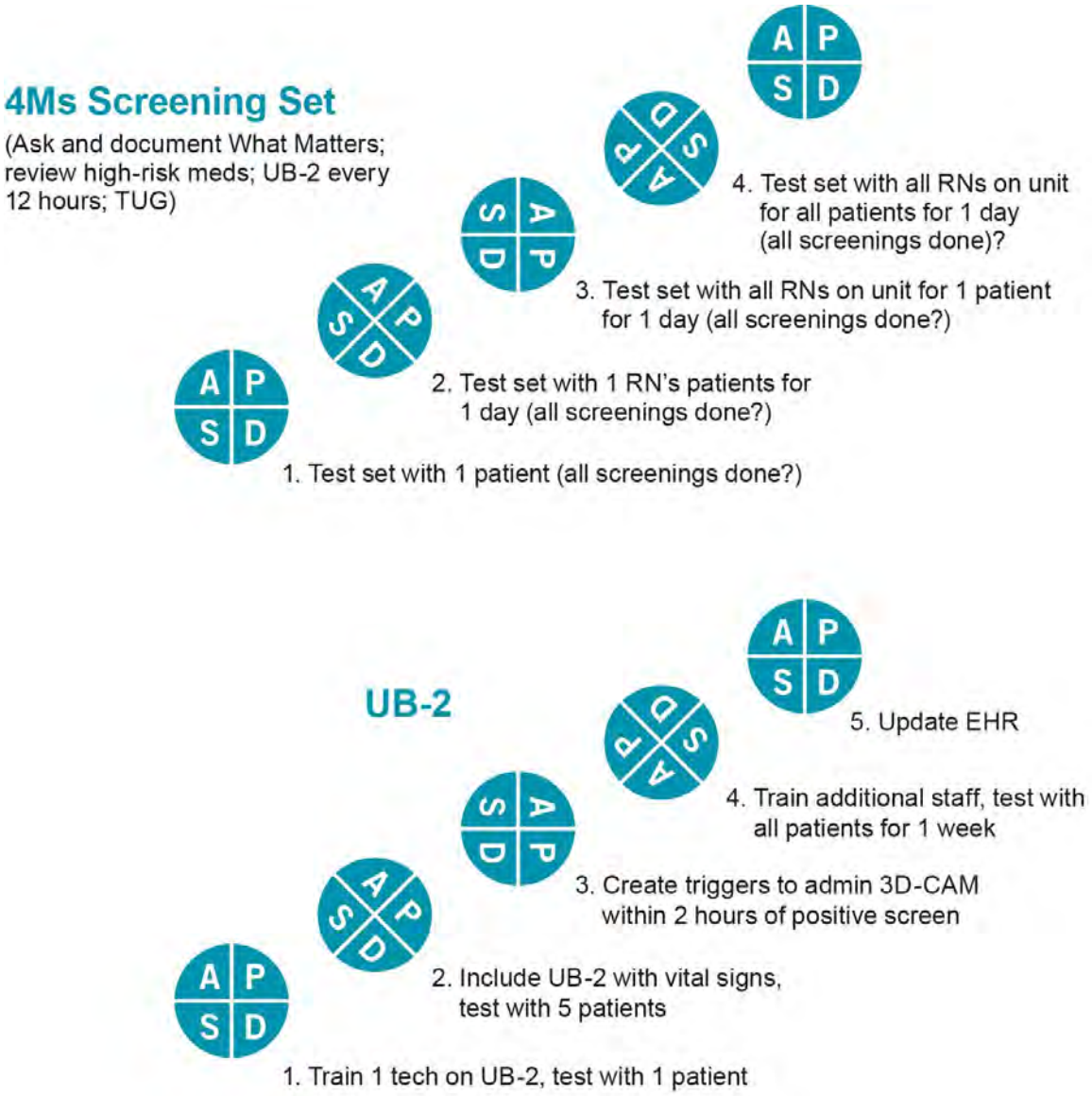
Example: Hospital-Based Care Multiple PDSA Cycles



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Appendix G: Implementing Reliable 4Ms Age-Friendly Care

The goal is to reliably integrate the 4Ms into the way you provide care for every older adult, in every setting, every time. How will you know that 4Ms care, as described by your site, is reliably in place?

The best way is to observe the work directly, using the 4Ms Age-Friendly Care Description Worksheet as an observation guide. Another way is to review patient records to confirm completeness of 4Ms documentation and alignment of care team actions with information obtained in assessment. Note that you only need a handful of patient records to tell you that your 4Ms performance is not at a high level (say, 95 percent or higher).[59] For example, if you see three instances of incomplete 4Ms care in a random sample of 10 records, you have strong evidence that your system is not performing in a way that 95 percent or more of your patients are experiencing 4Ms care.

If IHI visited your care setting, we also would look for several kinds of evidence that your site has the foundation for reliable 4Ms care, including the following:

- If we ask five staff members, they use the same explanation for WHY your site does the 4Ms work.
- If we ask five staff members, they use the same explanation for HOW your site does the 4Ms work.
- Staff at your site will have documentation for the 4Ms work; they can access your 4Ms Care Description and additional standard supporting operating procedures, flowcharts, and/or checklists.
- Training/orientation introduces new staff to the 4Ms work.
- Job description(s) outline elements of the 4Ms work as appropriate to the role.
- Performance evaluation refers to the 4Ms work.

IHI would also expect to learn about regular observation of 4Ms work by site supervisors and leaders who seek to understand and work with staff to remove barriers to reliable 4Ms care.

Appendix H: Measuring the Impact of 4Ms Age-Friendly Care

We highly recommend that you create and monitor an age-friendly measurement dashboard to understand the impact of your efforts. This can be accomplished in two ways:

1. Segment an existing dashboard by age and monitor performance for older adults (ages 65 years and older); or
2. Focus on a small set of basic outcome measures for older adults.

The tables below lists outcome measures that IHI identified to help health systems understand the impact of 4Ms age-friendly care. These measures are not designed to compare or rank health systems in "age-friendliness." We seek to outline measures that are "good enough" to establish baseline performance and are sensitive to improvements, while paying attention to the feasibility of collecting, analyzing, and acting on the results of these data for health systems with a range of skills and capacity in measurement. See the Age-Friendly Health Systems: Measures Guide for additional details on these measures, as well as suggested process and balancing measures.

Basic Outcome Measures	Hospital Site of Care	Ambulatory/Primary Care Site of Care
30-day all-cause readmission rate	X	
Rate of emergency department (ED) visits		X
Consumer Assessment of Healthcare Providers and Systems (CAHPS) — Select survey questions	HCAHPS	CG-CAHPS
Average length of stay	X	

Advanced Outcome Measures	Hospital Site of Care	Ambulatory/Primary Care Site of Care
Older adults with diagnosis of delirium	X	
Survey of care concordance with What Matters collaboRATE (or similar tool adopted by your site to measure goal concordant care)	X	X

Additional Stratification: Impact of Race and Ethnicity

We recognize the persistence of important differences in treatment and health outcomes associated with race, ethnicity, and other social factors. Health equity requires that health systems stratify key performance measures by these factors to reveal disparities and provoke action to eliminate them. For Age-Friendly Health Systems, we encourage stratifying outcome measures for older adults using the Office of Management and Budget core race and ethnicity factors to identify disparities in patient care and experience.

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Rush University

Assessment of Student Learning

January 19, 2021

JK Stringer, PhD
Assessment Manager
Rush Medical College
jk_stringer@rush.edu

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1 Introduction
2 Messaging and Motivation
3 Validity and Reliability
4 Dimensions of Assessment
5 Purpose Driven Assessment

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Introduction

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Welcome to Assessment

Have you heard these statements?

- Assessment **of** learning
- Assessment **for** learning
- Assessment **drives** learning

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Welcome to Assessment

Assessment is learning

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Definition of Terms

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (2014). ***Standards for educational and psychological testing***. Amer Educational Research Assn.

- **Assessment**
- Any systematic method of obtaining information, used to draw inferences about characteristics of people, objects, or programs; a systematic process to measure or evaluate the characteristics or performance of individuals, programs, or other entities, for purposes of drawing inferences; sometimes used synonymously with test.
- **Formative Assessment**
- An assessment process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning with the goal of improving students' achievement of intended instructional outcomes.
- **Summative Assessment**
- The assessment of a test taker’s knowledge and skills typically carried out at the completion of a program of learning, such as the end of an instructional unit.

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Definition of Terms

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (2014). ***Standards for educational and psychological testing***. Amer Educational Research Assn.

- **Evaluation**
- The collection and synthesis of evidence about the use, operation, and effects of a program; the set of procedures used to make judgments about a program's design, implementation, and outcomes.
- **Validity**
- The degree to which accumulated evidence and theory support a specific interpretation of test scores for a given use of a test. If multiple interpretations of a test score for different uses are intended, validity evidence for each interpretation is needed.
- **Reliability**
- The degree to which test scores for a group of test takers are consistent over repeated applications of a measurement procedure and hence are inferred to be dependable and consistent for an individual test taker; the degree to which scores are free of random errors of measurement for a given group.

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Messaging and Motivation

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Valuing what we measure or measuring what we value?

Biesta, G. (2009). **Good education in an age of measurement: On the need to reconnect with the question of purpose in education.** *Educational Assessment, Evaluation and Accountability*, *21*(1), 33-46.

What do our assessments tell our learners?

What do we want our assessments to tell our learners?

What do we do with the data and how does that shape what our learners experience?

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Why do our leaners, well, learn?

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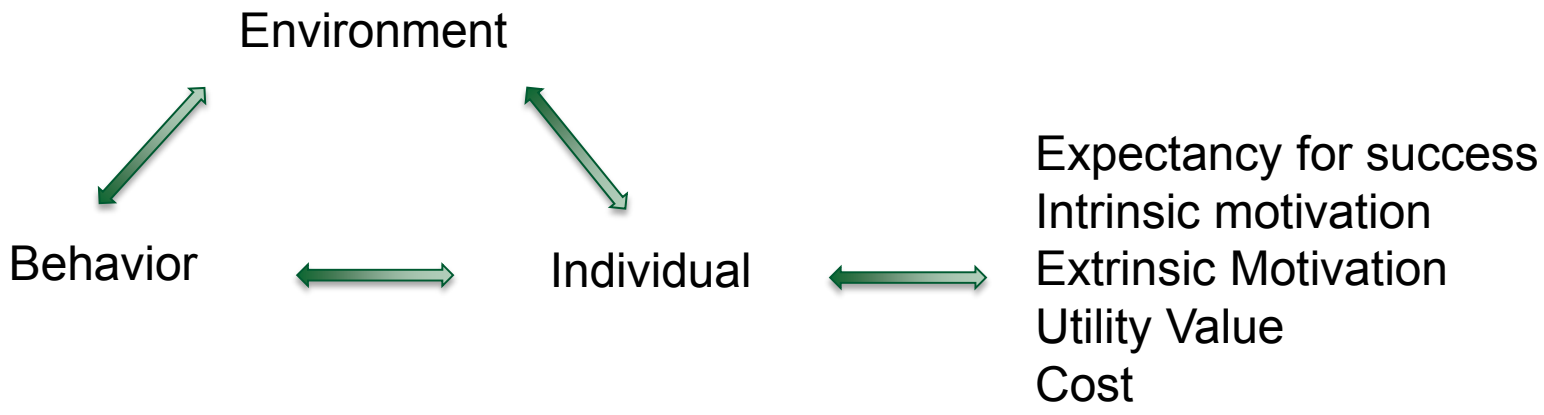
Individual and environmental factors shape learners' motivations for achievement activities (e.g., assessments)

Considering all these elements before we even get to assessment is important



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Validity and Reliability

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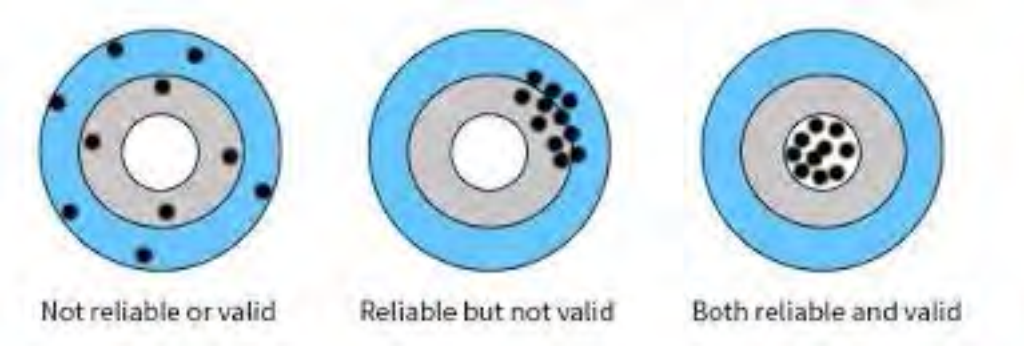
Validity and Reliability

Who recognizes the image below?

Who would have described something similar if I asked you to define validity and reliability?



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Funderstanding-the-reliability-and-validity-of-test-scores

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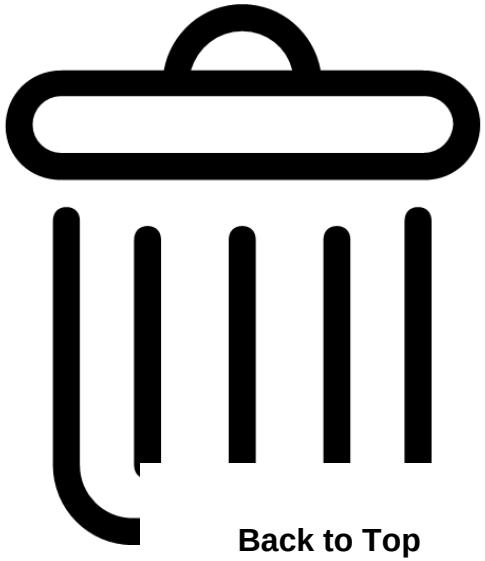

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Validity and Reliability

- **Validity**
- The degree to which accumulated evidence and theory support a specific interpretation of test scores for a given use of a test. If multiple interpretations of a test score for different uses are intended, validity evidence for each interpretation is needed.
- **Reliability**
- The degree to which test scores for a group of test takers are consistent over repeated applications of a measurement procedure and hence are inferred to be dependable and consistent for an individual test taker; the degree to which scores are free of random errors of measurement for a given group.
- **Scores can be reliable, but not valid.**
- **Inferences, how we use those scores, can be valid.**

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (2014). ***Standards for educational and psychological testing***. Amer Educational Research Assn.

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Validity and Reliability

Downing, S. M., & Yudkowsky, R. (2009). ***Assessment in health professions education***. Routledge.

- **The validity of our inferences is why it matters so much to consider**
- Assessment intentions
- Score meaning
- Score usage
- Student motivation
- Educational climate
- Outcomes
- Stakes
- **Particularly in health professions education, every bit of the assessment process matters**

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Dimensions of Assessment

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Dimensions of Assessment

Amin, Z., Chong, Y. S., & Khoo, H. E. (2006). ***Practical guide to medical student assessment***. World Scientific.

	Low Stake	Medium Stake	High Stake
Examples	Formative assessment	End of course test	Professional examination
Decisions and Consequences	Few, easily reversible decisions, low consequence	Decisions can be reversed	Decisions are generally irreversible, consequences are high
Developmental Effort Needed	Low	Medium	High
Quality Assurance	Rare	Recommended	Required
Monitoring and Implementation	Individual	Department	Central
Check for Validity and Reliability	Infrequent	Recommended	Required

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Dimensions of Assessment

Epstein, R. M. (2007). **Assessment in medical education.** *New England journal of medicine*, *356*(4), 387-396.

1

Formative Assessment

- Assessment **for** learning
- Guides learning
- Many opportunities
- Structured feedback is key
- Low stakes
- E.g., end of lesson quizzes

2

Summative Assessment

- Assessment **of** learning
- Used to make judgements
- Fewer opportunities
- Feedback is valuable
- High(er) stakes
- E.g., end of course exams

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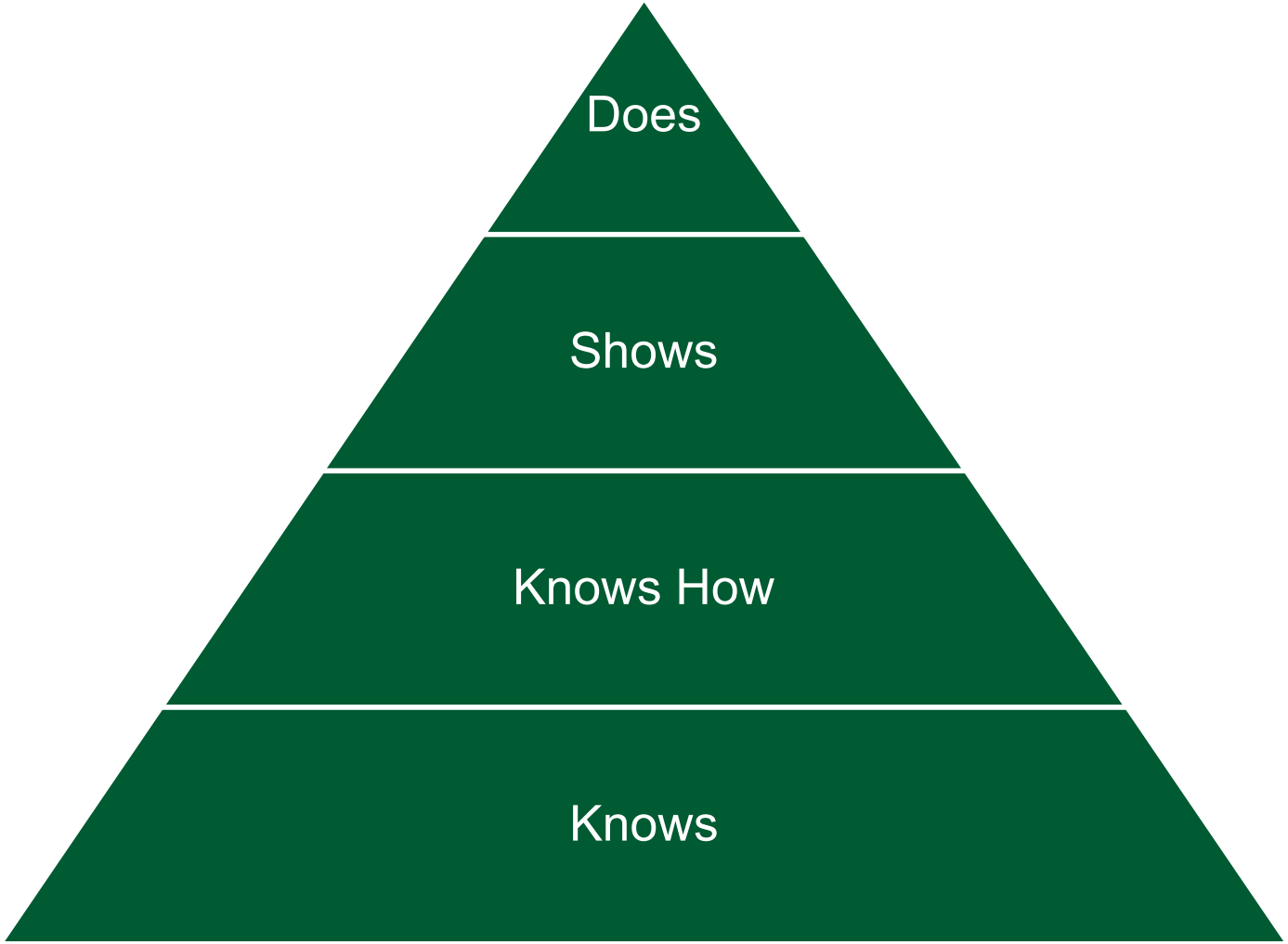
Dimensions of Assessment



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Purpose Driven Assessment

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Purpose Driven Assessment

Amin, Z., Chong, Y. S., & Khoo, H. E. (2006). ***Practical guide to medical student assessment***. World Scientific.

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Why do we assess?

- Accreditation
- Assess Competence
- Document Learner Experience
- Gauge Academic Progress
- Predict Performance
- Generate Feedback for Improvement
- Assign Grades
- Determine if Learning Objectives are Met
- Support Student Learning
- Understand the Learning Process

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Purpose Driven Assessment

Why do you assess?

What's your big question and how can we use the information here to break it up and answer it?

We'll work through each step of Miller's outcome framework including a few examples of assessment modes as an exercise in applying purpose driven assessment

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Purpose Driven Assessment

Am I producing a high quality _____?

What do I need to assess to build the evidence to support the inference that I am producing a high quality _____?

How do multiple data sources fit together to build a more complete picture of a high quality _____?

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Purpose Driven Assessment

A high quality _____ KNOWS _____.

1	1	2	2
Multiple Choice Questions	**Multiple Choice Questions**	**Short Answer Questions**	**Short Answer Questions**
• Reliability and objectivity • Easily administered and graded • Time consuming to develop high quality items • Students' test taking strategies are most likely to influence these	A 26-year-old man who is HIV positive has a CD4+ T-lymphocyte count of 250/mm3 (N>500). After 5 weeks of therapy with a nucleoside polymerase inhibitor and a protease inhibitor, he feels weak and is easily fatigued. His hemoglobin concentration has decreased from 12.8 g/dL to 8.2 g/dL. Which is the most likely cause of the anemia in this patient? (A) Decreased formation of erythrocytes (B) Folic acid deficiency (C) Increased formation of erythrocyte antibodies (D) Increased fragility of erythrocytes (E) Iron deficiency	• Minimal cueing effects • Can cover a wide range of topics in few questions • Manual grading frequently needed • Inefficient as the sole assessment mode on an exam	Compare and contrast Ametop (amethocaine gel) and EMLA cream. Compare and contrast the role of PTH (hormone) and mechanical forces acting on the skeleton in bone remodeling. Explain the hormonal response to a decrease in blood calcium levels.

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Purpose Driven Assessment

A high quality _____ KNOWS HOW TO _____.

1 Long Essay Questions

- Complex scenarios can be described
- Learners can provide in depth and stepwise answers
- Not suited to testing a wide range of content
- Inefficient in terms of faculty grading time and reliability

1 Long Essay Questions

Discuss informed consent and its medico-legal implications in the context of healthcare with attention paid to the role and responsibility of the healthcare team taking informed consent; situations where informed consent is not routinely required; and situations where informed consent could be deemed invalid.

2 Extended Matching Questions

- Strong for assessing early clinical reasoning
- Efficient to grade while still capturing a range of content
- Requires faculty training
- Relies on high quality vignettes and topic coverage

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2 Extended Matching Questions

An 80-year-old woman is admitted with an excruciating pain between the shoulder-blades. You can palpate the right radial pulse but not the left. Which of these clinical features are they most likely to demonstrate?

a) Radiofemoral delay
b) Pan-systolic murmur
c) Systolic blood pressure of 220 mmHg
d) Tapping apex beat
e) Chest pain eased by glyceryl trinitrate in 5 minutes
f) Third heart sound
g) Splinter haemorrhages
h) Breathlessness eased by lying flat
i) Slow-rising carotid pulse
j) Bradycardia with pulse rate 20 per minute
k) Chest pain eased by glyceryl trinitrate after an hour

Purpose Driven Assessment

A high quality _____ SHOWS HOW TO _____.

1	1	2	2
Objective Structured Clinical Examination	**Objective Structured Clinical Examination**	**Short Case**	**Short Case**
• Standardization • Reliability of scores • Labor intensive and expensive • Breaking a complicated event like a clinical encounter into smaller stations can dilute students' demonstration of their processing	A 51-year-old man comes into the office for right shoulder pain, progressive over the last 3 weeks, aggravated by his work sanding car hoods. Perform a focused physical exam of the shoulders, explaining what you are doing, what you are looking for, and what you are finding as you go. When you are finished examining the patient, summarize your findings to him and explain that you will talk with your preceptor.	• Authentic patient experience • By keeping time short, allows for a wider sampling of clinical skills • Standardization • Inter-rater reliability	• The candidate is given approximately 8-12 mins to examine a body system or anatomical area • No history is taken • Verbal communication is only allowed to get the patient to follow a set of instructions or if the patient's speech is being formally tested • Following the examination the candidate must give a 3-5 minute summary of

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Purpose Driven Assessment

A high quality _____ DOES _____.

1	1	2	2
Direct Observation	**Direct Observation**	**Learner Portfolio**	**Learner Portfolio**
• Highly contextual assessment that can be tied to in the moment feedback • Global, consistent areas for assessment • Unlikely to capture all elements in a single encounter • Requires faculty and cultural change	History Taking N/A - Not Observed 1 – inadequate: Missing key components, includes inaccurate or irrelevant data, inefficient in collection 2 3 – expected good performance: Mostly organized with integration of clinical reasoning (pertinent positives/negatives), improving efficiency 4 5 – top 10-15%: Consistently organized and efficient, guided by clinical reasoning	• Collects a range of high-level performance demonstrations • Useful tool for focused feedback • Time intensive on learner and faculty's part. • Challenging to standardize and adequately weight quality/quantity	Can include: • Direct observations • 360 feedback • Learner writing • Logs of notes and experiences • Additional certifications

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Purpose Driven Assessment

Am I producing a high quality _____?

Am I producing high quality _____ who KNOW _____, KNOW HOW TO _____, SHOW HOW TO _____, and DO _____?

Are the scores on my assessments reliable?

Do these assessments provide suitable evidence for the validity of my inferences about high quality _____?

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Thank you.

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Rush University

Accessibility in Health Science Education

February 16, 2021

Marie Lusk, MBA, MSW, LSW
Director, Student Accessibility Services

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Today's Objectives

- Review the American with Disability Act as Amended that guides the practices utilized in creating accommodations.
- Identify the interactive accommodation process used at Rush University and how to properly refer a student for services.
- Describe the importance of technical standards in the accommodation process.

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Office of Student Accessibility Office Testing Room AAC 903

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Section 504 of the Rehabilitation Act and the ADA

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Americans with Disability Act as Amended and Section 504 of the Rehabilitation Act of 1973.

- **Section 504 of the Rehabilitation Act of 1973 expands upon the Civil Rights Act of 1964 to include "equal opportunity" law for people with disabilities.**
- **More protections for individuals with disabilities at the post secondary level.**
- **Students have the right to sue based on their disability.**
- **In 2008- ADA Amendments Acts (ADAAA) stemmed from court decisions to address the effects of court rulings.**

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Case Law

UM-Boston

- Student filed a claim stating their institution instructed the them to negotiate their own accommodations with faculty.

University of Miami-Palm Beach

- Student filed a claim stating they were informed to negotiate their own clinical accommodations.

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To be protected by the ADA, one must have a disability, which is defined as:

1. A physical or mental impairment that substantially limits one or more major life activities,
2. A person who has a history or record of such an impairment, or
3. A person who is perceived by others as having such an impairment

Major Life Activity is defined as:

- Breathing, speaking, caring for oneself, seeing, hearing, eating, sleeping, walking, standing, communicating, learning, reading, concentrating, thinking, working, lifting and bending.

- Operations of major bodily functions.

- Functions of the immune system, normal cell growth, digesting, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine and reproductive organs.

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How does someone qualify for accommodations in the post secondary setting?

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To qualify for accommodations at a post secondary institution

- Student must meet the criteria set forth by the ADA-AA.
- That disability MUST impact one or more elements of the educational experience.

Educational experiences include:

- Parking/transportation
- Residence hall living
- Dietary
- Student club/groups/organizations
- Academic (including classroom/lab/clinical experience)

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Student Request Process

- Students complete a Request for Accommodation form.
- Students must submit diagnostic documentation for review.
- Intake session set up (remotely since March 2020).
- Engage student in a discussion about their disability and how it impacts their life.

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Student Request Process

- Review their program requirements
- Explain my office process and student responsibilities.
- Contact key faculty/staff for any clarification on the academic program where the barrier(s) will present.
- Write up the accommodation letter.
- Student identifies who receives letters each semester.
- Discuss disclosures.
- Licensure/board accommodations and employment.

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Confidentiality

- Documentation submitted to my office is confidential.
- Not shared with faculty/staff/administrators.
- Destroyed upon graduation.

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Technical Standards

- Criteria used by health science programs to assess the nonacademic qualifications of applicants and students with disabilities.
- Posted online for prospective and current students to review.
- Should be reviewed annually to ensure inclusivity.

Example of language review:

- **A student must be able to *speak….***

  Should read:

- **A student must be able to *communicate…***

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Technical Standards

Standard language/template on Technical Standards at Rush University.

- Introduction of inclusive practices

  Rush University is committed to diversity and to attracting and educating students who will make the population of health care professionals representative of the national population. Our core values — ICARE — Innovation, Collaboration, Accountability, Respect and Excellence translate into our work with all students, including those with disabilities

- **The technical standards**
- **Closing statement and referral for assistance.**

  Students who, after review of the technical standards determine that they require accommodation to fully engage in the program, should contact the Office of Student Accessibility Services to confidentially discuss their accommodations needs. Given the clinical nature of our programs additional time may be needed to implement accommodations. Accommodations are never retroactive; therefore, timely requests are essential and encouraged

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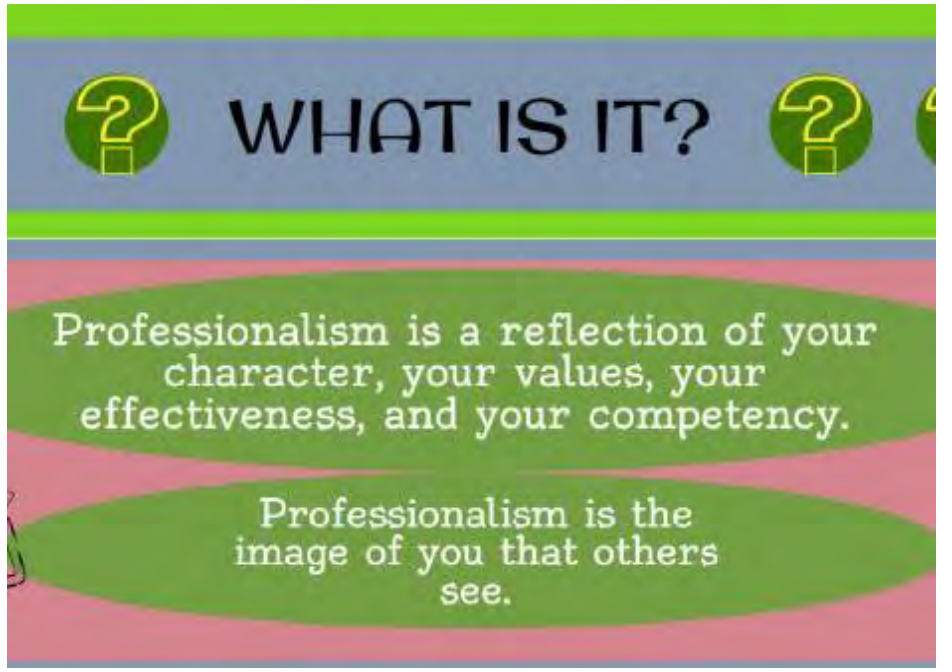
Technical Standards

Observation	**Behavioral and social abilities**
Communication	**Intellectual abilities**
Motor	**Quantitative abilities**
Professionalism	**Ethics**
Character	**Acquire information**
Use and Interpret	**Conceptual abilities**



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Discussing accessibility

- **Start each semester with informing students of all the support services available to them and where to find more information.**
  - Financial Aid
  - Center for Academic Excellence
  - Center for Clinical Wellness
  - Office of Student Accessibility Services
- **Touch base with students before a big exam/midterm time.**
  - "*How is everyone doing? Remember, the following offices are here to support our students…*"
- **Use people first language**
  - Negative Phrase: *A wheelchair bound person or confined to a wheelchair*
  - *Affirmative Phrase: A person who utilizes a wheelchair*

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Center for Innovative & Lifelong Learning

IBR Model for Conflict Resolution

Janet Shlaes, PhD, MBA, MA

March 16, 2021

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Learning Objectives

- Identify potential costs and benefits of conflict situations
- Summarize the IBR Model
- Apply the IBR Model to a conflict situation

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Conflict: Costs & Benefits

Emotional

Behavior

Performance

Finance

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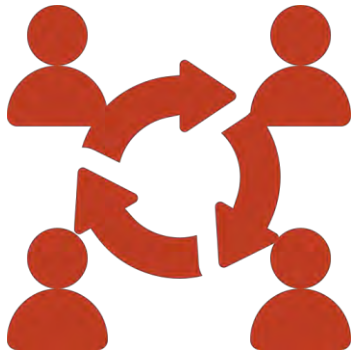
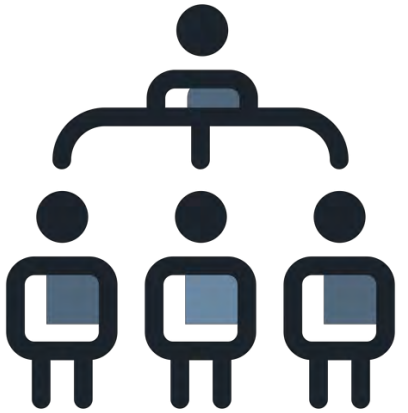
Identifying Conflict Situations: Past, Present, Future

Direct Report

Colleague



Team



Organization

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IBR Model Approach Benefits

Respectful

Positive

Non-confrontational

Mutual Outcome Focus

Collaborative Solutions

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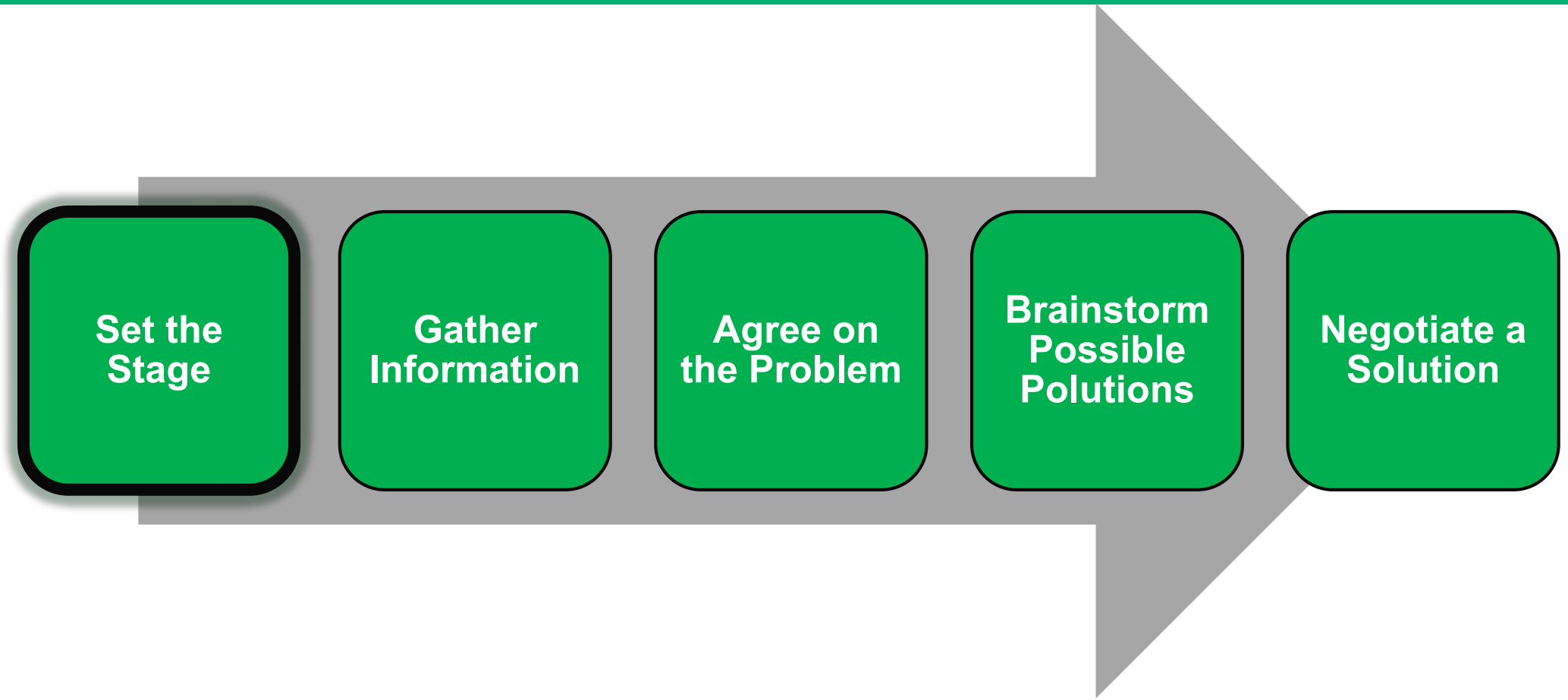
IBR Process



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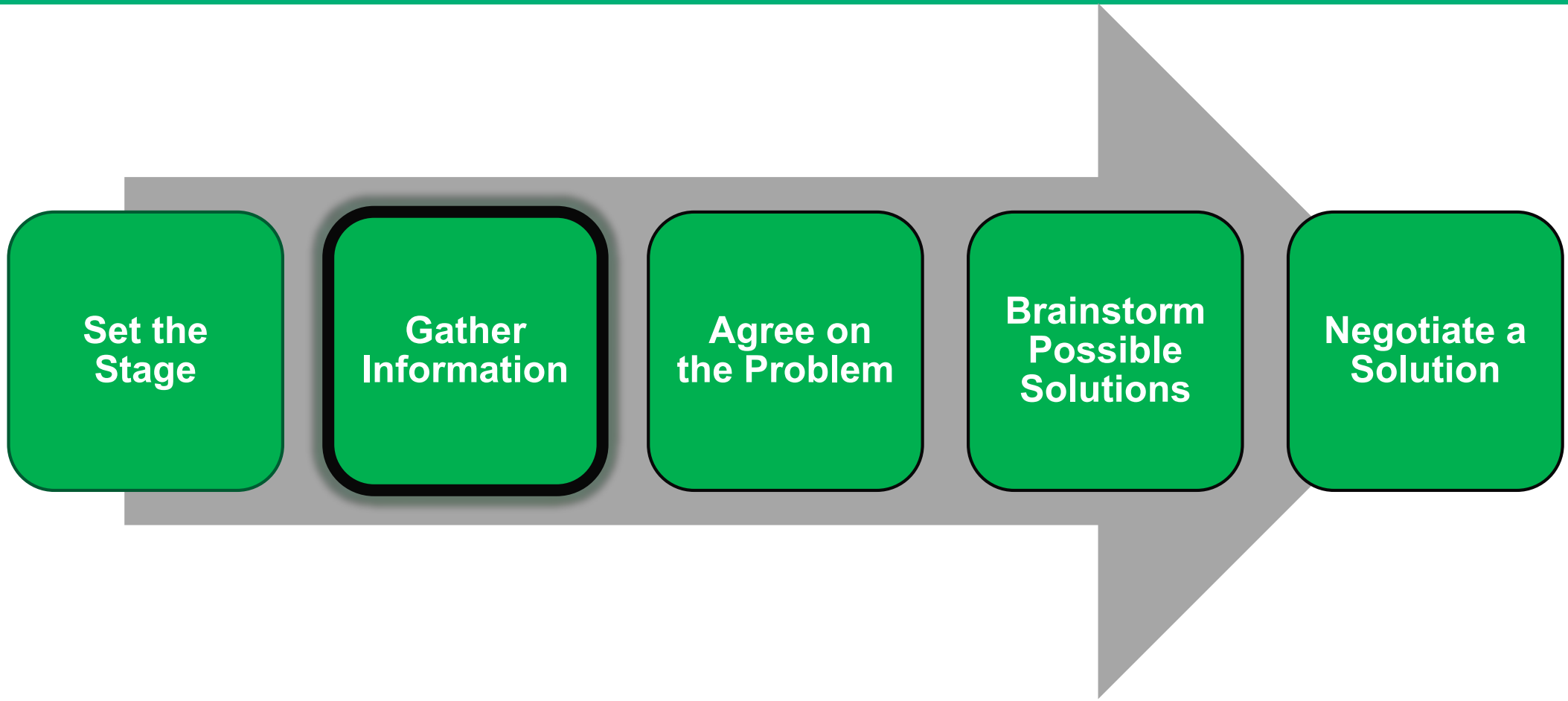
IBR Approach to Conflict Resolution



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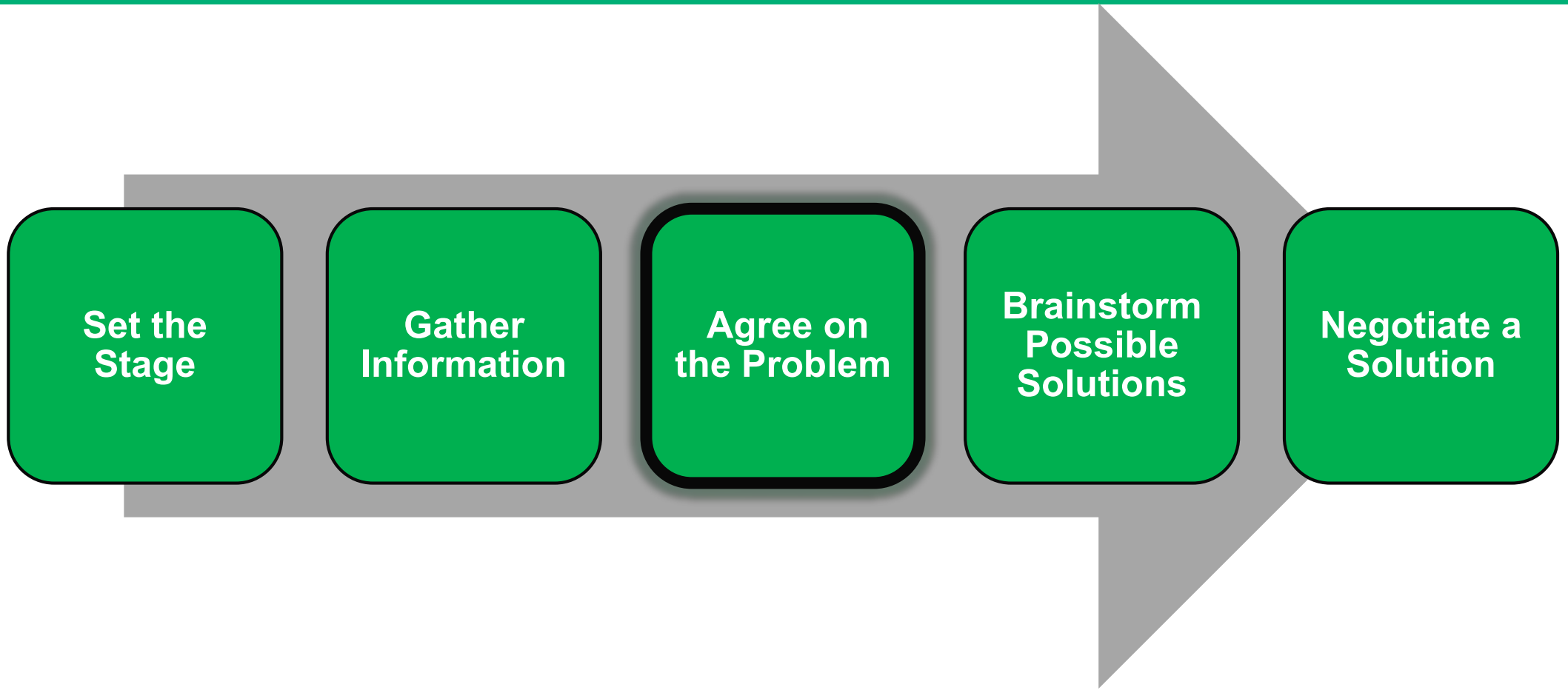
IBR Approach to Conflict Resolution



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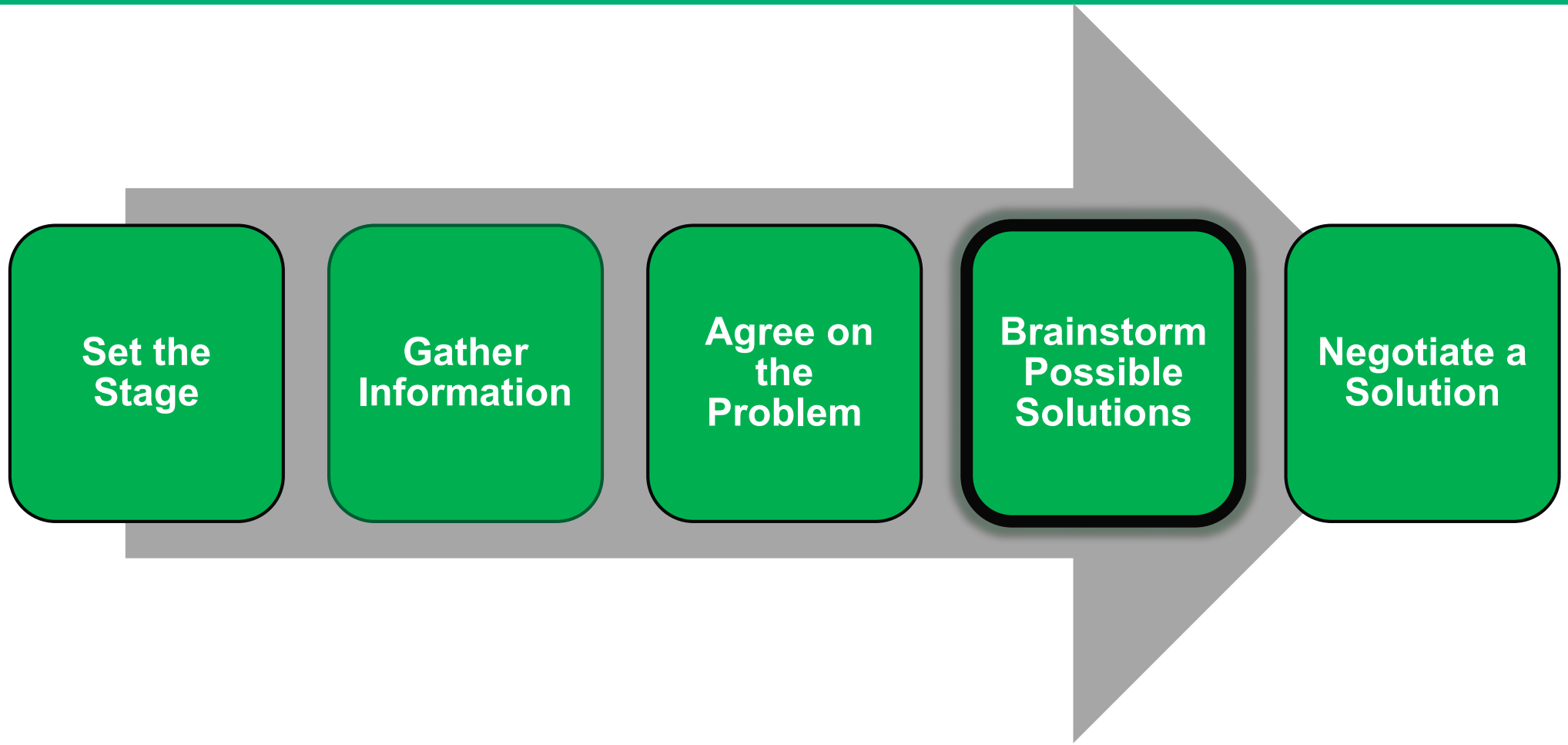
IBR Approach to Conflict Resolution



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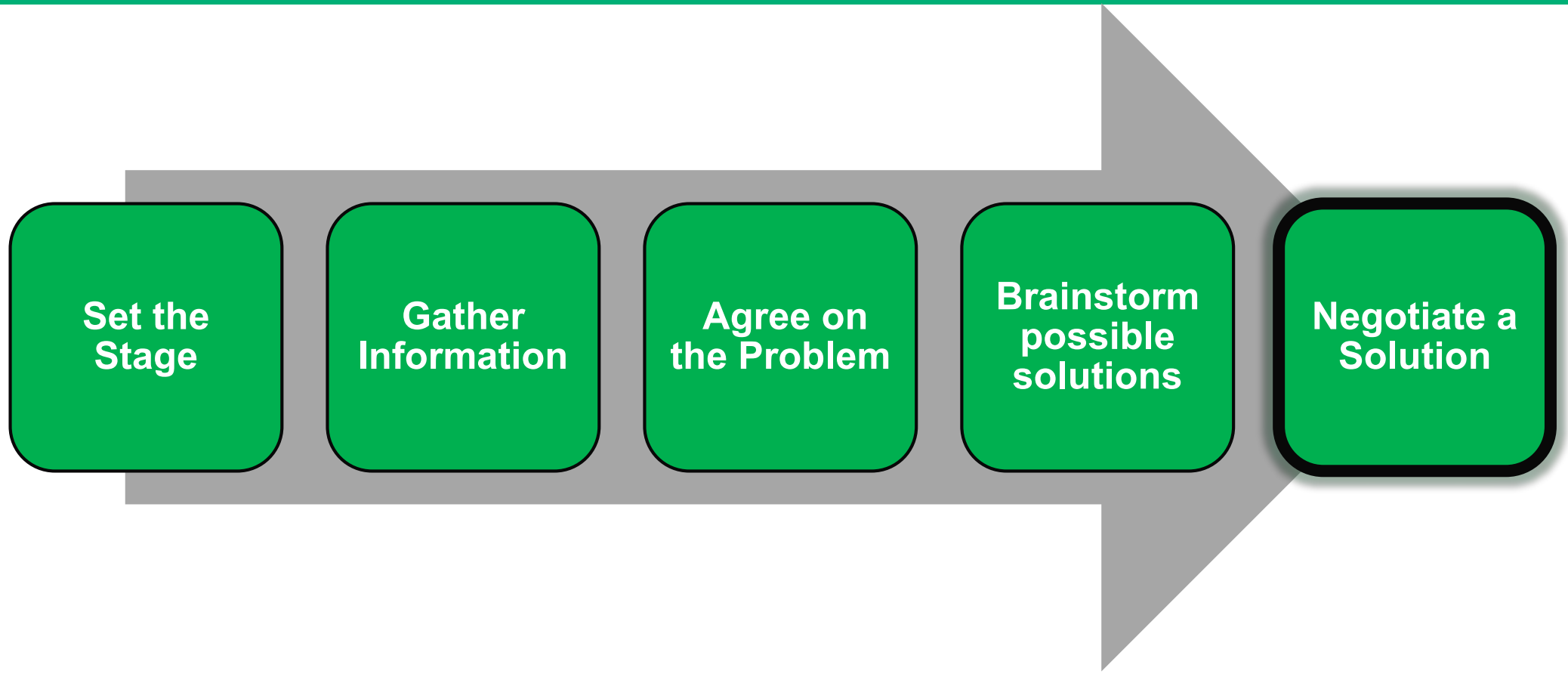
IBR Approach to Conflict Resolution



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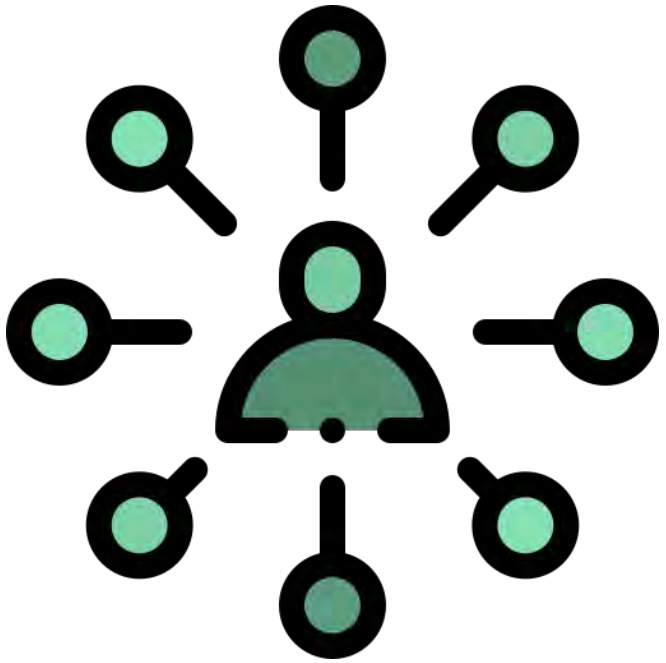
Working with the IBR Model: Breakout Rooms

01 In your breakout room work with a current or past conflict situation that one of your room's participants is currently experiencing or has experienced in the past.

02 Apply the IBR Approach to map out a strategy for working through the conflict.



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IBR Model Approach Benefits Quick Review

Respectful

Positive

Non-confrontational

Mutual Outcome Focus

Collaborative Solutions

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One Key Takeaway

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Excellence is just the beginning.

Rush University Medical Center

Working With the Media: Keys to Success

May 18, 2021

Tobin Klinger
Director of Media Relations

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What is Media Relations?

- Spokesperson
- Storytelling
- Relationship Building
- Developing Trust
- Responsive
- Transparent
- Goal Oriented
- Reactive and Proactive
- Liaison with media of all kinds

Media Relations is NOT

- Spin
- Alternative Facts
- Advertising
- Sales
- Completely Controlled
- Easy

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COVID-19: *Rush was built for this!*

National News Placements

- Washington Post
- New York Times
- CNN
- CBS National
- NBC National
- MSNBC
- The TODAY Show
- CBS This Morning
- Newsweek
- BBC
- Al Jazeera America

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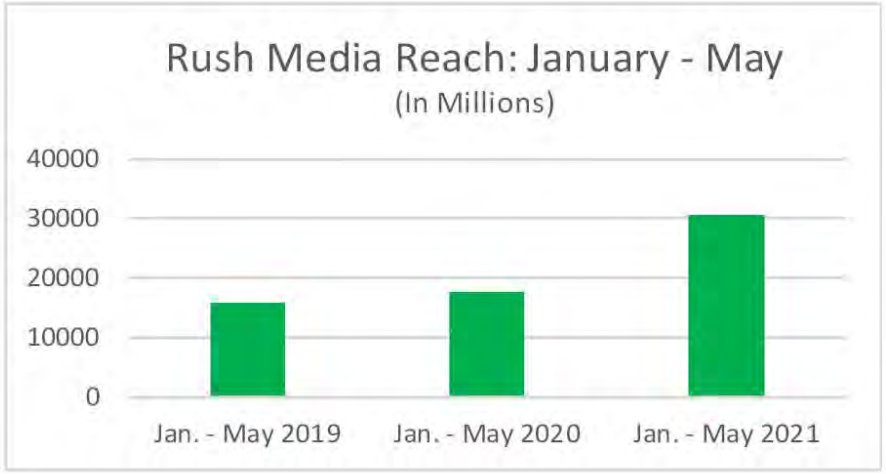
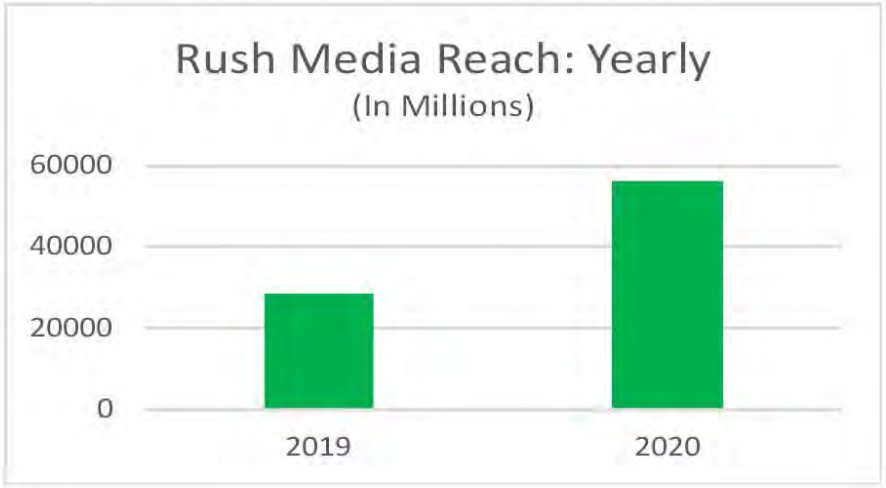
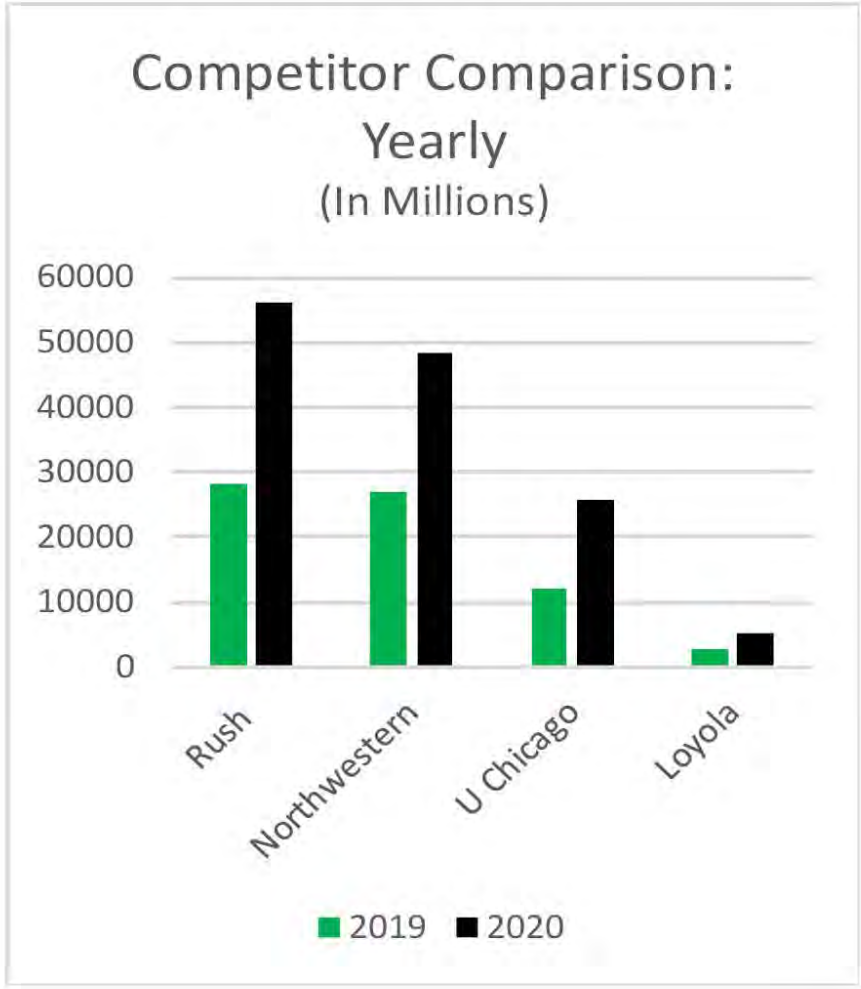
Rush Leads the Market







Consistent Leader:

Total number of stories featuring Rush

Total advertising equivalency for stories featuring Rush

Potential reach of stories featuring Rush

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Vaccine Clinic Earned Media

Media Numbers for Vaccine Clinic

- Rush vaccine prep stories: 1,400+
- CNN Placements: 20
- NBC News Placements: 10 National and 30+ for Affiliates

Building on the Momentum

Innovation and Research

- Regional Innovative Public Health Laboratory
- Telemedicine

Transforming Healthcare

- Rush BMO Institute for Health Equity
- COVID “Long Haulers” Clinic

Connecting Experts

We Want to Work with You!

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Media Relations:
Have Something to Say

When a reporter cold calls:

- Do NOT just start an interview
- Offer a return call
- Find out their deadline
- Find out scope of questions
- Call Media Relations!

Prepare, Prepare, Prepare

- 3 Key Messages
- Think about curveballs
- Don’t let them oversimplify

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How Media Relations Can Help

Storytelling

- Rush Stories
- News Releases
- Pitching
- Expert Sources
- Op-Eds
- Background Discussions
- Trends
- Constantly looking for where the puck is going to be

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Media Relations: What's in it for you?

Exposure for your work

- Raises awareness in your Field
- Strengthens Rush Brand
- Strengthens Your Brand
- Funding Agencies Like Coverage of Their Investments
- Helps with Future Funding

It's just plain fun!

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Question?

What are the risks?

- Oversimplification
- “When something takes off, it can take on a life of its own.”
- Misrepresentation
- Trolls

Media Relations will help every step of the way!

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Self-awareness and social awareness for effective problem solving

N.M. Russo-Ponsaran, PhD
Rush University Medical Center
Department of Psychiatry & Behavioral Sciences
Rush NeuroBehavioral Center

Teaching Academy
June 15, 2021

COI: I have no financial interests to disclose.

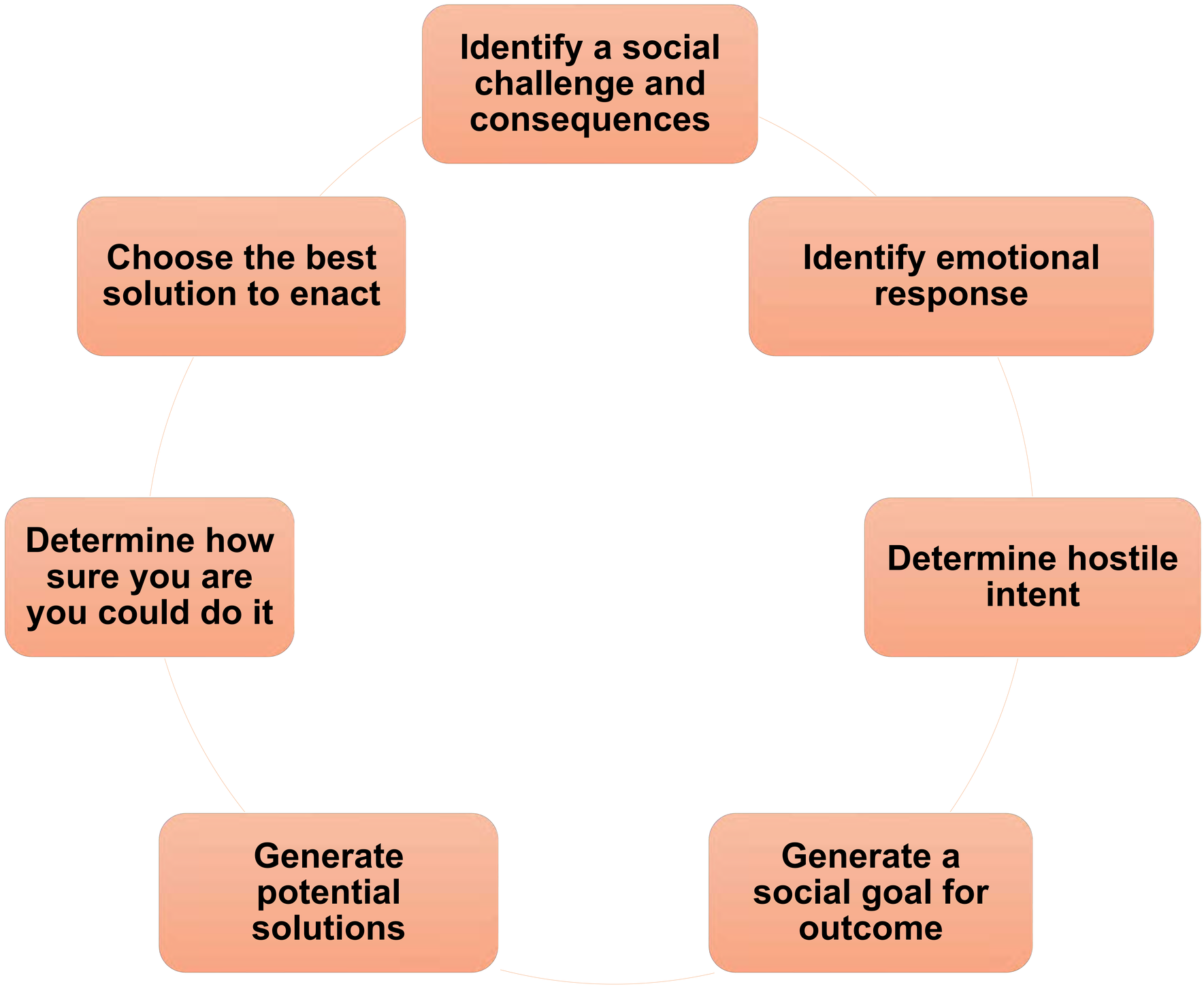
Objectives

1. Be able to identify steps involved in social problem solving according to the Crick and Dodge theory
2. Be able to identify internal and external factors that contribute to effective social problem solving

How we navigate challenging social situations

Crick and Dodge Social Information Processing Model

RUSH



Adapted from Crick & Dodge, 1994, 1996

Social problem solving

- Development of peer relationships
- Academic readiness, performance, and matriculation
- Classroom or workplace participation
- Community involvement
- Emotional and mental health outcomes

e.g., Dubow, Tisak, Causey, Hryshko, & Reid, 1991; Dusenbury, Yoder, Dermody, & Weissberg, 2019; Elias, 2019; Wentzel, 1991

Moving away from the deficit lens in understanding social problem solving

Experience matters

- Emotional response
- Past success
- Environment / types of situations
- Slow or fast thinking
  - Behavioral and emotional regulation
  - Effortful processing
  - Implicit Bias

Low frequency versus high frequency problem solving

Situations and context matter

Age-related changes in social problem solving

Age-related changes in social problem solving

- Young children

- Adolescence/Teen years

- In the workplace

- Aging
  - Decline in working memory, processing speed
  - Increase in experiences
  - Relationship to perceived self-efficacy

e.g., Artistico et al., 2003; Mienaltowksi 2011

CASEL 5

- SELF-AWARENESS
- SOCIAL AWARENESS
- SELF-MANAGEMENT
- RELATIONSHIP SKILLS
- RESPONSIBLE DECISION MAKING

Self Awareness

- Able to understand one's one emotions, thoughts, and values and how they influence behavior across contexts.
    - Self-efficacy
    - Emotion response
    - Assets and biases

www.casel.org/what-is-SEL

Social Awareness

- Able to understand the perspectives of and empathize with others, including those from diverse backgrounds, cultures, and contexts

- Understanding broader historical and social norms for behavior in different settings

- Nonverbal emotion recognition

- Social perspective-taking

www.casel.org/what-is-SEL

How does this fit in the workplace?

- Collaborative problem-solving
- Difficult conversations
- Inclusion
- Showing leadership

THANK YOU

For more information, please contact:
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