Engaging Families in I-PASS to Improve Safety

Alisa Khan, M.D., M.P.H.
Jennifer D. Baird, Ph.D., M.P.H., M.S.W., R.N.
Dale A. Micalizzi, A.A.S.
Theodore C. Sectish, M.D.
Nancy D. Spector, M.D.
Disclosures

Drs. Spector and Sectish have

• Received grant funding from the US Department of Health and Human Services, Agency for Healthcare Research and Quality (AHRQ), and Patient Centered Outcomes Research Institute (PCORI).

• Consulted with and hold equity in the I-PASS Patient Safety Institute, which seeks to train institutions in best handoff practices and aid in their implementation. They have received monetary awards, honoraria, and travel reimbursement from multiple academic and professional organizations for teaching and consulting on physician performance and handoffs.

Dr. Khan has

• Received grant funding from the Agency for Healthcare Research and Quality (AHRQ) and the Patient Centered Outcomes Research Institute (PCORI).

Dr. Baird has

• Received grant funding from the Agency for Healthcare Research and Quality (AHRQ).

Drs. Spector, Sectish, Khan, and Baird, and Ms. Micalizzi will

• Present copyrighted materials and have obtained permission from Boston Children’s Hospital and the I-PASS Study Group.

• Not discuss unapproved or off-label, experimental or investigational use.
Overview

• Introductions
• Setting context
• Patient and family centered pilot study
• Curriculum development
• Roles and inclusion of nurses, patients, and families
• Focus on health literacy
• Practice
• Patient and family centered multi-center study
• Overcoming challenges to implementation
Alisa Khan, M.D., M.P.H.

- Instructor in Pediatrics
- Pediatric Hospitalist and Health Services Researcher
- Project Leader, Patient and Family Centered I-PASS
- Boston Children’s Hospital
- Harvard Medical School
Jennifer Baird, Ph.D., M.P.H., M.S.W., R.N.

- Co-chair, Patient and Family Centered I-PASS Nursing Advisory Council
- Director, Institute for Nursing and Interprofessional Research
- Children’s Hospital Los Angeles
Dale Micalizzi, A.A.S.

• Co-chair, Patient and Family Centered I-PASS Family Advisory Council

• Founder, Justin’s HOPE Project at the Task Force for Global Health
Theodore C. Sectish, M.D.

- Professor of Pediatrics
- Vice Chair for Education and Program Director
- Department of Medicine Chair of Medical Education
- Boston Children’s Hospital
- Harvard Medical School
Nancy D. Spector, M.D.

- Professor of Pediatrics
- Executive Director, Executive Leadership in Academic Medicine
- Associate Dean for Faculty Development
- Drexel University College of Medicine
TRIZ Exercise

The Worst Possible FCR Experience Ever

Nancy Spector, M.D.
TRIZ Exercise

• Describe the features of the worst possible bedside rounds
  – Individual reflection for 1 minute
  – Pair-share for 2 minutes
  – Table share for 4 minutes
  – Large group shout out for 5 minutes
“A wise family doctor once told me something that has stuck with me through the years. It went something like this: ‘Hospitals are not set up for patients. They are set up for doctors.’ As I struggled through years of care with my children, I saw firsthand how true this statement really was.”

-Mother of 2 children with cystic fibrosis
Patient Safety in the United States

*Ongoing Challenges*

Alisa Khan, M.D., M.P.H.
Patient Safety in the US

Ongoing Challenges

- **Institute of Medicine, 1999**
  - 44,000-98,000 deaths per year due to adverse events

- **Office of the Inspector General, 2010**
  - 180,000 deaths per year due to adverse events

- **North Carolina Patient Safety Study, 2010**
  - 2341 randomly selected admissions from 10 randomly selected hospitals statewide

![Graph showing harms per 100 admissions from 2002 to 2007](image-url)
Why Communication Matters

Root Causes of Sentinel Events

Communication - 500
Assessment - 420
Physical Environment - 360
Information Management - 340
Operative Care - 240
Care Planning - 120
Continuum of Care - 80
Medication Use - 60
Special Interventions - 40
Anesthesia Care - 20

Handoff Bundle Intervention

Boston Children’s Hospital

Communication and Handoff Skills Training

Mnemonic

Redesigned Verbal Handoff Process

Computerized Handoff Tool (Unit 1 only)

= Resident Handoff Bundle (RHB)

Medical Errors

45.9%

Preventable Harms

54.5%

From Pilot Study to Multi-center Intervention Project...

- Multisite study to implement refined handoff bundle for resident physician change of shift handoffs at 9 pediatric institutions.
**Communication and Handoff Skills Training**
- For Residents
- For Faculty
- Adult Learning Principles
- Multimodal Delivery

**Mnemonic**
- Simplified after pilot testing
- Emphasizes most essential elements of handoff

**Printed Handoff Tool**
- Integrated into every EMR
- Structured template if no EMR

**Redesigned Verbal Handoff Process**
- Quiet, Private, Group Handoff

**I-PASS Bundle**

**Campaign and Culture Change**
- Continual Reinforcement
- Faculty Engagement
I-PASS Mnemonic

I  Illness Severity
P  Patient Summary
A  Action List
S  Situation Awareness & Contingency Planning
S  Synthesis by Receiver
## Primary Outcome

### Medical Error Rates

<table>
<thead>
<tr>
<th></th>
<th>Number of Errors (Per 100 patient admissions)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-Intervention (n=5516 admissions)</td>
<td>Post-Intervention (n=5571 admissions)</td>
</tr>
<tr>
<td>Overall Rate of Medical Errors</td>
<td>24.5</td>
<td>18.8</td>
</tr>
<tr>
<td>Preventable Adverse Events</td>
<td>4.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Near Misses/Non Harmful Medical Errors</td>
<td>19.7</td>
<td>14.5</td>
</tr>
<tr>
<td>Non-preventable Adverse Events</td>
<td>3.0</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Starmer NEJM 2014.
Communication Interventions

• Interventions to improve *intra-professional* communication have been shown to improve patient *safety*

• Communication interventions—including I-PASS—have not typically included families and other members of the *inter-professional* team

• Little is known about the impact of family-centered and inter-professional processes on *safety and other outcomes*
Family Centered Care

• Multiple organizations call for family-centered processes of care
  – American Academy of Pediatrics
  – Institute of Medicine
  – Accreditation Council for Graduate Medical Education
  – Society of Pediatric Nurses

• Implications for safety, quality, patient experience
Families as Vigilant Partners in Care

• Intimate knowledge of historical background
• Motivation for a good outcome
• Availability
• Proximity
• Perhaps particularly so in pediatrics

**Family Update Sheet**

**Child’s Name:** Mary Jones

**Reason your child was admitted to the hospital:** osteomyelitis (bone infection)

**Date:** 6/19/14

**Today’s updates:**
- antibiotic (vancomycin) dose increased
- infectious disease doctors consulted
- today’s blood cultures still negative (not growing bacteria)
- no fevers since yesterday morning

**Care plan for the next 12 hours:**
- draw antibiotic level from blood tonight
- draw blood culture if has fever tonight
- nothing to eat or drink after midnight tonight
- MRI in the morning
- wait for infectious disease recommendations (in the morning)

**Things to look out for:**
- fevers
- worse pain or swelling
- low blood pressures
- positive blood culture

---

**Nighttime Communication Study**

**Nurse-Resident Brief**

**Family-Resident-Nurse I-PASS Huddle**
Nighttime Communication Study

Findings

- Parent communication with nighttime providers and perceptions of communication between night providers drives *overall experience*¹
- Parents and night-team residents lack *shared understanding* 45.1% of the time²
- 15.3% of parents reported parent-provider *miscommunications*; they were 5.3 times more likely to report *errors* and 80% less likely to report *top-box experience*³
- Parent and provider experience and shared understanding improved following intervention⁴

³Khan et al. PHM Platform. 2016.
⁴Khan et al. PAS Poster. 2016.
Key Strategies in the Development of the Educational Interventions

*Expertise, Structure, Process, Faculty Development, and Campaign*

Nancy D. Spector, M.D.
Theodore C. Sectish, M.D.
Patient and Family I-PASS Study Group

Team of Content Experts

• Educators
• Hospitalists
• Health services researchers
• Residency program leaders
• Content experts
  – Simulation
    • Development of videos and online content
  – Faculty development
  – Health literacy
    • Includes expertise from medical interpreters
  – Nurse Advisory Council
  – Family Advisory Council
  – TeamSTEPPS™ experts
**I-PASS Logic Model**

**Resources**
1. Grant support
2. PRIS support
3. Executive Council support
4. Input:
   - Nursing Families
   - Health Literacy Experts
   - Communication Experts
   - FCR Experts

**Activities**
1. Educational Framework
2. Guiding Principles
3. Development of Bundled Intervention
4. Development of Curriculum
5. Incorporation of Nursing and Family Input
6. Use of Interprofessional Team Activities
7. Use of Interprofessional Simulation Activities

**Outputs**
1. Number Trained: Family Members, Physicians, Nurses, Other Staff
2. Number Sessions
3. FCR Observations
4. Interprofessional Training Sessions
5. Redesign of FCR
6. Development of Curricular Modules
7. Presentations
8. Publications

**Short Term Outcomes**
1. True FCR
2. Written Care Plan for Families Received Daily

**Long Term Outcomes**
1. Decreased Medical Errors
2. Decreased Family Error Reports
3. Decreased Team Error Reports
4. Shared Mental Model Achieved
5. Enhanced Family Engagement
6. Improved Care Experience: Physicians, Nurses, Patents/Families
7. Culture of Patient Centeredness
8. Culture of Patient Safety
9. Improved Workflow
10. Improved Education
Targeted Learners for the Intervention

- Residents
- Medical students
- Nurses
- Faculty
- Patients and families
Educational Strategies

• Use the 6-Step Process for Curriculum Development
  – Multiple learners targeted
• Incorporate educational frameworks and theories into design
• Introduce principles of health literacy into curriculum
• Use simulation to promote understanding and retention
• Employ multi-modal delivery of curricular concepts
Basic Concepts of Communication

Health Literacy Content Expertise

• Recognize differences in learning styles

• Demonstrate fluency over the communication spectrum
  – Inter-professional
  – Patients and families

• Incorporate principles of health literacy

• Articulate roles of inter-professional team members

Shared Mental Model
Communication Spectrum

- Medically rich language and terms
- Highly synthesized concepts
- Medical shorthand

- Living room language
- Focus on 2-3 concepts
- Simple, clear sentences

Inter-professional Understanding

Patient and Family Understanding
**Multi-modal Delivery of Curriculum**

*Reinforces Knowledge*

- **Three hour workshop**
  - Brief didactics
  - Trigger videos
  - Interactive small groups
  - Reflective exercises
  - Simulations

- **Refresher courses**
  - Just-in-time module
  - Faculty development modules

- **Campaign**
  - Pocket cards
  - Posters, computer screen-surrounds, flip charts
Educational Intervention Bundle

• Focuses on patient and family centeredness
• Incorporates standardized communication strategies
• Facilitates a shared understanding among patients, family members, and providers
<table>
<thead>
<tr>
<th>I</th>
<th>Illness Severity</th>
<th>Better, worse, or about the same</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Patient Summary</td>
<td>Typically problem-based</td>
</tr>
<tr>
<td>A</td>
<td>Action List</td>
<td>To-do list</td>
</tr>
<tr>
<td>S</td>
<td>Situation</td>
<td>Things family and patient should look out for</td>
</tr>
<tr>
<td></td>
<td>Awareness &amp;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contingency</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>Synthesis by</td>
<td>Read-back by family or other team member</td>
</tr>
<tr>
<td></td>
<td>Receiver</td>
<td></td>
</tr>
</tbody>
</table>
Key Aspect of Curricular Development

Including the Voice of Parents

- Maintained focus of family-centeredness
- Ensured engagement
- Promoted shared understanding
Challenges We Faced

Nurses and Faculty

• Ensuring the involvement and engagement of nurses
  – Morning workflow interfered with their availability
  – Need a defined role in the FCR discussion

• Resistance by faculty to change focus of rounds
  – Worry about compromising teaching
  – Desire to include medical terms and discuss data
  – Need to critique assessments by learners
Nurse Engagement

Engaging Nurses as Active Participants on Family-Centered Rounds

Jennifer Baird, Ph.D., M.P.H., M.S.W., R.N.
Guiding Principles of Nurse Engagement

• Nurses are key members of the team on FCRs
• Nurse input is critical to development of a viable plan of care for patient and family
• Nurses should speak early and often on FCRs
Important Considerations for Nursing

- Early identification of *nursing champions*
  - Guide decision-making throughout the process
  - Representation from clinical nurses and nurse leaders

- Dissemination of *education* to nursing staff
  - Format and length
  - All shifts or just day shift?

- Adaptation of nursing and team *workflows*
  - How will nurses consistently get to FCR, given competing demands of morning schedule?
Roles of Nurses on FCR

• **Coach** patients and families
  • Orient and prepare them to FCR
• **Advocate** for patients and families
  • Address their concerns, if they are unable or uncomfortable participating in FCR
• **Speak early** to provide critical information
  • Overnight events and concerns
  • Objective data (VS)
• **Speak often** to share thoughts or concerns
• **Ask questions** to create a shared mental model
Patients and Family Engagement

*Family Involvement in Designing, Training, and Implementing Patient and Family Centered I-PASS*

Dale Micalizzi, A.A.S.
Family Involvement

- A central tenet from Day 1
- Essential throughout the evolution of the project
- Has molded the project significantly
Family Advisory Council

• Each pilot site identified individuals to participate in the FAC

• Chaired by national patient advocates
  – Parents with background in patient engagement and patient safety

• FAC meets monthly

• Parents report back to quarterly “large group” calls
Characteristics of the FAC

• Parent members
  – Have a wealth of individual experiences with healthcare and their own children
  – Work with family advisory councils at their own children’s hospitals
  – Actively address issues of diversity
    • Language, culture, age, ethnicity, socioeconomic status
  – Give enormously of their voluntary efforts
Some of our I-PASS Study Patient & Family Advisory Council Members
Family Engagement at All Levels

• Kickoff meeting in Boston
• I-PASS committees
• Development of
  – Intervention
  – Curriculum
  – Patient questionnaires
  – Rounds Report, family brochure, other patient materials
• Advising and participating in trainings
• Observation of rounds
• Consultation and feedback to all aspects of project work
• Scholarship
  – Manuscript preparation
  – National presentations
Questions Posed to FAC

• Family perspective on matters such as:
  – Teaching on FCRs
  – Health literacy
  – Synthesis on FCRs
  – Adolescent patients
  – Limited English Proficiency
  – Interpreters
“In our hospital, where the majority of care providers and nursing staff are white and well-educated, I wonder whether there may be some specific challenges when we ask a parent of a different race/ethnicity/educational level/SES to synthesize for us?”
Sample FAC Member Answers

• “Patients don’t expect you to be them, but they do expect you to put yourself in their shoes and treat them as if they are your sister or brother or mom. If you come at it not trying to relate to that person in anything more than an empathetic way, you will never miss the mark.”

• “Families are the caregivers outside of the hospital. Staff members who acknowledge that every patient and their family bring value to the team and are essential to the patient’s healing, will overcome any obstacles of patients that don’t look or live like they do. It’s not what you say, it’s how you say it.”
Quote from Family Advisor

• “I am so encouraged by the efforts of the I-PASS team to involve, engage and truly listen to the patients and their families. Down to every detail, [they have incorporated] many perspectives and experiences and tailored the project to make a real difference in the safe treatment of patients through family centered rounds and clear and compassionate communication.”
Quote from Family Advisor

• “It has been an **honor and a joy** to participate as a family advisor in the I-PASS project. Dealing with a serious illness and regular hospitalizations often robs us of our energy and opportunity to be givers beyond the patient we are loving and caring for.”

• “The opportunity to take our experiences and **share our strengths and struggles** for the benefit of all has been such a gift ... I feel I have received more than I have given.”
Tips for Successful Collaboration with Families

• Include everyone
• Be sensitive to family time availability
• Engage families broadly at all levels
  – Science, training, education, intervention development, testing, etc.
• Appreciate expertise of family members
  – Ask a lot of questions
  – Listen and act
• Build substantive, continuing partnerships
• Recognize there is always a diversity of opinions
Comments from Patient and Family Centered I-PASS Leadership at End-of-Project Study Group Meeting

• Alisa (Project Leader): Thanks to the FAC for all you have done. It was an amazing experience. It has changed how I view the research I do and the care I provide to patients.

• Nancy (Chair of Executive Council): I echo Alisa. Your participation made the project so much better.
Comments from FAC Members at End-of-Project Study Group Meeting

• Liz: I am so thankful to have been involved with the group. Thanks to Dale and Helen for their leadership.
• Sharon: Thanks to all of the FAC members. I enjoyed working with both the large group and the local group. I felt that our viewpoints were always valued.
• Helen: The I-PASS study has been a joy to work with. The degree to which you have been receptive to the voices of the family advisors is almost unique in my experience. I think that I-PASS should be considered a national model for collaboration.
• Dale: Being co-chair for the I-PASS FAC has been a unique experience for me, as well. I had the opportunity to see what real team work looks and feels like. The FAC members were taken seriously and their comments and concerns were valued and acted upon. We inspired the team to think differently about what really matters to the family. They cared.
• Peggy: We felt really listened to. It has been powerful.
A-B-C as Easy as 1-2-3

*Integrating Health Literacy into Hospital Communications*

Alisa Khan, M.D., M.P.H.
Health Literacy: A Definition

Healthy People 2010

- Obtain, process, understand basic health information and services
- Make appropriate health care decisions (act on information)
- Access/navigate healthcare system*

*not in the Healthy People 2010 definition but functionally very important
Components of Health Literacy

Cultural and Conceptual Knowledge

Listening

Speaking

Writing

Reading

Numeracy

Oral Literacy

Print Literacy

IOM, Health Literacy, 2004
Health Literacy of America’s Adults

78 Million Have Below Basic or Basic Health Literacy

Poor Outcomes Associated with Low Health Literacy

**Worse knowledge / skills**
- Asthma, hypertension, birth control knowledge
- Food label and portion size understanding
- Emergency department instructions

**Worse behaviors**
- Smoking
- Substance abuse
- Behavioral problems
- Medication adherence

**Poorer health outcomes/ Suboptimal health services use**
- General health status
- Mortality
- Hospitalization
- Emergency department use
- BMI
- Diabetes control
- HIV control
- Depression
- Mammography
- Pap smear, STD Screening
- Immunizations
- Cost

Physicians’ Influence on Health Literacy

Health literacy depends on the complexity of demands made on the individual. If information is difficult or tasks are complex, health literacy will be lower.

- Skills/Abilities of patients
- Health Literacy
- Demands/Complexities of Health care system
AMA Health Literacy Video
Universal “Precautions”

*Universal Communications Principles*

- Everyone benefits from clear information
- Many patients are at risk of misunderstanding, but they are hard to identify
  - “You can’t tell by looking”
- Higher literacy skills ≠ understanding
- Health literacy is a state, not a trait
- Language, language, language
Health Literacy Challenges

*During Family Centered Rounds*

• Variable
• Often doctor-focused
• Replete with medical jargon and complex language
• Unexplained data
• Families speak at the end ("Do you have any questions?")
• Closed-ended questions
Health Literacy Best Practices

1. Plain language
2. Teach-back/ “Chunk and check”
3. Effective written communication
1. Plain Language

- Common everyday language; “living-room language”
- Limit medical jargon (fever vs. febrile; medicine vs. medication)
  - If using medical words, explain them
- Slow down
- Organize into 2-3 key concepts (“chunks” of information); break down into short statements
- Action-oriented language
- Focus on “need to know to do” information vs. “nice to know”
Use Everyday Language – Not Jargon

How might you say it differently?

<table>
<thead>
<tr>
<th>Jargon</th>
<th>Every Day Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acutely</td>
<td>All of a sudden or quickly</td>
</tr>
<tr>
<td>Edema</td>
<td>Swelling</td>
</tr>
<tr>
<td>Adversely Affect</td>
<td>Make Worse</td>
</tr>
<tr>
<td>Respiratory Distress</td>
<td>Trouble breathing</td>
</tr>
<tr>
<td>Abdominal Pain</td>
<td>Belly pain</td>
</tr>
<tr>
<td>Extremity</td>
<td>Leg, Arm, etc.</td>
</tr>
<tr>
<td>PRN</td>
<td>When you need it</td>
</tr>
<tr>
<td>Chest Film</td>
<td>Chest X-ray</td>
</tr>
</tbody>
</table>
2. “Teach-back”

- Patients say in their own words what they understood
  - “I want to be sure I explained everything clearly, so can you please explain it back to me so I can be sure I did?”
  - Do not ask:
    - “Do you understand?”
    - “Do you have any questions?”
  - Not just “repeat” back

- “Chunk and check”: for >2 concepts

- Provide additional info in a way that incorporates their perspective and offers positive feedback (never say “no”)
Final Check-In

Encourage Questions and Motivation

- Encourage Questions
  - “What questions do you still have?”
  - “That was a lot of information. What do I need to go over again?”
  - *Avoid* asking, “Do you have any questions?” (often leads to a quick “no,” even if questions)
3. Effective Written Communication

- Similar plain language principles as spoken language
  - Limit medical jargon; explain medical words
- Active voice, action-oriented
- Info in order that makes sense
- Focus on 2-3 key points
  - “Need to know,” not “nice to know”
- Simple Language
  - Simple words (1-2 syllables)
  - Short sentences (4-6 words → 10 tops)
  - Short paragraphs (2-3 sentences)
How to Use Printed Material

• Use to reinforce information presented in oral presentation

• Use as prop, discuss with patient, circle or mark important areas
  – *Don’t just give out without explaining!!!*

• Encourage parents to add notes
Readability

- 6th to 8th grade level for average reader
  - 4th to 5th grade level for low literacy patients

- Readability based on:
  - Sentence length and number
  - Word length (syllables, characters):
How to Measure Readability

• “Eyeball”

• MS Word
  – Flesch-Kincaid grade level...add 2 grades, esp. at lower grade level
  – Flesch Reading Ease.....
    • Score from 0-100 (higher score easier to read)
    • Score of 60-70 or higher should be OK
  – Enable in Word
    • File—>Options—>Proofing—>”Check grammar with spelling”—>”Show readability statistics”
ONE WAY TO DO THAT ARE PATIENT AND FAMILY CENTERED ROUNDS.

What is Patient and Family Centered Rounds? Patient and Family Centered Rounds are a way of getting care of your child. Each morning, the entire team that is doing and work with you to take care of your child and students, and others who are in the hospital. The team will want to have any questions.

Who will be coming to my child's room? When the team comes to your child's room, there will be two people who you can see and there is. Usually, the following people will be there:
• Nurse
  • Helps with your child’s day-to-day care needs (like giving medicines).
  • Works very closely with you and the whole team.
• Medical Student

PATIENT AND FAMILY
I-PASS
Better communication, safer care.
Caitlin is in less respiratory distress. When we examine her chest, there is less wheezing and somewhat less retractions. Caitlin now needs inhalation therapy with bronchodilators every 3 hours. She is on 1 liter of oxygen by nasal cannula. When she requires therapy every 4 to 6 hours and no longer requires oxygen she will be able to go home.

Today we will try to extend the time between bronchodilator therapy to every 4 hours and monitor her respiratory distress.

We will start to decrease the frequency of bronchodilator therapy and decrease the liters of oxygen she is receiving by nasal cannula.

Tell us if you think she is in more or less respiratory distress. Encourage her to eat and drink.

Encourage Caitlin and keep her mood positive.
Caitlin is breathing better. When we listen to her chest, we hear less wheezing and other sounds. Caitlin now gets breathing treatments every 3 hours and is on a small amount of oxygen through her nose. When she needs those treatments only every 4 to 6 hours and no longer needs oxygen, she will be able to go home.

Today we will try to increase the time between her breathing treatments to every 4 hours and check her breathing.

We will increase time between breathing treatments and give her less oxygen through her nose.

Tell us how you think she is breathing and if she is working harder to breathe. Encourage her to eat and drink.

Encourage Caitlin and help her to go to the playroom.

**6th grade reading level**

**Much less medical jargon, less “numbers”**

**Somewhat less specific information**

**More actionable regarding parents’ role**
Considerations For Effective Use

Rounds Report

• Engage the family
  – Create opportunities for discussion
    • Encourage and support them to use the tool

• Use universal health literacy precautions
  – Don’t estimate health literacy level
  – Assume low health literacy level

• Legibility
  – Neatness matters
    • Consider typing, if on paper
  – Avoid jargon and abbreviations (Latin or English)

• Drawings (printed or hand-drawn)
  – Concepts such as vesico-ureteral reflux or pelviectasis can be illustrated in a drawing
An Example of Family-Centered Rounds
### QI Observation Tool: Health Literacy

What term best describes the extent to which the behavior or element listed below was observed?

<table>
<thead>
<tr>
<th>Behavior / Element</th>
<th>N/A / Unable to assess</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a moderate extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Questions directed towards patient are open ended when appropriate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Team responds appropriately to non-verbal cues from family members</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Explained unfamiliar medical terminology (e.g., vancomycin, GBS meningitis)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Use of easy to understand sentence structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Tangential or unrelated information presented / discussed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Circle the phrase that best describes the pace of rounds:

- Very slow pace/ very inefficient
- Slow pace / inefficient
- Optimally paced / efficient
- Fast / pressured pace
- Very fast / very pressured pace

7. What was the most effective aspect of spoken communication with the patient and family on rounds?

8. What is the most important thing that could be done to improve spoken communication with the patient and family on rounds?

9. Additional Comments
Take Home Points

• Keep in mind the importance of health literacy in oral and written communication
  – Even you or I might have trouble processing information when stressed

• Health literacy is a “state,” not a “trait”
  – Even the most highly educated people often prefer receiving information in plain language
Final Thoughts

• Language
• Universal precautions regarding health literacy
• Numeracy
• Teachback, Ask-Tell-Ask, Chunk-and-Check
• It’s our responsibility to decrease the demands of the health care system
• Not just being nice. Really makes a difference!
Resources

Plain Language Pediatrics
Health Literacy Strategies and Communication Resources for Common Pediatric Topics
Mary Ann Abrams, MD, MPH, FAAP
Benard P. Dreyer, MD, FAAP
Editors

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®
Simulation Exercises

Experiencing Different Perspectives in Practice

Nancy D. Spector, M.D.
Theodore C. Sectish, M.D.
Why Role Plays?

• Means to promote skill acquisition
• Allow learners to
  – Practice new behaviors
  – Gain insight into other roles
  – Define problems and develop solutions
How Do You Design Them?

• Clear goals & objectives
• Consider patient complexity carefully
• Attempt to allow them to be universal and real. Pay attention to design
• Time limits with chance for debriefing and discussion
How Are They Utilized?

• Value for Participants
  – Chance for hands-on practice in a safe environment
  – Opportunity to explore different roles

• Value for Faculty
  – Chance to consider how to help residents handle handoff challenges
  – Opportunity for practice with observation tool
Preparation Before

• Success depends on facilitator preparation
  • Instructions in Faculty Guide encourage resident participation in role
  • Evaluation tool used to facilitate discussion
Preparation For After

• Key to success is often debriefing afterwards

• Facilitators are prepared to
  – Discuss openly afterwards
  – Allow debriefing of emotions
  – Ask open ended questions
  – Summarize experience
I-PASS
An Organizing Framework

I  Illness Severity
   – Getting better, getting worse, about the same

P  Patient Summary
   – Problem oriented
   – Ongoing assessment and plan

A  Action List
   – To-do list

S  Situation Awareness & Contingency Planning
   – Knowing what’s going on
   – Planning for what might happen

S  Synthesis by Receiver
   – Check-back: receiver summarizes what was heard, asks questions, restates key action/to do items
Illness Severity

• Articulate Illness Severity to assist in the development of a shared mental model

• Provide the family an opportunity for their assessment of illness severity

• May reveal a discordant understanding and offer an opportunity for clarification

• Example questions
  – “How is your child doing today? Better, worse or about the same?”
Introductions First

• Determine location – In or outside room
• Team introductions
  – Either presenter introduces or self introductions
• Invite parents and patients to join FCR
  – Reinforces patient and parent roles as team members
• Reviews concepts and goals of FCR
• Reviews time allotment and future check-ins
Family Concerns

• Provide the family with an opportunity to raise questions and concerns
• Discuss concerns in the beginning to promote the development of a shared mental model
Encouragement and Engagement

Patients and Families to Speak First

• “We always like to start off rounds knowing the things that are most important to you to discuss with us this morning. What are you most concerned about today?”

• “We have reviewed the admission notes and the overnight vital signs. What new concerns or questions have come up this morning?”

• For families/patients you KNOW you need to “contain” the conversation:
  – “This morning, when I came in to examine your child, you mentioned ___. Is anything else concerning you? Okay, let’s talk through the plan and we will make sure to address that.”
  – “We have 15 minutes to talk through things this morning, but if there are more things to discuss or that you are worried about, Dr. _____ will be back later this morning.”
Patient Summary

• *Problem* Based Discussion
  – Start with the one liner
  – Discuss priority problems
  – Use *plain language* if *SOAP* note format used

• Check back from patient/family
• Typically should happen after situation awareness and contingency planning

• *For complex patients, check back also needed immediately after a detailed patient summary* if *SOAP* note format used
Action List

• Medical student or intern
• Summary of main action items from the plan
  – Orders, consults, studies, procedures
  – Timeline: today, this week, before discharge
• Order entry in real time
• Ownership
• Follow-up
Situation Awareness

Situation Monitoring  
(Individual Skill)

Situation Awareness  
(Individual Outcome)

Shared Mental Model  
(Team Outcome)
Contingency Planning

- Problem solving *before* things go wrong

- If this happens, then...
Synthesis by Receiver

- Brief synthesis of essential information
- Opportunity for receiver to clarify information and have an active role on rounds
- Demonstrates information is received and understood
- Promotes a *shared mental model*
Common Concerns

Check-back seems condescending.
I feel awkward doing it…

• Put the pressure on **yourself**, not the patient
  – “I’d like to make sure that I did a good job explaining this to you. Can you tell me how you plan to give the asthma inhaler medicine to Christopher?”

• Ask in a **natural** way, not as if you are testing the patient/parent
  – “You mentioned that Christopher’s dad will also be taking care of him when he goes home. Can you tell me how you will explain to Christopher’s dad how to give the asthma inhaler medicine?”
Synthesis by Receiver

Compare and Contrast

• Mrs. Jones, please provide a summary of what we just discussed about Johnny’s problems and the plan.

Versus

• We want to double check ourselves and make sure that we have done a good job explaining what is going on with Johnny. We want to make sure that we are thinking about things in the same way and have addressed your main concerns.
Patient and Family Centered Rounds
Real Time Practice

2 Handoff Simulations

• Split into groups of three.
• Play the role – giver, receiver, observer—listed on the packet you receive.
  – Each packet has specific instructions + a sample printed handoff document.
• You will have **10 min** for the role-play, followed by **5 min** of debrief in your group.
• You will switch roles for the 2\textsuperscript{nd} simulation.
Wrap Up

Why Role Plays?

- Reflection in action
- Reflection on action

Tierney T and Nestel D Role-play for medical students learning about communication: Guidelines for maximizing benefits. BMC Medical Education 2007, 7:3

Patient and Family Centered I-PASS Multi-center Study

Results

Alisa Khan, M.D., M.P.H.
Methods

• Multicenter prospective pre-post study

• Inpatient pediatric units at 7 North American hospitals

• Staggered implementation and data collection from 2014-2017

• At each participating hospital:
  – 3 months baseline data collection
  – 9 month intervention period with iterative cycles of improvement
  – 3 months of post-intervention data collection matched by time of year

• Nurses and families engaged in every aspect of study
Primary Outcome

- **Medical error/AE rates**
- 2-step safety surveillance methodology, including:
  - Family safety reporting
- *Error*: mistake in care delivery process
- *Adverse Event (AE)*: injury or harm due to medical care
  - Preventable: caused by medical error
  - Non-preventable: not caused by medical error
## Secondary Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Modality</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family experience</td>
<td>Discharge survey</td>
<td>How well did you understand what was being said on rounds?</td>
</tr>
<tr>
<td>Rounds processes</td>
<td>Direct observation</td>
<td>Did family-centered rounds occur for this patient?</td>
</tr>
</tbody>
</table>
## Medical Error Rates

<table>
<thead>
<tr>
<th>Per 1000 patient-days</th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Errors</td>
<td>41.2</td>
<td>35.8</td>
<td>.21</td>
</tr>
<tr>
<td>Harmful errors/</td>
<td>20.7</td>
<td>12.9</td>
<td>.01</td>
</tr>
<tr>
<td>Preventable AEs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonharmful errors/</td>
<td>20.0</td>
<td>22.0</td>
<td>.5</td>
</tr>
<tr>
<td>Near misses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per 1000 patient-days</td>
<td>Pre-Intervention</td>
<td>Post-Intervention</td>
<td>p-value</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>---------</td>
</tr>
<tr>
<td>AEs</td>
<td>34.0</td>
<td>18.5</td>
<td>.002</td>
</tr>
<tr>
<td>Preventable AEs/Harmful errors</td>
<td>20.7</td>
<td>12.9</td>
<td>.01</td>
</tr>
<tr>
<td>Nonpreventable AEs</td>
<td>12.6</td>
<td>5.2</td>
<td>.003</td>
</tr>
</tbody>
</table>
Aspects of Family Experience that Improved

Understood what was said on rounds

Understood written updates provided

Shared understanding of medical plan with nurses

Nurses addressed family concerns

Nurses made family feel an important part of healthcare team

% Top-box score

Pre-Intervention
Post-Intervention

*p<.05
Communication Process Scores

- Family engagement: Pre-Intervention: 60%, Post-Intervention: 80% (p<.05)
- Nurse engagement: Pre-Intervention: 30%, Post-Intervention: 50% (p<.05)
- Family centered rounds occurred: Pre-Intervention: 70%, Post-Intervention: 90% (p<.05)
- Family received written updates: Pre-Intervention: 50%, Post-Intervention: 70% (p<.05)
- Teaching occurred on rounds: Pre-Intervention: 80%, Post-Intervention: 90% (p<.05)
- Optimal pace of rounds: Pre-Intervention: 50%, Post-Intervention: 70% (p<.05)

n=206 rounds encounters pre-intervention; n=278 post-intervention
Conclusions

• Implementation of a communication intervention emphasizing *family-centeredness, standardized communication, inter-professional collaboration, and health literacy* was associated with:
  – *38% reduction in preventable AEs and reductions in AEs overall*
  – No change in nonharmful errors

• Also associated with improvements in:
  – Aspects of family experience
  – Family/nurse engagement
  – Other communication processes

• No negative impacts on teaching, rounds duration, and resident/nurse experience
Challenges to Implementation of Patient and Family Centered I-PASS

Engaging the Group to Overcome Challenges

Nancy D. Spector, M.D.
Theodore C. Sectish, M.D.
Ensuring the Involvement and Engagement of Nurses

• Considerations
  – Work schedules
  – Culture and tradition
    • History of physician-centric rounds
    • Nurse as observer rather than active participant
  – Lack of inter-professional training
  – Length of rounds
Table Discussion

Nursing Engagement

• Use the worksheet provided to:
  – Brainstorm the issues involving the engagement of nurses for the next 10 minutes
  – Spend another 10 minutes to come up with solutions

• We will gather as a large group to share ideas
Resistance by Faculty to Change Focus of Rounds

• Considerations
  – Tradition of faculty presence on rounds
  – Focus of teaching on rounds
  – Physician inclination to include medical terms and data
  – Faculty responsibility to critique assessments by learners
Table Discussion

Resistance by Faculty

• Use the worksheet provided to:
  – Brainstorm the issues involving the resistance by faculty for the next 10 minutes
  – Spend another 10 minutes to come up with solutions

• We will gather as a large group to share ideas
How to Make it Work In Practice

Implementation Plan at Home Institution

Alisa Khan, M.D., M.P.H.
Jennifer Baird, Ph.D., M.P.H., M.S.W., R.N.
Dale Micalizzi, A.A.S.
Patient and Family Centered I-PASS

Implementation Steps

1. Establish Institutional Support and Ensure Team Organization
2. Assess the Local Environment
3. Consider Need to Adapt Patient and Family Centered I-PASS and/or the Local Environment
4. Determine Implementation Scope
5. Develop a Communication Plan
6. Ensure Ongoing Data Collection and Iterative Improvement Cycles
7. Plan for Implementation
Institutional Support

• Sponsorship and support from the institution are critical!
  – Chief medical, nursing, safety and/or quality officers
  – Training program directors
  – Division and department chairs

• Commitment from an Executive Sponsor will ensure goals of implementation align with the institution’s strategic goals

• Patient and Family Centered I-PASS Champions also needed
  – Well respected physicians and nurses who are opinion leaders

• Patient and Family Centered I-PASS Coordinating Committee needed as well
Needs Assessment

- Completion of a needs assessment activity offers insight into current FCR practices
- Best conducted as a collaborative effort including front-line physicians and nurses, intervention champions, family advisory council members, and other key stakeholders
- Documentation of discussion strongly encouraged
- Consider creating a process map
Adaptation of Patient and Family Centered I-PASS

**Guiding Principles**

- Keep the I-PASS rounds structure intact
- Retain training on general principles of high functioning teams and standardized communication
- Engage champions, nurses, and residents to ensure consensus is achieved
- Reinforce key elements through direct observation
- Refine implementation using PDSA cycles
Determining Implementation Scope

• Define short-term and long-term scope of PFC I-PASS Implementation efforts

• Recommendation: start small!
  – Small-scale local wins are more likely to spread
  – Serial testing and learning on a small scale makes broad-scale implementation more manageable

• Select units in the short-term that are on board and include early adopters
Patient and Family Centered I-PASS

Communication Plan

• Timely and effective communication critical
  – Raise awareness about anticipated changes
  – Assists adopters in the transition from awareness to conscious decision to change behaviors

• Ensure all stakeholders aware of key timelines, particularly if impacts workflow
Data is Critical

• Data collection, analysis, and feedback to team members: Critical to PFC I-PASS implementation

• Performance measures should
  – Map back to aims of implementation
  – Address areas of critical vulnerability and challenges
  – Track performance longitudinally
  – Actually be collected!
    • Logistics, accountability, and process are critical
Analysis and Interpretation of Data

*Run Charts*

• Run charts offer several advantages over pre/post summary data
  – Visual representation of what’s working (or not)
  – Regular review of impact of different aspects of interventions as they occur

• Recommendations:
  – Regular review of data on a monthly basis with key PFC I-PASS Champions for PDSA development
  – Regularly scheduled sessions to review data with faculty, residents, and nurses
  – Posting of data in shared areas
Sample Run Chart

Parent/family expressed concerns for the day at the start of rounds

Frequency

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

1 2 3 4 5 6 7 8 9 10 11 12 13 14

Wash-in period

Month

Post data collection Beyond study

Aggregate n = 10 20 18 28 11 40 33 50 73 59 28 15

Aggregate
Setting General Goals

• Establishment of general goals ensures focus and accountability

• Goals should be a “stretch” and include a timeline
  – Aggressive enough to force the team to make a clinically meaningful system change

• Example goal:
  – “Within the next 12 months, all FCRs will be conducted using PFC I-PASS format.”
Establishing Key Outcome Metrics

• Once goals and timeline are in place, need to decide how to measure attainment

• Collecting data is critical
  – Are we headed in the right direction?
  – How do our strategies need to be adjusted in order to achieve our goals?

• List of metrics should be balanced in order to understand how all aspects of PFC I-PASS implementation are going
  – Structure, Process, Outcomes, Balancing measures
Potential Outcome Metrics

• Training Penetration
  – Percent of residents/nurses/champions trained

• FCR Process
  – Percent of parents/families who express concerns for the day at the start of rounds
  – Percent of nurses present for majority of FCR discussion
  – Assessment of use of effective plain language during FCR

• Rounds Report Tool
  – Assessment of completion of Rounds Report

• Clinician and Family Experience Surveys
  – Communication with families on rounds
  – Family understanding of what was discussed on rounds
Developing a Data Collection and Reporting Plan

- Collect minimum of 2 months of baseline data prior to finalization of measures
- Once measures finalized, establish ongoing data collection and reporting routine for each measure

<table>
<thead>
<tr>
<th>Measure (with operational definition)</th>
<th>Who collects the data?</th>
<th>Collection frequency</th>
<th>How is it reported to PFC I-PASS champions and clinicians</th>
<th>Who reports it?</th>
<th>How often is it reported?</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent/family express concerns at start of rounds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rounds Report completed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other selected metrics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Planning for Implementation

• Documentation of a timeline for implementation of all key Patient and Family Centered I-PASS elements is **critical**
Plan for Implementation

Small Group Exercise

• For the next five minutes, independently review key planning steps on the “PFC I-PASS Implementation Plan”

• Consider key leaders / resources at your own institution and potential timelines for implementation

• Identify at least two examples of resistance you’re likely to encounter

• Be prepared to discuss your implementation plan as a group
Final Step: Celebrate Success!
QI Observations

• Recruit faculty, nurse, parents to observe rounds and give targeted feedback to team
• Observations are facilitated by QI tool
• QI Tool addresses 4 key domains of behaviors on rounds integral to Patient and Family I-PASS:
  1. *Activation* of family and members of inter-professional team
  2. Use of *structured communication* techniques & I-PASS format
  3. *Health Literacy*
  4. *Teaching*
# QI Observation Tool

**Core Items**
1. Please choose your additional area(s) of interest for this week's observations (select all that apply):
   - [ ] Activating and engaging the family and inter-professional team
   - [ ] Use of structured communication techniques
   - [ ] Teaching
   - [ ] Patient centered conversation and written information

<table>
<thead>
<tr>
<th>Element/Behavior</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Parent/family expressed concerns for the day at the start of rounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Nurse present for majority of discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Rounds Report / written family communication tool completed or updated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Teaching occurred on rounds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I-PASS Mnemonic Element</th>
<th>Description</th>
<th>Behavior</th>
<th>Yes, completely</th>
<th>Yes, partially</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Illness Severity</td>
<td>Identification of patient as better, worse, or about the same</td>
<td>Parent/Patient states assessment of illness severity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary presenter states assessment of illness severity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Patient Summary</td>
<td>Assessment and plan for each patient problem</td>
<td>Patient summary completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Action List</td>
<td>Summary of main action items for next 24 hrs.</td>
<td>Action items for next 24 hrs. discussed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Situation Awareness</td>
<td>Awareness of what is going on for patient and team, plan for what might happen</td>
<td>Contingency plans for next 24 hrs. specified</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and Contingency Planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Synthesis by Receiver</td>
<td>Oral summary of discussion on rounds; restatement of key action items and contingency plans (ideally completed by patient/family)</td>
<td>Synthesis completed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10a. If “yes, completely” or “yes, partially,” who completed synthesis by receiver? (check all that apply) [ ] Patient [ ] Family [ ] Nurse [ ] Other:
10b. If “no,” did a team member verbally indicate that they would return for synthesis from family member later? [ ] Yes [ ] No
Parent/Family Expressed Concerns for the Day at the Start of Rounds

- Aggregate n =

- Frequency

- Wash-in period
- Month
- Post data collection
- Beyond study

- Aggregate n = 10 20 18 28 11 40 33 50 73 59 28 15
Synthesis Completed

Frequency

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Wash-in period: 1-5
Month: 6-9
Post data collection: 10-12
Beyond study: 13-14

Aggregate n = 10 20 18 28 11 40 33 50 73 59 28 15

I-PASS
Better communication, safer care.
Final Take Home Points

• Importance of bringing patients, families, and team members on rounds as partners in the development of interventions
• Critical nature of engaging all members of the inter-professional team
• Emphasizing health literacy principles in communications to create a shared mental model
• Strategic in overcoming challenges to implementation
“We have to make it easier for families to be a true part of their children’s care. When patients and families are true members of the medical team, care is more informed, more targeted, and more safe for everyone.”

-Mother of 2 teenagers with cystic fibrosis
Questions?