

HRSA-Funded Collaborative Patient Safety Training to Address ACGME Core Competencies

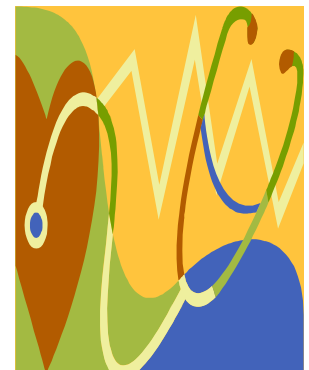
Ranjit Singh, MD, MBA, John Taylor, MBA,
Bruce Naughton, MD, Brian Connolly, MD,
Marlon Koenigsberg, PhD, Diana Anderson,
MEd, Linda McAusland, MEd, Robert
Wahler, PharmD, Amanda Robinson,
Gurdev Singh, PhD



Systematic Appraisal of Risk And Its Management for Error Reduction



**Patient Safety Research Center
Family Medicine Research Institute
462 Grider Street
Buffalo, NY 14215. USA**



Overview of This Presentation



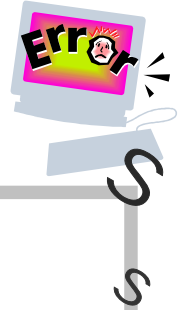
- **Context**
- **Objective**
- **Setting and Participants**
- **Design of Curriculum**
- **Main Outcome Measures**
- **Results**
- **Conclusions**

Context



- 1. Patient safety and Medical Errors Currently receive only scant attention in most residency curricula**
- 2. Dept. of Health and Human Service recommends that education be done collaboratively, i.e. those who work together should train together.**
- 3. ACGME has introduced new accreditation rules requiring all residency programs to document training and evaluation of residents in six specific core competencies (by 2004)**

Context



The six specific core competencies:

1. Patient Care
2. Medical Knowledge
3. Practice-Based Learning
4. Communication
5. Professionalism
6. System-Based Practice

Objective



Collaborate with:

- **School of Nursing**
- **School of Pharmacy**

Safety Training Team composed of: FM-MD, Engineer, Psychologist, PharmD, Nurse Educator, Educationist, Geriatrician.

To Design and implement (federally funded)
**a new Patient Safety Curriculum for
Family Medicine Residents so as to
address the ACGME Core
competencies.**

Setting/Participants



**University-based Family Practice
Residency program with:**

5 ambulatory sites including:

Urban

Suburban

Rural

46 residents



Design



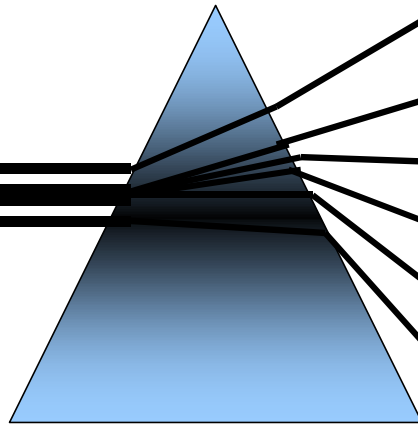
Introduction to the New Curriculum

We see Patient Safety through the Prism of the Core Competencies

The Rationale

IOM call
for

**Patient
Safety
Training**



*Achieved through the prism of the
ACGME's Core Competencies*

ACGME Competencies:

- 1. Patient Care**
(team-building)
- 2. Medical Knowledge**
(Medication safety)
- 3. Prac.-Based Learning**
(safety QI)
- 4) Communication Skills**
(Pat. Family & Teams)
- 5) Professionalism**
(safety ethics & culture)
- 6) System-Based Practice**
(advocacy across system)

Program Objectives Corresponding to the Six ACGME Competencies

- **Improve Patient Care** → **Master team building Skills**
- **Improve Medical Knowledge** → **Manage and prevent polypharmacy error**
- **Demonstrate Practice-Based Learning** → **Implement a self-evaluation process to instill a culture of safety**
- **Enhance Communication Skills** → **Encompass the patient's family and clinical teams**
- **Extend Professionalism** → **Improve patient safety ethics**
- **Understand System-Based Practice** → **Advocate for patients across the system**

Overview of Training

Three components

- 1. Safety Orientation Workshop**
- 2. A progressive Series of Safety Courses**
- 3. A series of Experiential Activities**

Overview of Training (1)

1. Safety Orientation Workshop:

Evidence based overview of patient safety through brief lectures and participatory exercises

Overview of Training (2)

2. A Progressive Series of Safety Courses

PGY-1: Behavioral Skills for Patient Safety; 8 sessions covering material related Team Building, Communication and Professionalism.

PGY-2: Medication Safety; 4 sessions – focus on polypharmacy

PGY-3: Systems Approach to Patient safety; 4 sessions covering systems theory, SWOT analysis of existing systems, tools of retrospective and prospective analyses, visualization, advocating for patients in a fragmented system and principles of system redesign

Overview of Training (3)

3. A series of Experiential Activities:
covering each of the 6 competencies including simulations, practical activities, and individual exercises to practice newly acquired safety skills.

Safety Training Team Visits each site 3x per yr.

**Comp. 1: Patient Care; Team Building Exercises
Rural Practice Team-Profile.**

**Comp. 2: Medical Knowledge; Polypharmacy Audit
Polypharmacy Journal/Rounds.**

**Comp. 3: Pract.-Based Learn.: QI Project using 4 step process
Safety Journal.**

**Comp. 4: Commun. Skills; Communication Exercises
Communication Profile**

Comp. 5: Professionalism; Safety Ethics exercise

Comp. 6: System-Based Prac.: Rural practice system-profile.

Journals Required: (1)

Objective 2: Polypharmacy Journal

Kept All Year; Rounds

Presentation once a year

- **PGY-2s record cases of polypharmacy (six per year)**
- **Conduct a detailed analysis of each case: list medications and their source, list the common side effects for each, identify possible drug interactions, relevant medical and social hx, identify polypharm issues affecting this patient and make recommendations for medication change.**
- **Each resident presents one case from their Journal at ‘Polypharmacy Rounds’.**

Journals Required ⁽²⁾

Objective 3: **Safety Journal:**

Kept All Year; Rounds

Presentation once a year

- **Each PGY-3 residents is required to make 6 journal entries.**
- **Each entry documents either an observed error, an anticipated error, a near miss, or an adverse event. Resident analyses the causative factors, consequences, error recovery, and suggests strategies for prevention.**
- **Each resident has the opportunity to present a detailed review of one case during the systems course**

YEAR-SPECIFIC ACTIVITIES			SITE-SPECIFIC GROUP ACTIVITIES			
RESIDENT YEAR	DIDACTIC COURSE	INDIVIDUAL EXERCISES	COMPETENCIES ADDRESSED	Visit 1	Visit 2	Visit 3
PGY-1	Behavioral Skills for Patient Safety Course	<ul style="list-style-type: none"> ▪Communication Profile 	Professionalism Communication Patient Care	Ethics Exercise 1 <i>Training in how to handle ethical situations. Didactics, readings, and simulations are used</i>	Team Exercise 1 <i>Role playing exercises including key concepts: Role definition, agenda setting, “turn-taking”, and assertiveness</i>	Team Exercise 2 <i>Role-play scenarios to discuss communication errors and successes</i>
PGY-2	Medication Safety	<ul style="list-style-type: none"> ▪Polypharmacy Journal ▪Rural Practice Team Profile ▪Rural Practice System Profile 	Medical Knowledge Practice-based Learning Systems-based Practice	Polypharm Audit <i>Each resident reviews five charts of patients 70+ years for inappropriate medication use.</i>	Polypharm Rounds <i>Each PGY-2 resident presents one case from their polypharm journal to faculty and other residents.</i>	Polypharm Audit <i>The audit is repeated as previously performed.</i>
PGY-3	Systems Approach to Patient Safety	<ul style="list-style-type: none"> ▪Safety Journal 	Systems-based Practice Patient Care Practice-based Learning	Quality Improvement Step 1 <i>Residents & Staff complete survey to identify problems; surveys then used as source for data analysis.</i>	Quality Improvement Step 2 <i>Present data from surveys to the site staff; help residents & staff to prioritize and identify 2-3 areas for QI; residents volunteer to work on an issue together with other staff and develop 2-3 possible solutions for each issue.</i>	Quality Improvement Step 3 <i>Residents then present the suggested solutions to the group; group decides on which solutions are to be implemented at the site; follow up next year to see what change(s) have occurred.</i>

Main Outcome Measures



Performance of the residents in the various ongoing activities is evaluated using rubrics.

Additionally, each resident is evaluated annually in an OSCE that covers all the six ACGME competencies and includes standardized patient interviews, response to video and written vignettes as well as review of standardized charts.

Residents from a neighboring FM Program took the same OSCE (=comparison group)

Summary of Methods for Evaluating the 6 Competencies



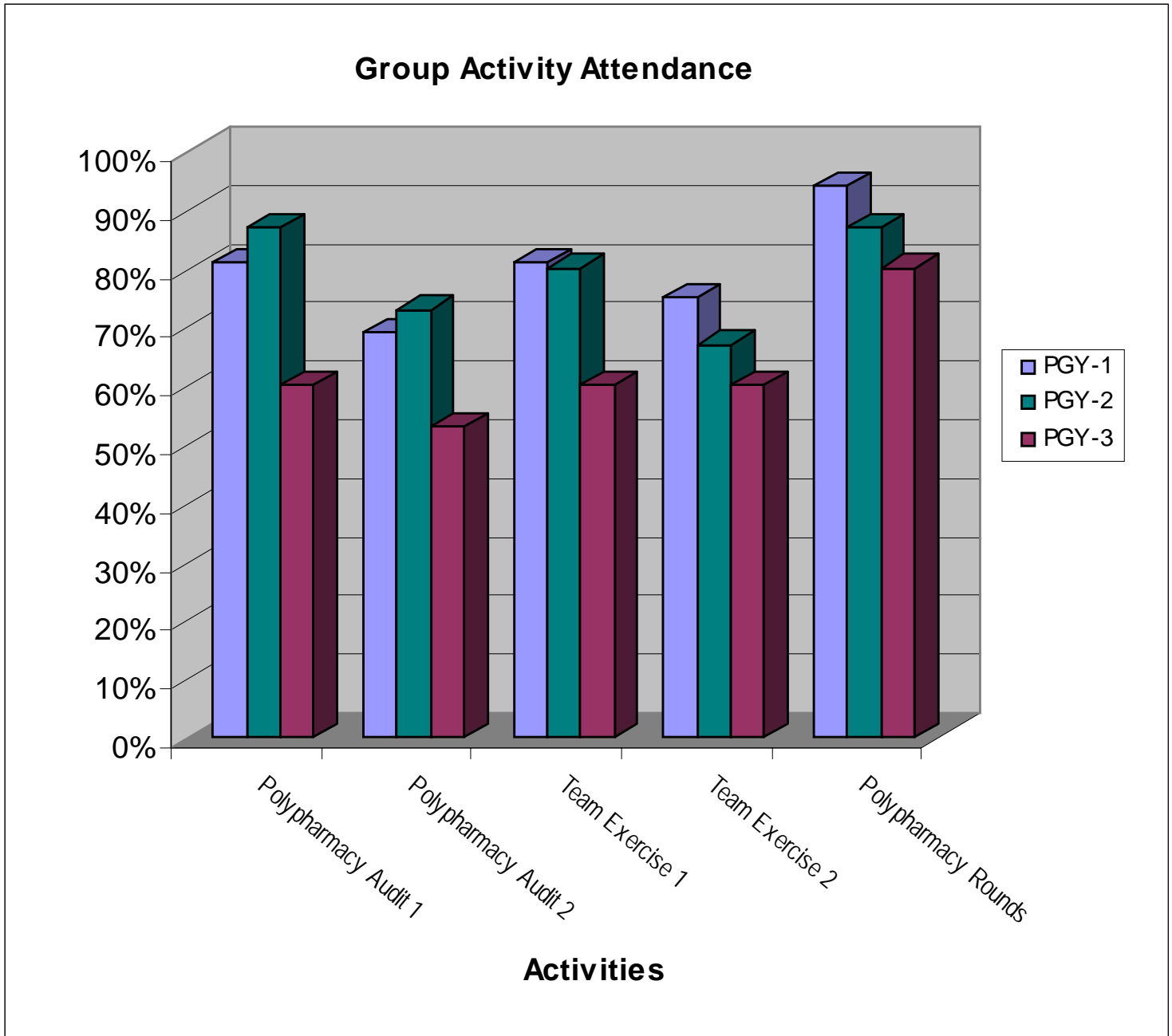
ACGME Competencies	Evaluation Mode	
	Ongoing	Year End OSCE
Patient Care	Rural Practice Team Profile	Standardized Patient Interviews, Video clips, PGY-1 Written Exam
Medical Knowledge	Polypharmacy Audit, Polypharmacy Journal	Standardized Patient Interviews, Video Clips, PGY-2 Written Exam
Practice Based Learning	Safety Journal and Rounds, Quality Improvement Exercise	Video Clips, PGY-3 Written Exam
Communication Skills	FHC Communication Profile	Standardized Patient Interviews, Video Clips, PGY-1 Written Exam
Professionalism/ Ethics		Standardized Patient Interviews, Video Clips, PGY-3 Written Exam
System-Based Practice	Rural Practice system profile	Video clips, PGY-3 Written Exam

Results

(ongoing)



AVERAGE ATTENDANCE WAS 75%



Polypharmacy Errors Identified

- **PolyPharm Journals:**
 - Overall compliance 60%
 - Only 33% of residents completed all 6 assigned entries
 - 60% completed at least half of the entries
 - Average score (graded according to rubric) was 90%
- **PolyPharm Audit:**
 - NSAIDs were identified as a recurring error (43% of the charts reviewed; n=180)
 - Concomitant use of diuretics w/NSAIDS and use of benzodiazapines were also common problems



future audits will focus on pain medication

Safety Journals

- Seventy percent of assigned entries were completed (n=63)
 - 62% observed errors
 - 10% anticipated errors
 - 21% near-miss events
 - 7% adverse events
- Residents devised a system-based solution for 56% of the documented cases

OSCE Results

Hypothesis: Residents who received patient safety training score better on the OSCE than those who didn't receive training (comparison based on classes of '04 and '05)

Activity	Training Group Mean (n = 22)	No-Training Group Mean (n = 8)	P value
SP Interview: Medication Error Case	3.21	2.43	0.41
Teamwork Exercise: Mrs. Sanchez Video Case	10.23	7.13	< .01
Dr. Townsend Chart Review	16.59	14.25	0.18

OSCE Results

Hypothesis: Senior Residents score better than Junior residents

Activity	Class of '03 (n=10)	Class of '04 (n=10)	Class of '05 (n=12)	P value
SP Interview: Medical Error Case	2.71	3.60	2.78	0.48
Teamwork Exercise: Mrs.Sanch ez Video	9.71	11.00	9.45	0.30
Dr. Townsend Chart Review	18.71	18.09	15.09	0.11

Resident Feedback

- **Some residents failed to see the importance and broader applications of the training program – this contributed to the poor rate of compliance with the Journal activities.**
- **For three of the five OSCE activities: Standardized Patient Interviews, Chart Reviews, and Video Clips, the majority of residents stated that they would change at least one aspect of their practice behavior.**
- **The chart review OSCE activity was reported as the most difficult**
- **The standardized patient interviews were considered by residents to be the most helpful**

Conclusions



- We have developed and implemented a comprehensive Patient Safety Training program that incorporates all 6 ACGME competencies and facilitates their tracking
- A 'Safety OSCE' was used to evaluate resident performance and program effectiveness
- Residents who received training tended to perform better in the OSCE than those from a comparison group
- Senior residents typically performed no better than junior residents, suggesting that the *usual* residency training does not improve performance in these competencies.

Conclusions



- Residents reported a high likelihood that they would change some aspect of their behavior based on the OSCE activities
- Efforts are needed to improve resident motivation to complete assigned activities
- Ongoing evaluation of the program is planned to further evaluate its effectiveness

Thanks!

