Patient Safety Matters

Challenges and Opportunities

How we see and deal with these matters
And why are others interested in our work?
We are about
Placing Patient Safety at the heart of Medical Education and Practice
• Our Mission, Driving principles, Premises, and Implications
• The Burden of Lack of Safety on the Nation
• The Opportunity

• Our approach to lightening the Burden

Main Areas of our Activity
Education/training
Safety Practice Enhancement

Covered in the first presentations
Covered in this presentation
Orienting and Motivating Faculty and Residents to Patient Safety: ‘Meeting the Unmet Needs’  NPSF 2010

How We Started Meeting Them in 2002!

Ranjit Singh
Gurdev Singh
Diana Anderson
John Taylor
Ashok Singh
Don McLean
Tom Rosenthal

Supported by HRSA Grants

www.Patientsafety.buffalo.edu
Overview of This Presentation

- Context and the Burden of HC Risks
- Objective
- Design
- Setting and Participants
- Intervention Description
- Main Outcome Measures
- Results
- Conclusions
The Context & RISK Burden
Patient Safety

Is

“freedom from accidental injury due to medical care or medical error” (US IOM, 2000)

UN: WHO is working towards declaring it a Basic HUMAN RIGHT (2004)

There is already a “London Declaration” by WHO
Safety is a fundamental system property. Without safety there can be no quality of care (IOM).

“The goal in the United States is to deliver safe, high-quality health care..”

AHRQ www.HHS.gov
WHAT DOCTORS HATE ABOUT HOSPITALS

From heart surgery to prostate care, the medical industry knows little about which treatments really work.

By John Carey (P. 729)
AMONG CLAIMS INVOLVING DIAGNOSTIC ERRORS...

ALL 59% OF THOSE CASES INVOLVED CANCER

INVOLVED COLORECTAL CANCER

7%

44% INVOLVED BREAST CANCER

30% RESULTED IN DEATH

Note: Based on a review of 131 closed claims involving diagnostic errors by four malpractice companies.

LEADING FACTORS CONTRIBUTING TO ERROR*

FAILURE OF JUDGMENT 79%
FAILURE OF VIGILANCE OR MEMORY 59%
KNOWLEDGE 48%
PATIENT'S BEHAVIOR 46%
HANDBOFFS TO OTHER STAFF 20%

*Errors can have multiple causes

MULTIPLE CAUSES

Wall Street J: Sept 28; 2010

Failure to Order the Right Test
Fail to Create a Follow-up Plan
Failure to Obtain Adequate History Or Conduct a Physical
Incorrectly Interpret Diagnostic Tests

What the Doctor Missed

Using Malpractice Claims to Help Physicians Avoid Diagnostic Mistakes, Delays
This constitutes nearly 50% of the surgical “Never Events”

Wrong body part: 30%
Wrong procedure: 16%
Wrong patient: 4%

CMS press release 2006 (Minnesota Study)
And then there are other adverse events!

US Healthcare

National Burden of Systemic Errors in the Health Care

In ambulatory care of just Medicare patients—over half a million preventable ADE’s due to errors of commission alone — Gurwitz et al. 2003

Morbidity and mortality as a result of drug-related problems in the ambulatory settings may cost more than $177 Billion/yr — Cooper 1996

More than ‘n’ Jumbo jets of the Health Care Industry drop out of the sky every day! (Analogy after Leape: the Safety Guru of USA)

Geriatrics carry the maximum share of this burden

In 2001 there were 4.3 million ambulatory visits for treating Adverse Drug Events — Zhan et al. 2005

One of the costlier outcomes of drug related morbidity is hospitalization. — Gurwitz 1995
59% are preventable — Cooper 1996

7.75 million office visits by the elderly resulted in the prescribing of at least one medication from the list of 20 drugs judged potentially inappropriate in the elderly — Aparasu 1997

Morbidity and mortality as a result of drug-related problems in the ambulatory settings may cost more than $177 Billion/yr — Cooper 1996

More than ‘n’ Jumbo jets of the Health Care Industry drop out of the sky every day! (Analogy after Leape: the Safety Guru of USA)
Up to 200,000 avoidable Deaths per year in outpatient Settings. Srasfield in JAMA 2000.

More than 5 Jumbo jets of the Health Care Industry drop out of the sky every day!

Geriatrics carry the maximum share of this burden

In 2001 there were 4.3 million ambulatory visits for treating Adverse Drug Events Zhan et al 2005

More than 1.5 million Preventable ADEs per year! IOM 2006

And then there are other adverse Events!!
And then there are other adverse Events!!

The US National Burden of Systemic Errors in the Health Care

More than 5 Jumbo jets of the Health Care Industry drop out of the sky every day! (Analogy after Leape: the Safety Guru of USA)

1.5 Million/year Incidents of Harm

1.5 million medication errors occur in hospitals each year. One in five elderly patients is given medicines that may not be good for them  

1.7 million infections per year in US hospitals i.e. 4.5 infections for every 100 admissions

© Gurdev Singh 2007
# International Rankings and National Health Expenditure (Through Patient’s Lens)

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<td>3003</td>
<td>2996</td>
<td>1886</td>
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Average Life Expectancy at Birth

Above Average
- USA $7,290
- Switzerland $4,417

Below Average
- Japan $2,581
- Mexico $823

From National Geographic Jan. 2010
Medical Tourism

The high cost of U.S. hospital care is causing patients to travel to places like India and Thailand for major procedures.

PLUS:
BEST HOSPITAL CHOICES
COMPARING COSTS
WHAT TO AVOID
‘This was quite a shocking idea for me. I’ve never traveled really; I’ve always been a small-town girl.’

Patricia Hansen, 58, at the Taj Mahal, after hip surgery in New Delhi.

AARP Sep. 2007
In 2007, more than 0.5 million workers were outsourced. In 2010, 6 million workers were outsourced. These numbers are on a "steep climb.”

AARP Sep. 2007/The Economist April 2010
Primary Care Providers are not directly threatened by

But they certainly will have to learn to cope with it, if ‘customer’ care is their motive – as it should be
Medicare says it won’t cover hospital errors

“This Never Events” Aug 2007

This rule is bound to come to primary care
Take Home:

We must create and ride a health machine that will "change the world"

We want a "Toyota of Health Care"

Provided that we remember that Pursuit of Safety is a Never Ending Journey

We can all play a role in making this a reality
We must create and ride a health machine that will change the world.

We want a "Toyota of Health Care."" Provided that we remember that Pursuit of Safety is a Never Ending Journey.

We can all play a role in making this a reality.

"Health tourism" and "Health refugees" Or live with outsourcing.
We at UB are about Placing Patient Safety at the ❤️ of Medical Education and Practice - Since 2002
Pathological: Why Bother about Patient Safety?

Reactive: Do something when we have an incident

Bureaucratic: ‘We have a system in place’

Proactive: We are always on the alert/thinking about what might emerge

Safety-Cultured: We manage Safety as an integral part of everything we do

Dynamics of Successfully Managed Change

Rising Levels of Cultural Maturity

Patient Safety

Singh 06- After Manchester PSF
Money vs. Health. No relationship

Better health
Individual states
Worse health

Less state spending

$4,000
$6,000
$8,000

Congressional Budget Office Head, Peter Orszag: Times Nov 08
C_p = Tangible and intangible costs of harm to patients and staff in the system

Achieved through communication, patient education and stress management

INTERPLAY BETWEEN SAFETY-BASED QUALITY AND COSTS IN THE WHOLE SYSTEM UNDER STUDY
$C_s = \text{Costs of safety investments and maintenance of the system}$

INTERPLAY BETWEEN SAFETY-BASED QUALITY AND COSTS IN THE WHOLE SYSTEM UNDER STUDY

©G and R Singh 2001
TOTAL COST = \( C_p + C_s \)

\( C_p = \) Tangible and intangible costs of harm to patients and staff in the system

\( C_s = \) Costs of safety investments and maintenance of the system

OBJECTIVE

Achieved through prioritized cost-effective interventions in the system

Achieved through communication, patient education and stress management

INTERPLAY BETWEEN SAFETY-BASED QUALITY AND COSTS IN THE SYSTEM UNDER STUDY
We seek an environment in which Continuing Total Quality Improvement drives Primary Care.

Three Domains of Quality (IOM):
- Safety of Patients and Practitioners.
- Practice consistent with Current Knowledge.
- Customization (patient centeredness).

Influenced by Strategic Planning Institute
“Relative perceived service quality”

Value for Money
Safe
timely
effective
efficient
equitable
patient cent$^d$.

With Full Awareness of ...
Calls for Patient Safety in **Educ./training:**

- In the US all programs were required to address Accreditation Council Graduate Medical Education’s Six Core Competencies **by 2006 (!!)**

- The UN WHO has launched the World Alliance for Patient Safety to advance the safety goal: **“First do no harm”**

- UK Academy of Medical Royal Colleges places patient safety at the **“heart of good medical practice”**
Currently:

Patient Safety and Medical Errors receive scant attention in most Residency (US Post-graduate) and Pre-Doc (Under-graduate) curricula.

Despite the fact that Patient Safety is an issue that transcends all the desired competencies.
Only about % of the 125 US medical Schools reported Patient Safety content in elective or required courses  
Kane et al May 2008
2010! Brings Warm Welcome From Buffalo!
Objective of Our Curriculum
Objective of Safety Curriculum Was

To design and implement a new Patient Safety curriculum for Residents (PGs) and medical students that addresses all six ACGME competencies through Collaboration with Schools of Nursing and Pharmacy

Respecting the Principle that THOSE WHO WORK TOGETHER SHOULD BE TRAINED TOGETHER

Singh: April 2002/5
We at UB would have liked to see a Recommendation to this effect in the NPSF Report: “UNMET NEEDS” -Vital for creating a common professional culture-

THOSE WHO WORK TOGETHER SHOULD BE TRAINED TOGETHER
Our Motivation for Safety Training

1. Provide higher quality care for your patients
2. Achieve Competency in ACGME Core areas
   • Improve Patient Care
   • Improve Medical Knowledge
   • Demonstrate Practice-Based learning
   • Enhance Communication Skills
   • Extend Professionalism
   • Understand Practice Within the Larger System
3. Respond to ACGME and Formidable and Compelling External and Internal Pressures
4. CV Enhancement  Advance from good to excellent

Residents have valued certification to this effect!
This certifies that

Diana Anderson

has attended the course and completed the experiential activities
of the comprehensive and collaborative interdisciplinary
Patient Safety Program
addressing the six ACGME Core Competencies

State University of New York at Buffalo, USA
Please see the reverse side for curriculum details
The Six ACGME Core Competencies

- Communication
- Knowledge
- Professionalism
- Patient Care
- Practice Based Learning
- System Based Practice
The Six ACGME Core Competencies

Safety Transcends all Competencies

For accreditation, ACGME requires documentation of residents’ performance in these areas, not just attendance!
Curriculum Design Overview
Patient Safety Program

The Two Premises
1) Human error is inevitable ("to err is human")
2) The existing healthcare systems are not conducive to maximum safety

Implications
1) Accept Human Errors [fallibility]
   - Punitive actions against individuals are usually ineffective
   - Re-training & counseling do not eliminate human errors
2) Focus Efforts on the System of Health Care
   - Engage in system redesign (acknowledging human factors)
   - Make appropriate use of technology (e.g. palm pilots)
   - Build a culture of safety (shift away from a culture of blame)
With Awareness of:

“Tell me and I will forget
Show me and I may remember
Involve me and I will understand”

**Emotionally, Intellectually and physically**

**BUT**

**Excluding the EGO**

*i.e. HALO!*

and

Awareness of the Recipe for errors:

“See one
Do one
Teach one”

Singh: 2002
With advice that

Shed the Ego

Learn from every where
and from all directions
Curriculum Development process

1. Medical Practices
2. PG Curriculum
3. Pre-Doc (UG) Curriculum
Innovative Curriculum Design and Rationale

Patient Safety through the ACGME Prism

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

Safety Objectives
1. Improve team building skills
2. Reduce inappropriate prescribing (esp. with geriatric patients)
3. Encourage and facilitate self-evaluation to instill a culture of safety
4. Enhance communication skills with patients/families/colleagues
5. Improve patient safety ethics
6. Analyze system components and address system problems to improve safety

This work was supported by US Federal Funds
Overview

- Faculty Retreat
- Residency Program (PG)
- Undergraduate program (Pre-Doc)
Residency Curriculum Components

- Introductory/Orientation Workshops
- A series of year-specific didactic courses
- A series of group exercises
  Role-plays
  Response to video-vignettes
  Chart reviews
  Journal Entries [Polypharmacy, Safety and Transitions Journals]
  Journal Presentations
- A longitudinal safety enhancement (QI) project
  (Integrated into daily activities)

Activities run by multidisciplinary team
Details in the first Reference in the list:

“A Comprehensive Collaborative Patient Safety Residency Curriculum to Address the Core Competencies”

The first ever of its kind!
University-Based Family Medicine Residency Programs
Including one of the Oldest and Biggest in the USA

With

6 Ambulatory Sites
And
58 Residents

52 faculty
Including 6 Site Directors
Intervention
In the context of this presentation
Safety **Orientation** Workshop:

Evidence-based overview of patient safety through brief lectures and participatory exercises
Faculty Retreat Overview (FM)

* Introduction of Family Medicine Safety Team
* **Pre-test!** (anonymous)
* ACGME Requirements
* Systems Approach to Building a Culture of Safety
  Part 1: Goals of the Session and Introduction to Patient Safety
    Video and Exercise
    Didactics
  Part 2: Understanding the System in which we Practice
    Video and Exercise
    Didactics
  Part 3: Building a Culture of Safety
    Video and Exercise
    Didactics
    Exercise
* Intro to the New Interdisciplinary Patient Safety Program
* **Faculty Role: Its importance as role models**
* Research Update: Patient Safety Research Center of Dept. of FM
* **Post-test!** (anonymous) and YOUR Evaluation and Feedback
Role of the Faculty

Success of the program will make an important contribution to satisfying ACGME accreditation requirements

Your participation is essential!

- Teaching / Reinforcing the principles of safety
- Facilitation of incorporation of program activities
- Leadership through example
- Creation of effective teams with trust, mutual respect and collaboration
- Emphasizing preventative approaches
- Encouragement of open discussion/reporting of errors
- Providing feedback and suggestions/ideas to Errors team

In other words:

Building a Culture of Safety
Res. Safety Orientation Workshop

* Introduction of Family Medicine Safety Team
* **Pre-test!** (anonymous)
* ACGME Requirements
* Systems Approach to Building a Culture of Safety
  Part 1: Goals of the Session and Introduction to Patient Safety
    Video and Exercise
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* **Post-test!** (anonymous) and YOUR Evaluation and Feedback
Main Outcomes Measures
Main Outcome Measures

Scores on anonymous pre and post-orientation Quizzes in 4 knowledge areas:

1. Definitions
2. Burden of errors
3. Reasons for safety problems
4. Strategies for Improvement

Included self-report of prior patient safety training and experience
Results
Results for Faculty and Residents

• Pre-test scores were low and did not correlate with prior training/exper.

• Mean overall post-test scores improved:
  - Faculty: from pre 25% to post 52%
  - Resid.: 27% to 63%
  (p< 0.001)

• Understanding the burden of hazards showed the greatest improvement:
  - Faculty: from pre 10% to post 67%
  - Resid.: 17% to 74%
  (p< 0.001)
Comparison of Pre- and Post-Tests

**Definitions**

**Burden of Errors**

**Reasons for Quality Problems**

**Strategies for Improvement**

**Faculty**

Pretest (n=111)

Posttest (n=130)

**Residents**

Pretest (n=111)

Posttest (n=130)
Conclusions
Faculty and Residents significantly improved their knowledge of safety concepts

- Sustained and improved effects require CSE
- Recommend Safety Curriculum for all prog.
- Pres’s., VP’s, Deans and Chairpersons MUST make safety their business and priority.

I have made it my business to keep ‘bugging’ them!!
Plea from an old Turban-Top Student – since 2001

FOUNDATION of UG and PG Education please!
Our Aspiration

Education/training

Transfer approach across all the domains

Those who work together must be trained together: Transdisciplinary

We have received About $1 million Fed support

Roadmap Initiative
Patient Safety **Education** and Training are Likely to provide the biggest

About 2 trillion
Thanks & Fruitful Interventions for MEETING THE UNMET NEEDS!

Thanks are due to HRSA for the Title VII Grants that made this work possible.


