Canadian Patient Safety Institute
Institut canadien pour la sécurité des patients

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Reflections: Ten Months and Where to From Here

Breakfast With the Chiefs

December 15, 2005

Philip Hassen, CEO, CPSI

Presentation Overview

- Nature of the Problem
- Safer Healthcare Now Campaign
- Systems vs. Medical Approach
- Integrated Strategy for Patient Safety
- Leadership
- Accountability

Definitions

Patient Safety:

The reduction and mitigation of unsafe acts within the health-care system, as well as through the use of best practices shown to lead to optimal patient outcomes.

Canadian Patient Safety Dictionary, 2003

Adverse Event:

An adverse event is an unintended injury or complication which results in disability, death or prolonged hospital stay, and is caused by health-care management.

Wilson et al

What We Know

- Francoeur Committee (Quebec 2001) / Blais *et al* Study (GRIS, Quebec 2004)

- Building a Safer System: A National Integrated Strategy for Improving Patient Safety in Canadian Health Care (2002)

- Adverse Events in Canadian Hospitals
  (Baker, R. & Norton, P. et al. (2004))
  - Incidence rate of 7.5% in hospitals (2000)
  - 70,000 preventable adverse events (est.)
  - 9,000 - 24,000 preventable AE deaths in Canada (2000)

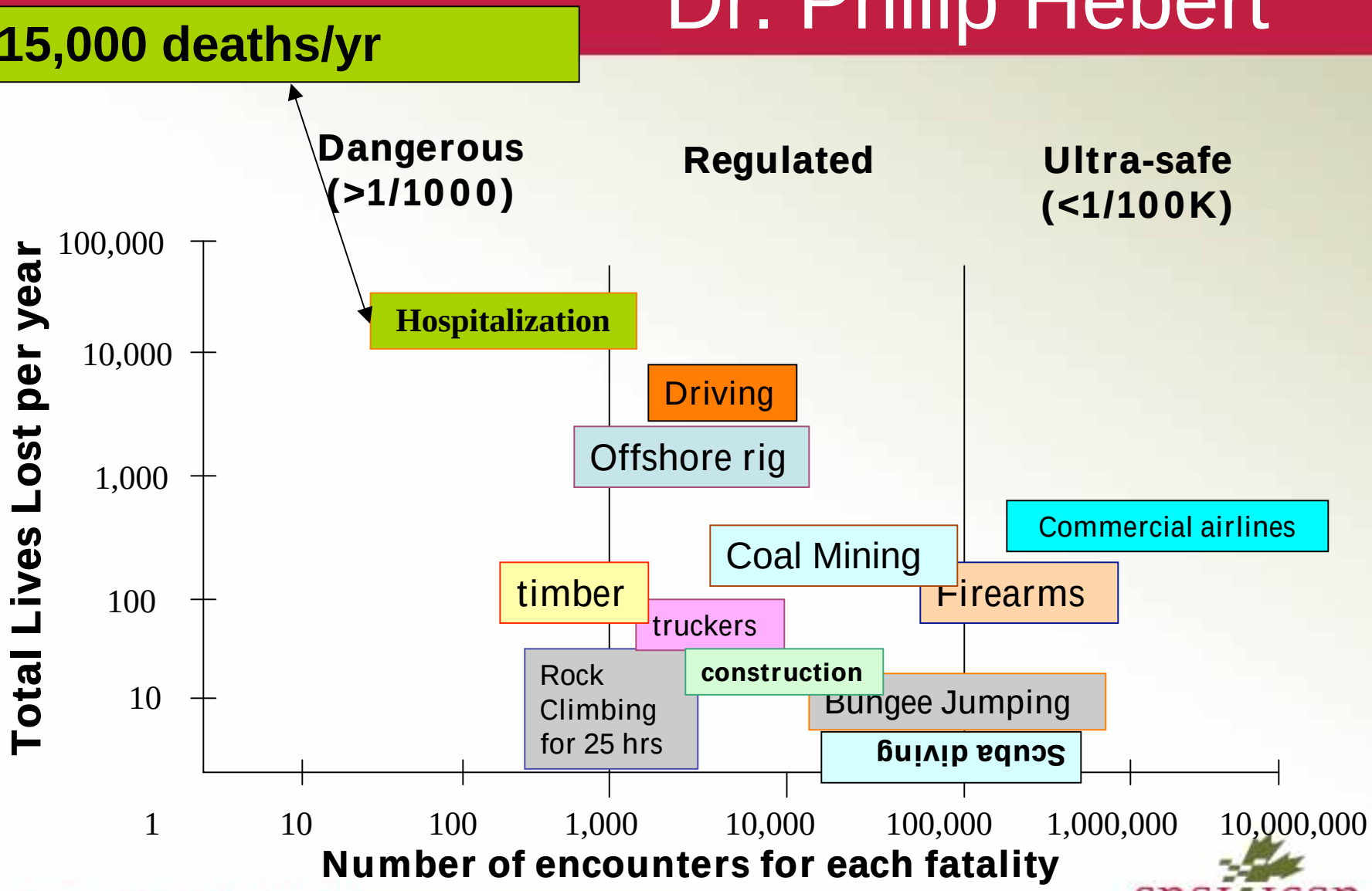
What We Know

Canadian Institute for Health Information (2004)

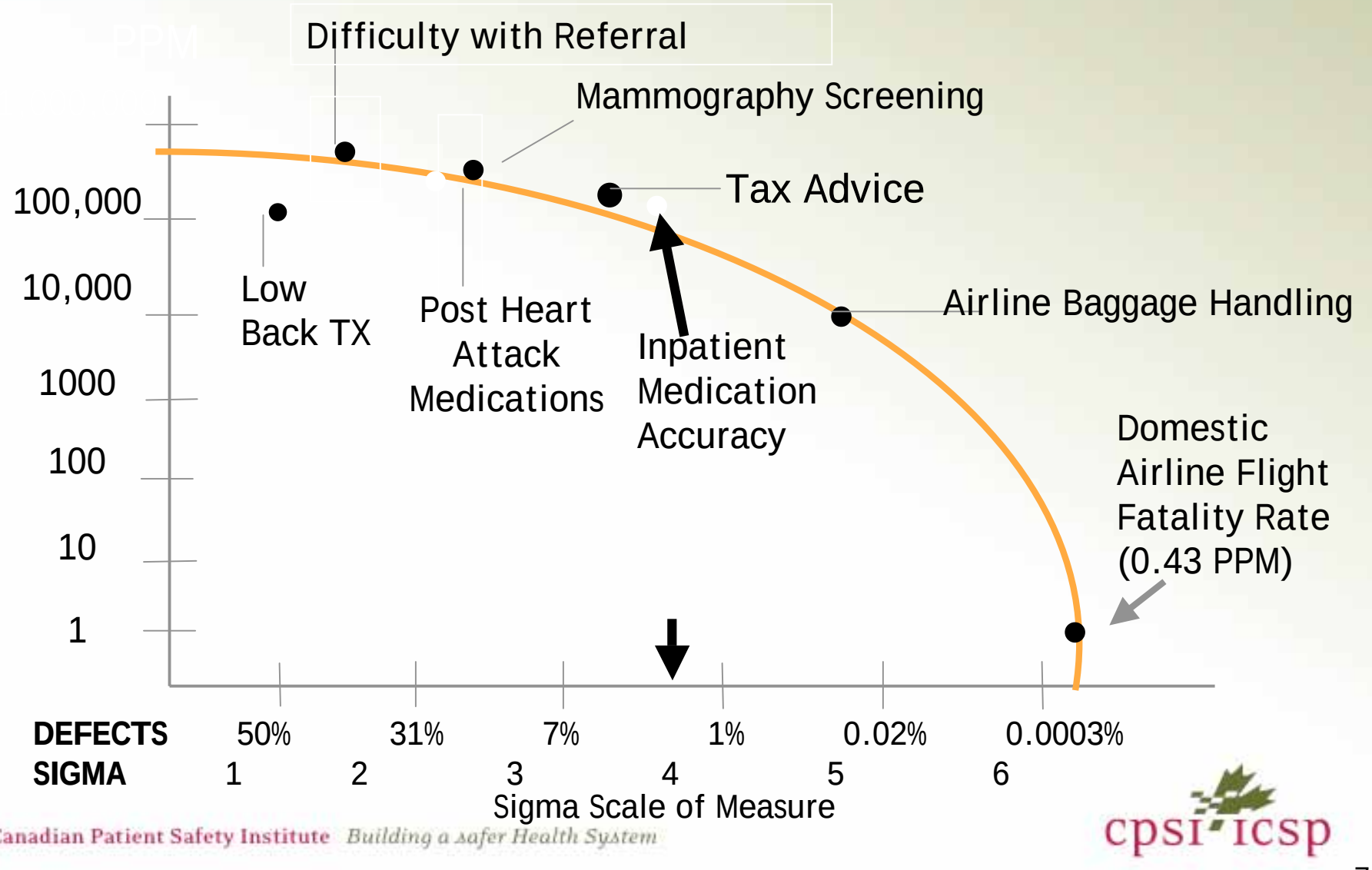
- **One in nine adults contract infection in hospital.**
- **One in nine patients receive wrong medication or wrong dose.**

More deaths after experiencing adverse events in hospital than deaths from breast cancer, motor vehicle and HIV combined.
Institute for Health Care Improvement

Risky Activities – Adapted by Dr. Philip Hebert



Comparative Reliability Between Industries



Canadian Patient Safety Institute *Building a safer Health System*

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Source: Institute for Healthcare Improvement

Imagine:

- **$15 billion in annual purchases hand-written on slips of paper**
  - The Canadian prescription drug industry
- **1 billion service events scheduled manually over the phone**
  - Annual diagnostic test events in Canada
- **An industry that does not increase productivity**
  - The healthcare industry in Canada, almost 10% of the economy
- **A service industry that injured 2.5% of its customers through preventable errors (30% of injuries resulting in permanent impairment, 5% resulting in death)**
  - Hospital care in Canada

(Source – Courtyard Gp)

Patient Safety: Barriers to Action

- **Difficulty recognizing errors**
- **Victims are nameless and faceless**
- **Lack of information systems to identify errors**
- **Workarounds**
- **Relationship of trust with providers**
- **Access is more urgent in Canada**
- **Leadership turnover**
- **Fragmentation of care delivery hampers systems thinking**

Patient Safety: Barriers to Action

- **Poor capital investment framework favours short term needs**
- **Belief that productivity improvement is not possible in healthcare**
- **Shortages of clinical professionals**
- **Concern about liability**
- **Jurisdictional conflicts**
- **Simplistic approach to building the EHR**
- **Culture of patient safety is lacking**

Human Factors

- **"Health care is the only industry that does not believe that fatigue diminishes performance."**

  – Lucian Leap

Fatigue

- **24 hours without sleep is equivalent to a blood alcohol level of 0.10 – a 30% decrease in cognitive processing**
- **Nurses are 3 times more likely to make mistakes after 12 hours on the job**
- **Interns made 30% more errors in ICU patients when on traditional 24 hour call schedules**
- **The best countermeasure for fatigue is teamwork**

THEN WE HAVE HUMAN JUDGMENT

Inherent Human Limitations

- **Limited memory capacity – 5-7 pieces of information in short term memory**
- **Negative effects of stress – error rates**
  - **Tunnel vision**
- **Negative influence of fatigue and other physiological factors**
- **Limited ability to multitask – cell phones and driving**

Limited Short Term Memory

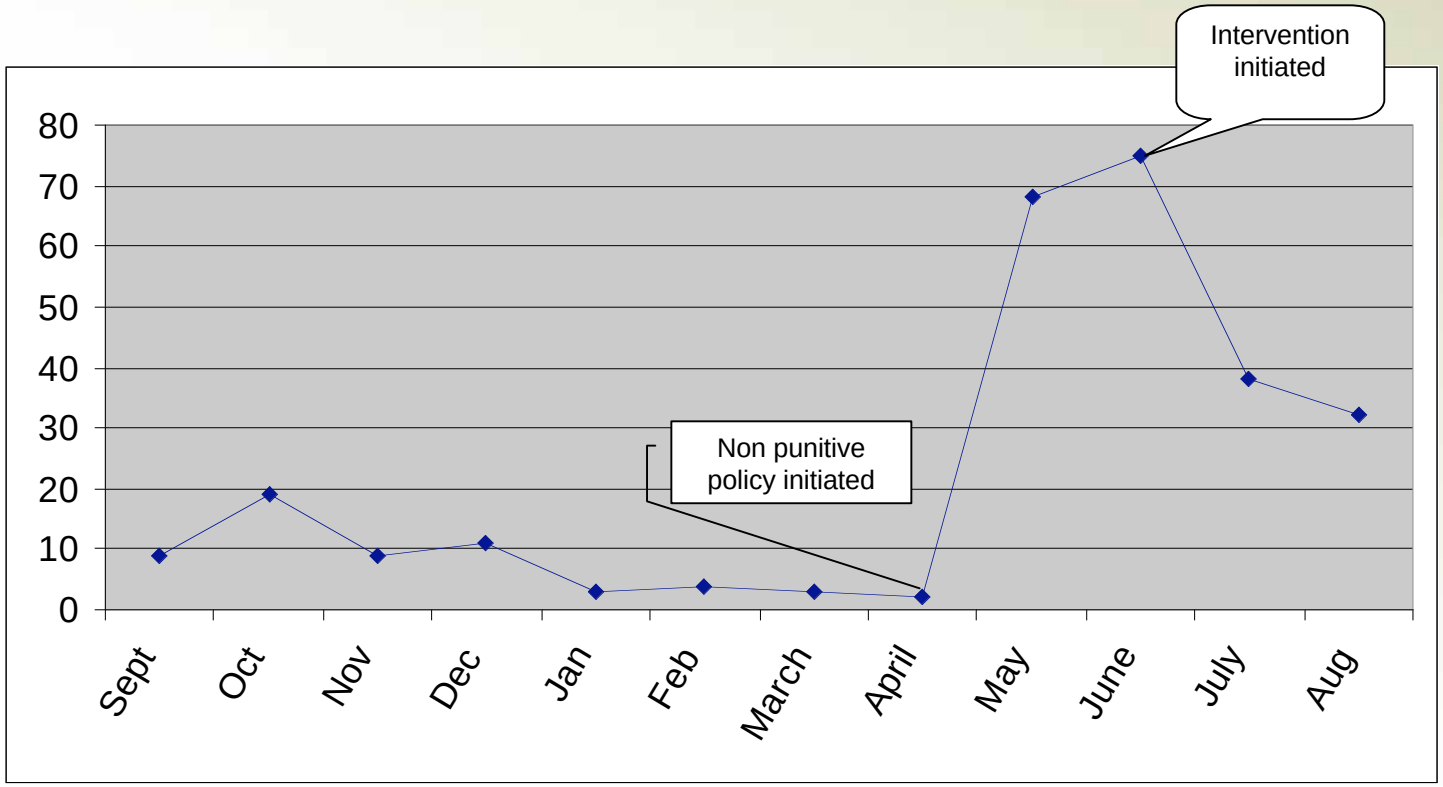
- **We can only hold 5-7 items in short term memory – when you exceed this, you forget things**
- **Why do you take a list when you go to the grocery store**
- **Why is a telephone number 7 digits?**
- **Observational studies of med-surg nurses showed they were trying to hold 17-20 items in memory 70% of the time**

Negative Effects of Stress

- **At baseline, humans will make an error of omission 1/100 times – forgetting to do something, and an error of commission 1/300 times – like reading a drug label wrong**
- **When stressed, even experts make more mistakes**
- **Also, people become tunnel visioned when stressed, and can lose the "forest for the trees"**

Reported Medical Errors

(Dana Farber Institute)



Safety Issues

Epinephrine

Ephedrine

Safety Issues

Phenylephrine

Phentolamine

Safety Issues

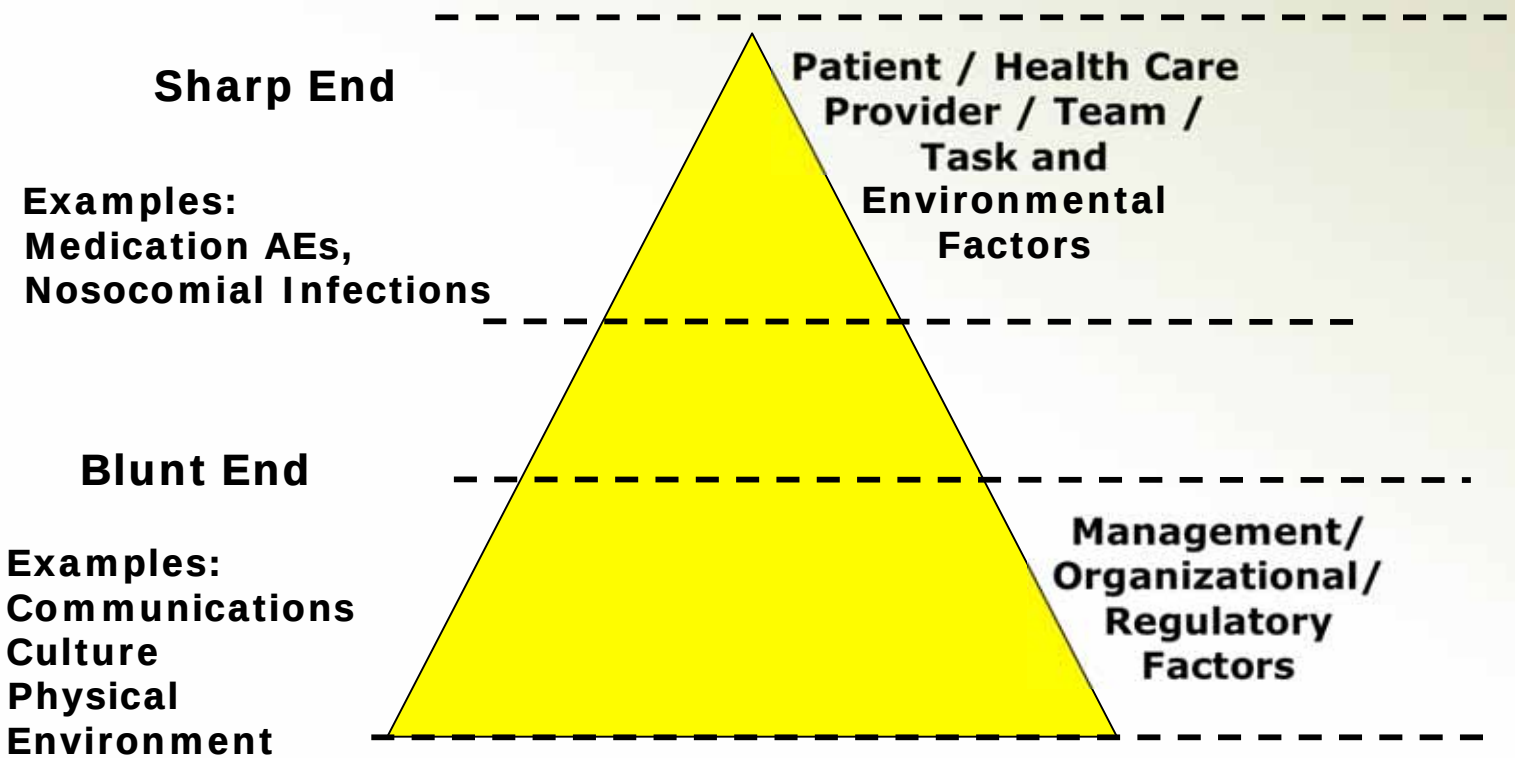
Amrinone

Amiodarone

Typography Differentiation

• Vinblastine	VinBLAStine
• Vincristine	VinCRIStine
• Dobutamine	DOBUTamine
• Dopamine	DOPamine

Types of Adverse Events



Adapted from the NHS Report – Doing Less Harm, 2001

What We Are Doing

***Safer Health Care Now!* The Canadian Campaign**

- **Regional Coordination** through geographic *nodes:*
  - Western Canada (includes Territories)
  - Ontario
  - Atlantic Canada
- **Clinical and other Collaboratives**
  - Canadian ICU Collaborative
  - Canadian Association of Paediatric Health Centres
  - Institute for Safe Medication Practices Canada
  - CIHI
  - CCHSA

Safer Healthcare Now!

Interventions

1. **Improved care for acute myocardial infarction**
2. **Prevention of adverse drug effects**
3. **Deploying rapid response teams**
4. **Prevention of central line-associated bloodstream infection**
5. **Prevention of surgical site infection**
6. **Prevention of ventilator associated Pneumonia**

Retrieved from www.saferhealthcarenow.ca or
www.soinsplussursmaintenant.ca
Toll free#: 1-866-421-6933

Teams Working on Each Intervention:

• RRT	**44**
• AMI	**48**
• Med Rec	**85**
• Central line	**39**
• SSI	**57**
• VAP	**45**
Total	**318**

***As of December 9, 2005**

	West	Ontario	Atlantic	Quebec	Total
Healthcare Delivery Organizations [includes hospitals, agencies, services and regions (with one or more hospitals participating)]	**37**	**72**	**24**	**2**	**135**

***As of November 10, 2005**

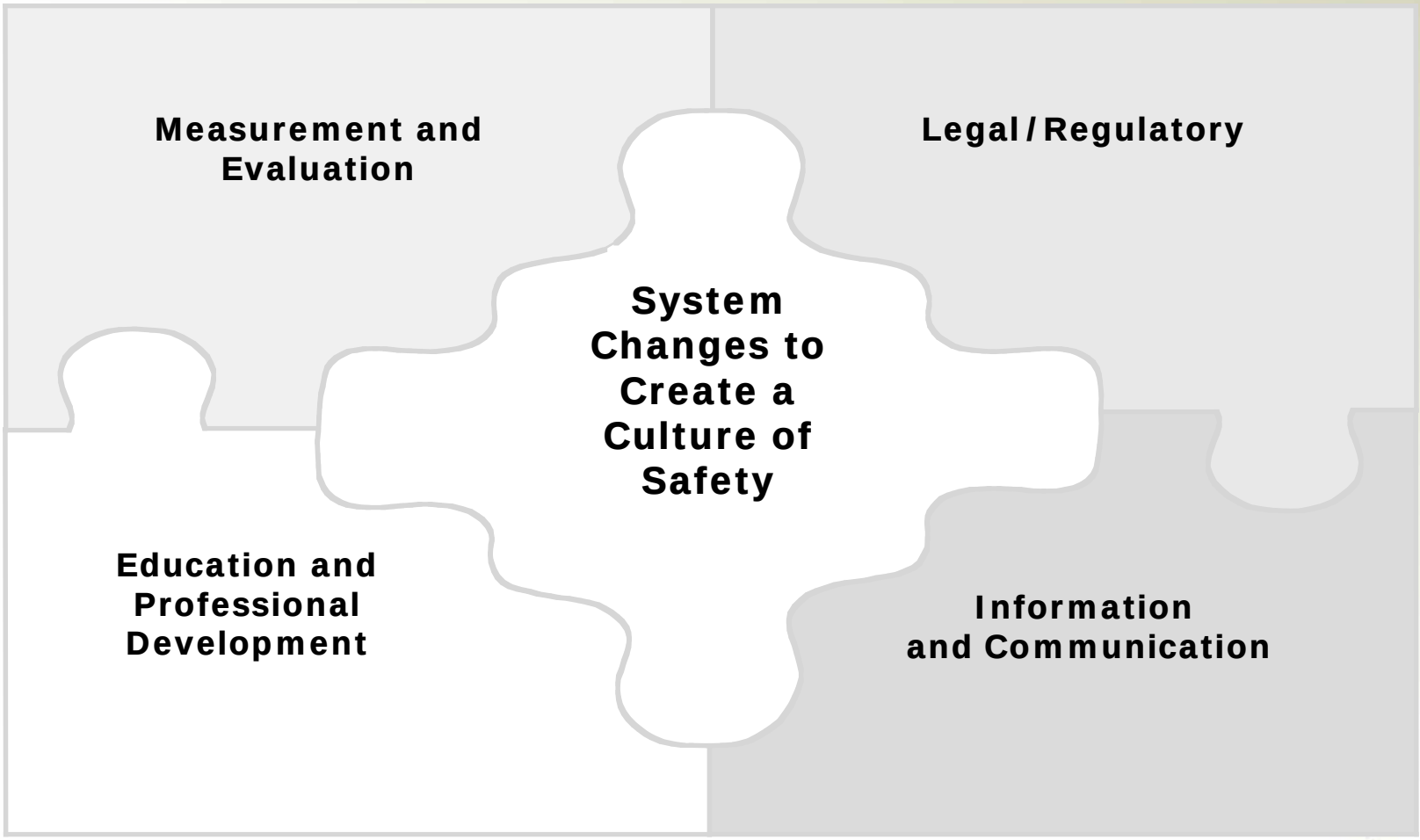
Accomplishments to Date

- **Strategic Business Plan developed and widely distributed**
- **CPSI office and operations established in Edmonton with a satellite office in Ottawa**
- **Pan-Canadian co-ordination and collaboration - developed to ensure that existing initiatives are not duplicated and roles are clear**
- **Infection Control strategy with Leaders in the field**
- **Drug reaction strategy with Health Canada and many others**
- **Labeling review with ISMP and industry**
- **Etc.**
- **Changing the culture and practices**
  - Difficult even when all the evidence points to the necessity for change

Accomplishments to Date

- **Root Cause Analysis**
- **Research Review and Request for Applications**
  - **Demonstration and Research projects**
  - **Will link decision makers, researchers on project teams**
- **National Symposium on Patient Simulation**
- **Increase publications on Patient Safety**
- **Two Canadian Patient Safety Dictionaries developed (English and French versions)**

An Integrated Approach to Patient Safety



Accomplishments to Date

Establish network of advisory committees:

- Education/Professional Development
- Health System Innovation
- Legal/Regulatory

– Research/Evaluation

- Information/Communication –

Medium Term Patient Safety Goals

Setting goals for:

- **Acute Care**
  - **Hospital acquired infections**
  - **Medications Practices**
  - **Mis-diagnosis**
- **Long Term Care**
  - **Medications**
  - **Falls**
  - **Bed Sores**
- **Community Care**
  - **Home Care**
  - **Other community care**

Future Challenges

- **Changing the culture and practices**
  - **Difficult even when all the evidence points to the necessity for change**
- **Effective engagement of the public**
  - **Challenging to achieve yet essential**
- **Key investments in human resources and technology required**
  - **Example: electronic health record**

Integration among national agencies

- **Minimize duplication and confusion**

Long Term Patient Safety Goals

- **Creating a Culture of Change**
  - **Eliminating blame**
  - **Requiring**
    - **‘Anonymous’ Reporting**
    - **Comprehensive Analysis of underlying causes**
    - **Pan Canadian Alerts and Advice**

Step One: Address Strategic Priorities, Culture and Infrastructure

- **Establish Patient safety as a strategic priority**
- **Establish a culture that supports patient safety**
- **Assess organization culture**
- **Address organization infrastructure**
- **Learn about patient safety and methods for improvement**

Source: IHI Leadership Guide to Patient Safety

Multitasking, Interruptions, Distractions

- Humans are poor multi-taskers
- Drivers on cell phones have 50% more accidents, 25% of traffic accidents are “distracted drivers”
- Interruptions and distractions increase error rates
- Humans need very formal cues to get back on task when interrupted and distracted

Step Two : Engage Key Stakeholders

- **Engage the Board of Trustees**
- **Engage Physicians**
- **Engage Staff**
- **Engage Patients and Families**

Step Three: communicate and Build Awareness

- **Begin patient safety leadership Walkarounds**
- **Implement safety briefings**
- **Improve communication using I-SBAR**
- **Implement Crew Resource Management Strategies**

Step Four: Establish, Oversee, and Communicate System-Level Aims

- **Establish aims beyond benchmarks**

- **Oversee and communicate system-level aims**

Step Five: Strengthen Reporting and analysis Functions

- **Improve analysis of adverse events**
- **Strengthen incident reporting mechanisms**

“Culture eats strategy for lunch over & over again”

Marc Bard

Accountability

More Important Now Than Ever Before…

"Our current methods of organizing and delivering care are unable to meet the expectations of patients and their families because the science and technologies involved in health care -- the knowledge, skills, care interventions, devices, and drugs -- have advanced more rapidly than our ability to deliver them **safely**, effectively, and efficiently."

The Robert Wood Johnson Foundation, 1996