Measuring Harm and Designing System-wide Improvement

National Forum on Quality Improvement in Health Care

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The presenters have nothing to disclose.

National Forum on Quality Improvement in Health Care
Harm in Healthcare: fighting Patient Safety stagnation

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Professeur associé, IFROSS, University of Lyon 3, France

Orlando – Minicourse M16
December 5, 2016
Adverse Event - definition

“An unintended injury caused by medical management rather than by the disease process. The injury is sufficiently serious to lead to prolongation of hospitalisation or temporary or permanent impairment or disability in the patient.”

*Harvard Medical Practice Study (1990)*

An incident which resulted in harm to a patient

*WHO – International Classification for Patient Safety*
## Studies of Harm in Hospitals

<table>
<thead>
<tr>
<th>Study</th>
<th>Year of review</th>
<th>Number of reviewed stays</th>
<th>% of stays including AE</th>
<th>Deaths (% of AE)</th>
</tr>
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<tbody>
<tr>
<td>Harvard Med Practice Study (US)</td>
<td>1984</td>
<td>30121</td>
<td>3.7</td>
<td>13.6</td>
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<tr>
<td>Utah-Colorado</td>
<td>1992</td>
<td>14700</td>
<td>2.9</td>
<td>6.6</td>
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<tr>
<td>Australia</td>
<td>1992</td>
<td>14179</td>
<td>16.6</td>
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<td>UK</td>
<td>1999</td>
<td>1014</td>
<td>10.8</td>
<td>8.2</td>
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<tr>
<td>Denmark</td>
<td>1998</td>
<td>1097</td>
<td>9.0</td>
<td>4.9</td>
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<tr>
<td>New Zealand</td>
<td>1998</td>
<td>6579</td>
<td>11.2</td>
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<td>Canada</td>
<td>2000</td>
<td>3745</td>
<td>7.5</td>
<td>15.9</td>
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<td>2004</td>
<td>1967</td>
<td>12.3</td>
<td>4.1</td>
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<td>Netherlands</td>
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<td>7926</td>
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<td>Spain</td>
<td>2005</td>
<td>5908</td>
<td>9.3</td>
<td>4.4</td>
</tr>
</tbody>
</table>
Nonetheless, despite more than a decade of focus on improving patient safety in the United States, the current rates of adverse events among inpatients at three leading hospitals are still quite high for 33.2 percent of hospital admissions for adults.

Classen, D. C., Resar, R., Griffin et al. (2011). 'Global trigger tool' shows that adverse events in hospitals may be ten times greater than previously measured. *Health Aff (Millwood)*, 30(4), 581-589.
Adverse Event - definition

“An unintended injury caused by medical management rather than by the disease process. The injury is sufficiently serious to lead to prolongation of hospitalisation or temporary or permanent impairment or disability in the patient.”

1 patient in 10

An incident which resulted in harm to a patient

1 patient in 3

NCC MERP Index Value
The most robust studies suggest that 1–2% of consultations are associated with an adverse event in primary care. In out-of-hours care, the rate is about 2%.

**Sources of harm**

There is more agreement about the sources of harm in primary care. Factors thought to contribute to adverse events include:

- Human factors such as teamwork, communication, stress and burnout
- Structural factors such as reporting systems, processes and the environment
- Clinical factors such as medication.
The incidence of adverse events among home care patients

NANCY SEARS¹, G. ROSS BAKER², JAN BARNESLEY² AND SAM SHORTT³

• The AE rate was 13.2 per 100 home care cases [95% confidence interval (CI): 10.4–16.6%, standard error 1.6%].
• 32.7% (20 of 61 AEs) of the AEs were rated as having >50% probability of preventability;
• 6 deaths (10.9% of patients with an AE; 1.4% of all patients)

<table>
<thead>
<tr>
<th>AE category</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls with injury</td>
<td>15</td>
<td>24.6</td>
</tr>
<tr>
<td>Medication error</td>
<td>10 (2 deaths)</td>
<td>16.4</td>
</tr>
<tr>
<td>Pressure ulcer/skin breakdown</td>
<td>7 (1 death)</td>
<td>11.5</td>
</tr>
<tr>
<td>General decline</td>
<td>7</td>
<td>11.5</td>
</tr>
<tr>
<td>Delayed healing</td>
<td>6 (1 death)</td>
<td>9.8</td>
</tr>
<tr>
<td>Infection</td>
<td>5</td>
<td>8.2</td>
</tr>
<tr>
<td>CHF</td>
<td>4 (1 death)</td>
<td>6.6</td>
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<tr>
<td>Catheter injury</td>
<td>3</td>
<td>4.9</td>
</tr>
<tr>
<td>Bowel impaction/obstruction</td>
<td>2</td>
<td>3.3</td>
</tr>
<tr>
<td>Bleed</td>
<td>1 (1 death)</td>
<td>1.6</td>
</tr>
<tr>
<td>Dehydration</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Improvement, worsening or stagnation in Patient Safety?
From 2010 through 2014, the overall rate of hospital-acquired conditions declined 17%, from 145 to 121 per 1,000 hospital discharges.

Among the most frequent HACs, between 2010 and 2014, the rate of pressure ulcers decreased the most, from 40.3 per 1,000 discharges to 30.9 per 1,000 discharges.
Temporal Trends in Rates of Patient Harm Resulting from Medical Care

Christopher P. Landrigan, M.D., M.P.H., Gareth J. Parry, Ph.D., Catherine B. Bones, M.S.W., Andrew D. Hackbarth, M.Phil., Donald A. Goldmann, M.D., and Paul J. Sharek, M.D., M.P.H.
BACKGROUND

In the 10 years since publication of the Institute of Medicine’s report To Err Is Human, extensive efforts have been undertaken to improve patient safety. The success of these efforts remains unclear.

METHODS

We conducted a retrospective study of a stratified random sample of 10 hospitals in North Carolina. A total of 100 admissions per quarter from January 2002 through December 2007 were reviewed in random order by teams of nurse reviewers both within the hospitals (internal reviewers) and outside the hospitals (external reviewers) with the use of the Institute for Healthcare Improvement’s Global Trigger Tool for Measuring Adverse Events. Suspected harms that were identified on initial review were evaluated by two independent physician reviewers. We evaluated changes in the rates of harm, using a random-effects Poisson regression model with adjustment for hospital-level clustering, demographic characteristics of patients, hospital service, and high-risk conditions.
RESULTS
Among 2341 admissions, internal reviewers identified 588 harms (25.1 harms per 100 admissions; 95% confidence interval [CI], 23.1 to 27.2). Multivariate analyses of harms identified by internal reviewers showed no significant changes in the overall rate of harms per 1000 patient-days (reduction factor, 0.99 per year; 95% CI, 0.94 to 1.04; P=0.61) or the rate of preventable harms. There was a reduction in preventable harms identified by external reviewers that did not reach statistical significance (reduction factor, 0.92; 95% CI, 0.85 to 1.00; P=0.06), with no significant change in the overall rate of harms (reduction factor, 0.98; 95% CI, 0.93 to 1.04; P=0.47).

CONCLUSIONS
In a study of 10 North Carolina hospitals, we found that harms remain common, with little evidence of widespread improvement. Further efforts are needed to translate effective safety interventions into routine practice and to monitor health care safety over time. (Funded by the Rx Foundation.)
Les événements indésirables graves associés aux soins observés dans les établissements de santé
Résultats des enquêtes nationales menées en 2009 et 2004


Parmi les EIG survenus en cours d’hospitalisation, dont le nombre est évalué en moyenne à 6,2 pour 1000 journées d’hospitalisation, 87 ont été identifiés comme « évitables », soit 2,6 pour 1000 journées. Par ailleurs, ont été observés en moyenne pour 1000 jours d’hospitalisation, 1,7 EIG évitable ayant entraîné une prolongation d’hospitalisation et 1,7 EIG évitable ayant pour origine des actes invasifs ou des interventions chirurgicales. Enfin, la fragilité du patient est le premier facteur contributif à la survenue d’un EIG.

Concernant les EIG à l’origine d’hospitalisations, 4,5% des séjours ont été causés par un EIG et 2,6 % l’ont été par un...
### France: Study of Patient Harm 2004 vs 2009

<table>
<thead>
<tr>
<th>Patient days (PD)</th>
<th>AE</th>
<th>AE/1000 PD (%)</th>
<th>Cl at 95 %</th>
<th>AE</th>
<th>AE/1000 PD (%)</th>
<th>Cl at 95 %</th>
<th>OR</th>
<th>CI at 95 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>35234</td>
<td>255</td>
<td>7.2</td>
<td>[5.7-8.6]</td>
<td>31663</td>
<td>214</td>
<td>6.2</td>
<td>0.93</td>
<td>[0.68-1.27]</td>
</tr>
</tbody>
</table>

Adverse Events (2004) | Adverse Events (2009) | OR | Cl at 95 % |
--- | --- | --- | --- |
| Patient days | AE | AE/1000 PD (%) | Cl at 95 % | Patient days | AE | AE/1000 PD (%) | Cl at 95 % | OR | Cl at 95 % |
| 35234 | 255 | 7.2 | [5.7-8.6] | 31663 | 214 | 6.2 | [5.1-7.3] | 0.93 | [0.68-1.27] |
Still a Challenge

- Major progress has been made in assessing the nature and scale of harm to patients in many countries.
- A considerable number of interventions of different kinds have shown that errors can be reduced and processes made more reliable.
- The most safety improvements so far demonstrated have been those with a strong focus on a core clinical issue and a relatively narrow timescale. It has proved very much more difficult to improve safety across whole organisations.
- Improving safety at a population level has been even more challenging and findings have generally been disappointing.

Questions for discussion

- Why, despite increased awareness, numerous national and regional programs, new research, is Patient Safety stagnating?
- What could be actions to improve or accelerate Patient Safety improvement in your organization?
Discussion
The improvement threshold phenomenon

The fantasy

The literature

3 case studies of leading organizations

The investment threshold
Findings
Factors used by leading QI programs to come to improved patient results

Findings
Factors used by leading QI programs to come to improved patient results

Average cycle of Quality interventions in complex systems

Amalberti, R. Translating concepts into field reality, BMJ-IHI International Forum, April 2014

- 2 Years to see the problem
- 2 Years to see local solutions
- 1 more Year to see solution endorsed by medical Agencies
- 5 years for spreading out solution within all the professional community

10 Yrs minimum
Preventing Patient Harms Through Systems of Care

- CMS recently launched Partnership for Patients, an ambitious national effort designed to substantially reduce 9 types of preventable harm and hospital readmissions.

- These harms include adverse drug events, catheter-associated urinary tract infections, central line–associated bloodstream infections, fall injuries, pressure ulcers, surgical site infections, venous thromboembolisms, ventilator-associated pneumonia, and obstetrical adverse events.

- Thousands of hospitals have agreed to participate and chose to focus on several harms because it was beyond their capacity to simultaneously address all 9 types of harm.
The dilemma is that most patients are at risk of most of the 9 harms and other harms, including loss of dignity and a sense of respect for their values. Yet patients can expect physicians to focus harm-reduction efforts on just a few of these harms. Health care is addressing these harms as if each type occurs in isolation.

This reaction has occurred because it is too burdensome to attempt to reduce multiple harms at the same time. The “siloing” of preventing patient harm is inefficient. Health care needs a different approach to reducing patient harm.
For instance, patients receiving mechanical ventilation in the ICU are at risk of 8 of the 9 harms on the CMS list, such as central line–associated bloodstream infections, ventilator-associated pneumonia, and venous thromboembolism.

Mechanically ventilated patients are also susceptible to harms not included on the CMS list, such as delirium, diagnostic errors, and air embolism.

It is time for the science of health care delivery to mature and embrace systems engineering. It is time for health care to embrace the compelling goal of reducing preventable patient harm. By systematically addressing all the known harms patients may experience, clinicians may realize this goal (…).
Resilience Engineering

- **Resilience** is the intrinsic ability of a system to adjust its functioning prior to, during, or following changes and disturbances, so that it can sustain required operations under both expected and unexpected conditions.

- A practice of **Resilience Engineering / Proactive Safety Management** requires that all levels of the organization are able to:
  - **Learn** from past events, understand correctly what happened and why
  - **Respond** to regular and irregular conditions in an effective, flexible manner,
  - **Monitor** short-term developments and threats; revise risk models
  - **Anticipate** long-term threats and opportunities

Erik Hollnagel, Safety Culture, Safety Management, and Resilience Engineering 2009
Two views of safety management
Moving to Patient Safety 2

Classical safety management uses trivial (structural) models. The aim is to reduce the number of adverse events (the visible). Efforts focus on avoiding that something happens again (“fixing weaknesses,” prevention, protection).

Resilience management uses non-trivial (functional) models. The aim is to improve the ability to succeed under varying conditions. Efforts focus on enhancing the organisation’s ability to respond, monitor, anticipate, and learn (the visible and invisible).
Four pillars of a safety strategy:

- **A systems approach.** The approach to reduce harm must be integrated and implemented at the system level.

- **Culture counts.** Health systems and organisations must truly prioritise quality and safety through an inspiring vision and positive reinforcement, not through blame and punishment.

- **Patients as true partners.** Healthcare organisations must involve patients and staff in safety as part of the solution, not simply as victims or culprits.

- **Bias towards action.** Interventions should be based on robust evidence. However, when evidence is lacking or still emerging, providers should proceed with cautious, reasoned decision-making rather than inaction.

Integrated approach to Patient Safety

- Systems-based
- Focused on culture
- Patient- and staff-centered
- Evidence-based
Free from Harm

Accelerating Patient Safety Improvement
Fifteen Years after *To Err Is Human*

Report of an Expert Panel Convened by
The National Patient Safety Foundation
Move from piecemeal to total systems approach

- Despite demonstrated improvement in specific problem areas, such as hospital-acquired infections, the scale of improvement in patient safety has been limited.
- Though many interventions have proven effective, many more have been ineffective.
- The health care system continues to operate with a low degree of reliability.
- *To Err Is Human*: the expectation at the time was substantial, permanent improvement.
- Next 15 years: it has become increasingly clear that safety issues are far more complex—and pervasive—than initially appreciated.
- Patient safety requires an overarching shift from reactive, piecemeal interventions to a total systems approach to safety.
- It means leadership consistently prioritizing safety culture and the wellbeing and safety of the health care workforce.
Recommendations

1. Ensure that leaders establish and sustain a safety culture
2. Create centralized and coordinated oversight of patient safety
3. Create a common set of safety metrics that reflect meaningful outcomes
4. Increase funding for research in patient safety and implementation science
5. Address safety across the entire care continuum
6. Support the health care workforce
7. Partner with patients and families for the safest care
8. Ensure that technology is safe and optimized to improve patient safety
What is Safety?

Frank Federico
Vice President

December 2016
What is your definition of patient safety?
'The avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the process of healthcare.'

Does this mean your system is safe?
How do you know how safe you are?
Safety

- We can measure safety retrospectively by counting adverse events.
- Safety is a dynamic non-event. If nothing happened does that mean we are safe?
- Are we safe now? Count harm events AND Sensitivity to operations. Do we know and understand where systems may fail?
  - Briefings/debriefings
  - Walkrounds/ Gemba walks
  - Dedicated patient safety staff
  - Situational Awareness
The typical Medicare patient in one year sees seven different doctors, including five different specialists, working in four different practices.

How Many Doctors Does It Take to Treat a Patient?
WSJ  http://www.wsj.com/articles/SB118238673713942795
Relationship Between Errors and Adverse Events and Mortality

Adverse Events

Errors

Mortality

Adapted from Bates
Safety in healthcare is a moving target. As standards improve and concern for safety grows, we come to regard an increasing number of events as patient safety issues. In this respect, healthcare differs from almost all other safety-critical industries. What we regard as harm in, for instance, civil aviation remains the same whatever advances may occur in aviation technology or practice. In contrast, innovation and improving standards in healthcare alter our conceptions of both harm and preventability.

In the 1950s, many complications of healthcare were recognised, at least by some, but largely viewed as the inevitable consequences of medical intervention. Drug events in the community that cause admission to hospital, polypharmacy and general harm from overtreatment. All these, in the past, might have been regretted, but now receive greater attention by being viewed under the safety umbrella.

The perimeter of safety is, therefore expanding. This is welcome for patient as it reflects rising standards and aspirations. However, the shifting perimeter does present problems, both conceptually and practically. The definition of harm seems increasingly difficult to pin down as more and more events are badged as safety issues. This raises the question of whether we need to reconsider the measurement of adverse events.
The Expanding Target of Adverse Events (Harm)

- Wrong site surgery
- Infections
- CAUTI, Pressure Ulcers, Falls with Harm
- What is next?
- Delirium
- Loss of Independence
- Medication-related confusion
- Deconditioning
- Lack of respect
- Loss of Independence
Reflect on your improvement work. Are there examples of lots of hard work to make something better and yet all seems to be the same?
70% of all Process Improvement Projects Fail
The problems that exist in the world today cannot be solved by the levels of thinking that created them.

Albert Einstein
Violation Producing Conditions

- Perceived low likelihood of detection
- Inconvenience
- Misperception or lack of recognition of risk
- Authority / status to violate (self-perceived)
- Copying behavior
- No disapproving authority figure present
- Group pressure

{Primary Source Human Error Assessment & Reduction Technique, Jeremy Williams}
Systemic Migration to Boundaries

INDIVIDUAL BENEFITS

VERY UNSAFE SPACE

ACCIDENT

‘Illegal normal’
Real life standards

Usual Space
Of Action

Expected safe
space of action
as defined by
professional
standards

Market demand

Technology

Individual
concerns
Life quality, ...

Safety Regs
& good practices
Certification/
accreditation standards
Systemic Migration to Boundaries

- Individual Benefits
  - 50-60 mph
  - 40 mph
- Very Unsafe Space
- Accident
- 30 mph speed limit
  - School Zone
- Safety Regs & good practices
  - Certification/accreditation standards
- Other Drivers
  - Distracted by Technology
- Individual concerns:
  - Late for the train
  - Life quality, ...

- Illegal normal
  - Real life standards

Performance
Are there Violation Producing Conditions in your work area?
Impact of poor care on a patient
Cumulative Complexity Model

- Workload
- Capacity
- Burden of treatment
- Burden of illness
- Outcomes
  - access
  - use
  - self-care
What matters to you?
Emotional harm from disrespect: the neglected preventable harm

Laugue Sokol-Hessner, Patricia Henry Folcarelli, Kenneth E F Sands

INTRODUCTION
Consider these actual patient experiences:
- A patient is admitted to the hospital for a bowel obstruction from a known malignancy. She calls her cancer specialist about this complication, but he is unavailable. A covering provider reading from her file says ‘your cancer is untreatable’. This is the first time she has heard this.
- A patient dies in the hospital and the next day the funeral home collects a body from the hospital morgue. After embalming the body, the funeral home is notified by the hospital that they were given the wrong body. Because of this error, it may not be possible to process the correct body in time for the wake the following day.

Despite being simultaneously dreadful and familiar to healthcare professionals, cases like these are not systematically identified or addressed in hospital quality improvement programmes. As a result, we have no good way of preventing them and patients inevitably continue to suffer from them. As a result, many patients experience the consequences of adverse events, patients emphasise emotional harm more than physical harm. Emotional harms can erode trust, leave patients feeling violated and damage patient–provider relationships. Such injuries can be severe and long lasting, with adverse effects on physical health. Failures to acknowledge and systematically address these harms ensure that they continue.

For these emotional harms, we are where we were with patient safety before 1999: we know they occur, but lacking a systematic approach to capture, categorise or assess them, we struggle to understand root causes and prevent future events. We do not even have reliable estimates of how often such harms occur. Some evidence suggests they may be more prevalent than physical harms.

Undoubtedly, some of these events are preventable. The costs of failing to prevent them—both financial and otherwise—are unjustifiable. As the IOM Report notes, ‘the institutional response’ would
Emotional Harm

Emotional harms can be conceptualized as harms to a patient’s ‘dignity’ which can be caused by a failure to demonstrate adequate ‘respect’ for the patient as a person.

Beth Israel Deaconess Medical Center, Boston
“Twenty-one out of the 30 studies that measured burnout found a significant association between burnout and patient safety…”

Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review
Louise H. Hall, Judith Johnson, Ian Watt, Anastasia Tsipa, Daryl B. O’Connor
What Contributes to Harm

- Poorly designed processes
- Lack of systems thinking
- Counting certain harm events and thinking that makes us safer
- Project thinking
- Lack of leadership at all levels
- Focus on harm and risk
- Lack of joy in work
Patient Safety is not a project.
It is how we work.
“.. front-line staff naturally seem to accept that to improve safety, you have to focus on everyday work, not only accidents (past or future)”

https://humanisticsystems.com/2016/11/24/just-culture-who-are-we-really-afraid-of%ef%bb%bf/
Radical Redesign Principles

- Change the Balance of Power
- Standardize What Makes Sense
- Customize to the Individual
- Promote Wellbeing
- Create Joy in Work
- Make it Easy
- Move Knowledge, Not People
- Collaborate/Cooperate
- Assume Abundance
- Return the Money
Harms to Consider

- Lack of respect for patients/families and staff
- Deconditioning
- Treatments that increase morbidity and mortality
- Excessive treatments
- Underuse of needed treatments
1926 - 2015
Reflection
Measurement and Monitoring

Frank Federico

This presenter has nothing to declare

December 2016
Why measure?

- Has patient care been safe in the past?
- Are our clinical systems and processes reliable?
- Is care safe today?
- Will care be safe in the future?
- Are we responding and improving?
A framework for safety: Vincent et al. The Health Foundation

Figure: A framework for safety measurement and monitoring

- Past harm
- Reliability
- Safety measurement and monitoring
- Anticipation and preparedness
- Sensitivity to operations
- Integration and learning
Table Exercise

- Discuss the framework for safety
- What measures do you have for each part of the framework?
- Sensitivity to operations – how safe is your organization today?
The measurement and monitoring of safety

Drawing together academic evidence and practical experience to produce a framework for safety measurement and monitoring

Spotlight
April 2013
Past Harm

- Infections
- Pressure ulcers
- Medication-related events
- Others….
Tools

- HSMR- mortality review
- Gold standard chart review
- IHI Global Trigger Tool
- Voluntary reports

What are the advantages of these methods?
What are the disadvantages?
Are we safe today?

- Measuring risk
- Reliability of processes
- Situational Awareness
- Sensitivity to operations

- What are the advantages of these methods?
- What are the disadvantages?
Safety

- Will we be safe in the future?
  - Preparedness
  - Prediction
  - Anticipation
  - Situational awareness
  - Human reliability analysis- sustainability of processes
  - FMEA
  - Safety Cases
  - Safety culture
  - Hiring, training and competency assessments
Safety in the Future

- What are the advantages of these methods?
- What are the disadvantages?
Are we learning and improving?

Become a safer organisation through increased reporting and learning from harm events

- Improve safety culture
  - No blame culture
  - Senior staff actively engage with teams to encourage learning from incidents
  - Safety work on themes developed from reporting
  - Increased speed of processing and investigating incidents
  - Develop rapid, effective and innovative means of disseminating learning
  - Ensure all staff are trained to use the incident reporting system
  - Standardise what should be reported

- Reduce incidence occurrence
  - Improve learning from incidents across the organisation

- Increase incident reporting rates
How will you determine the level of safety in your organization?
Prioritize: How does an organization manage a portfolio of projects

Anthony Staines, Ph.D.
Patient Safety Program Director, Fédération des hôpitaux vaudois, Switzerland
Professeur associé, IFROSS, University of Lyon 3, France
Please advise on prioritizing improvement opportunities

- Preventing CLABSI
- Surgical checklist
- Evidence-based practice for AMI
- High-alert medications management
- Preventing VAP
- Hand hygiene
- DVT prophylaxis
- Preventing falls
- Preventing SSI
- CPOE
- Preventing pressure ulcers

- Handoffs, handovers
- Rapid response teams (MET)
- CAUTI
- MRSA
- Sound-alike, look-alike medications
- Read-back for verbal orders
- Medication reconciliation
- Preventing surgical fires
- Infant abduction
- Crew Resource Management
Questions for discussion

- There are many things to do in patient safety: what do you do first? what criteria do you use to prioritize, who should do this?…
Neuchâtel on the map of Switzerland
Hôpital Neuchâtelois

- Founded in 2006 through the merger of 7 hospitals
- 7 locations
- 2,500 employees
- 300 acute beds
- 140 rehabilitation beds
- 17,000 admissions p/year
- 1,700 deliveries p/year
Patient Safety Concept

- Improvement interventions
  - System & structure
  - Measuring
  - Culture
Emphasis across time

- Improvement interventions
- Awareness raising
  - Culture
- Measurement
- Structure
Design of a Patient Safety Action Plan

- Current Patient Safety Practice Review & Analysis
- Patient Safety Culture Survey
- Literature review
- Experience
- Criteria
- Prioritization
- Strategy
- Action Plan

Findings Quantification

Gaps
Prioritization of patient safety projects

- Cost x effectiveness
- Severity x probability

- Prevent central line infections
- Prevent venous thromboembolism
- Surgical safety CL
- EBM heart diseases
- VAP
- Flue vaccination
- High alert medication management
- Hand hygiene

- a. Equipe d'intervention rapide
- b. Détection par déclencheur spécifique aux médicaments + alertes
- c. Développement système électronique d'ordres médicaux
- d. Pharmacie clinique et formation
- e. Protocoles pour médicaments à haut risques (stockage-prescri-administration)
- f. Bilan comparatif des médicaments (medication reconciliation)
- g. Médicaments ressemblants
- h. Médicaments : stockage et préparation
- i. Hygiène des mains - désinfection
- j. Prévention infections voies urinaires
- k. Prévention infections voies centrales
- l. Prévention pneumopathies ventilation mécanique
- m. Réduction infections MRSA
- n. Prévention infection du site opératoire
- o. Vaccination contre la grippe (soignants - patients à risque)
- p. Comptage des compresse et instruments
- q. Tourquet pneumatique : risque ischémique ou thrombotique
- r. Chir élective : evaluation chap patient risque accident ischémique
- s. Sécurité chirurgicale (check-list) & prévention erreurs site chirurgical
- t. Prévention faux chirurgaux
- u. Évaluation pour chaque patient risque bronchospiration
- v. Evaluation chap patient recevant anticoagulants-professionnel spéc.
- w. Prévention insuffisance rénale par produits de contraste iodés
- x. Évaluer chaque patient - risque malnutrition
- y. Prévention thromboembolies veineuses
- z. Revue décès non attendus
- A. Gestion des soins intensifs par intensivistes exclusivement
- B. Sécurité transfusionnelle
- C. % Prévention des chutes
- D. Prévention escarres
- E. Prévention des erreurs d'identification du patient
- F. Application systématiques pratiques EBM pour maladies cardiaques
- G. Réduction du décès fonctionnel des aînés hospitalisés
- H. Prévention des enlèvements de nourritures à l'hôpital
- i. Amélioration des transmissions relatives aux patients
## Prevention of CLABSI

I. Basic practices for prevention and monitoring of CLABSI: recommended for all acute care hospitals

<table>
<thead>
<tr>
<th>Topic</th>
<th>Recommendation</th>
<th>Current Practice</th>
<th>Plan 97</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Before insertion</td>
<td>1. Educate healthcare personnel involved in the insertion, care, and maintenance of central venous catheters about CLABSI prevention (A-II).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. At insertion</td>
<td>1. Use a catheter checklist to ensure adherence to infection prevention practices at the time of central venous catheter insertion (B-II). 2. Perform hand hygiene before catheter insertion or manipulation (B-II). 3. Avoid using the femoral vein for central venous access in adult patients (A-I). 4. Use an all-inclusive catheter cart or kit (B-II). 5. Use maximal sterile barrier precautions for central venous catheter insertion (A-I). 6. Use a chlorhexidine-based antiseptic for skin preparation in patients older than 2 months of age (A-I).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. After insertion</td>
<td>1. Disinfect catheter hubs, needleless connectors, and injection ports before accessing the catheter (B-II). 2. Remove nonessential catheters (A-II). 3. For non-tunneled central venous catheters in adults and adolescents, change transparent dressings and perform site care with a chlorhexidine-based antiseptic every 5-7 days or more frequently if the dressing is soiled, loose, or damp; change gauze dressings every 2 days or more frequently if the dressing is soiled, loose, or damp (A-I). 4. Replace administration sets not used for blood, blood products, or lipids at intervals not longer than 96 hours (A-II). 5. Perform surveillance for CLABSI (B-II). 6. Use antimicrobial ointments for hemodialysis catheter insertion sites (A-I).</td>
<td></td>
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</tr>
</tbody>
</table>
**II. Special approaches for the prevention of CLABSI**

1. Bathe intensive care unit (ICU) patients older than 2 months of age with a chlorhexidine preparation on a daily basis (B-II).
2. Use antiseptic- or antimicrobial-impregnated central venous catheters for adult patients (A-I).
3. Use chlorhexidine-containing sponge dressings for central venous catheters in patients older than 2 months of age (B-I).
4. Use antimicrobial locks for central venous catheters (A-I).

**III. Approaches that should not be considered a routine part of CLABSI prevention**

1. Do not use antimicrobial prophylaxis for short-term or tunneled catheter insertion or while catheters are in situ (A-I).
2. Do not routinely replace central venous catheters or arterial catheters (A-I).
3. Do not routinely use positive-pressure needleless connectors with mechanical valves before a thorough assessment of risks, benefits, and education regarding proper use (B-II).

---

Frequency of Event Reporting

% of positive responses to questions on frequency of event reporting, by hospital member of Hôpital neuchâtelois.
Evaluation des actions d'amélioration de la sécurité des patients

CPOE
Clinical pharmacy
Medication reconciliation
Hand Hyg.

Central line infections
Surg site inf
Venous thromb
Rapid response team

Pressure ulcers
Patient identification

Support from Hospital Federation
## Possible criteria to prioritize patient safety interventions

<table>
<thead>
<tr>
<th></th>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Visibility</td>
<td>Are an opportunity to show institutional commitment in safety improvement.</td>
</tr>
<tr>
<td>2</td>
<td>Clinical effectiveness</td>
<td>Are grounded on scientific evidence (evidence-based)</td>
</tr>
<tr>
<td>3</td>
<td>Buy-in</td>
<td>Have a potential to create buy-in from the clinicians.</td>
</tr>
<tr>
<td>4</td>
<td>Value</td>
<td>Can simultaneously improve safety and cut costs or increase revenue</td>
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<tr>
<td>5</td>
<td>Feasibility</td>
<td>Are easy to implement.</td>
</tr>
<tr>
<td>6</td>
<td>Results driven</td>
<td>Help getting and showing results.</td>
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<tr>
<td>7</td>
<td>System-wide</td>
<td>Involve a spread that is system-wide and leaves no clinical unit out.</td>
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<tr>
<td>8</td>
<td>Cultural impact</td>
<td>Help creating a safety culture within the institution.</td>
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<tr>
<td>9</td>
<td>Cost effectiveness</td>
<td>Can be implemented with little extra cost or can generate more savings or extra revenue than cost increase.</td>
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<tr>
<td>10</td>
<td>Mandatory</td>
<td>Helps complying with legal or regulatory requirements.</td>
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<tr>
<td>11</td>
<td>Patient involvement</td>
<td>Allows patient involvement.</td>
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<tr>
<td>12</td>
<td>Innovative</td>
<td>Gives the institution an image of being innovative, pioneer, and can be helpful for other institutions.</td>
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<tr>
<td>13</td>
<td>Volume</td>
<td>Volume of patients that will benefit from the intervention.</td>
</tr>
<tr>
<td>14</td>
<td>Severity of risks</td>
<td>Deal with risks that have the most severe potential consequences for patients</td>
</tr>
<tr>
<td>15</td>
<td>Multi-professional</td>
<td>Promotes interprofessional discussions and consensus.</td>
</tr>
</tbody>
</table>
A checklist to design your Patient Safety Strategy

- Structure – leadership – governance
- Reporting system (incidents, adverse events, near misses)
- Institutional Risk Management System
- Resources (investment, operations)
- Protocols - guidelines
- Patient engagement
- Safety culture
- Measurement - quantification
- Improvement interventions
- Research and education
Engaging Others
Getting Results Model

- **WILL**: Status quo not acceptable. There is a better way

- **IDEAS**: Changes that can be tested

- **GETTING RESULTS**: Testing those changes and implementing and spreading those that get desired results
Reflection

Reflecting on your own successes and setbacks in engaging others in patient safety, where have you had the most success and where have you had the least:

- Engaging around WILL?
- Engaging around IDEAS?
- Engaging around GETTING RESULTS?
Leadership for Quality and Safety Improvement

Anthony Staines, Ph.D.
Patient Safety Program Director, Fédération des hôpitaux vaudois, Switzerland
Professeur associé, IFROSS, University of Lyon 3, France

Orlando – Minicourse M16
December 5, 2016
Leadership for Quality and Safety

- **Preparation**
  - Understand where your organization stands
  - Understand the principles, methods, pressures
  - Understand the organization’s experience and readiness

Where you stand

Example

Measurement of medication harm

- Adverse Drug Event Trigger Tool: 20 charts per month
- Initially, 18% of patients with AE
- 18 month breakthrough collaborative
- 7% of patients with AE

Examples of Triggers

- Diphenhydramine
- Vitamin K
- Romazicon
- Antiemetics
- Naloxone
- Antidiarrheals
- Serum glucose <50
- WBC <3,000
- Platelet <50,000
- Digoxin level > 2
- Rising serum creatinine
- Oversedation / fall / lethargy / hypotension
- Rash
- Abrupt medication stop
- Transfer to higher level of care
- C. difficile positive
- INR >6
Figure 3 Trend in monthly mean number of ADEs per 1000 doses.
Leadership for Quality and Safety

- Vision and strategy
  - Create an inspiring vision collaboratively
  - Choose improvements that are strategically important
  - Create an improvement strategy

- Communication, involvement and motivation
  - Show involvement
  - Build consensus within top leadership, sustainability and priority
  - Define a communication strategy

The County Council vision:

For a good life in an attractive county
Strategic Improvement Areas

Learning and innovation
Leadership

IT Envir. Adm.

Access How we receive Prevention Taking care of oneself Cooperation/flow Clinical improvement work Patient safety Medication

Good finances
Reliability

Value for patient increases

Leadership for Quality and Safety

- Build infrastructure for change and define responsibilities
  - Define top management team responsibilities + all managers
  - Establish quality and safety groups at all levels
  - Ensure experts are available for support
  - Appoint physician and nurse leaders
  - Provide networks to support experts
  - Form project teams
  - Ensure patient safety and error reporting are in all job descriptions

Findings
Factors that can help or hinder QI programs to come to improved patient results

Clinical programs structure

Guidance Council
Global coordination, budget, information systems, goal setting, priorities

Program management

Urban North Region
Regional program management

MD

Dev. team 1

Dev. team 2

Development

Urban Central Region
Regional program management

MD

MD

MD

Urban South Region
Regional program management

MD

Clinical integration
Executive team

- Cardiovascular
- Neuromusculoskeletal
- Women & Newborn
- Primary Care
- Oncology
- Intensive Medicine
Leadership for Quality and Safety

- Systems change
  - Create and improve patient feedback systems
  - Create a personnel reporting system for adverse events and near misses
  - Create a system for prioritizing, investigating and preventing events
  - Change reporting systems to include quality and safety indicators along finance and production data
  - Change IT systems to allow collection of data and fast feedback
  - Change appraisal recognition and reward systems to align with strategy

Leadership for Quality and Safety

- Human resources, people and team development
  - Include quality and safety in all personnel introduction programs
  - Agree policies with professional groups and unions on reporting
  - Provide quality and safety training to middle managers and leaders
  - Develop top and middle management teams
  - Develop the ability of quality experts to translate and apply methods locally
  - Provide quality methods training and development
  - Ensure managers and experts apply latest knowledge

Leadership for Quality and Safety

Other actions

- Use your boundary-spanning or mediating role to identify and overcome boundary problems for patients
- Identify and support physician enthusiasts for quality and safety
- Improve relations with physicians through regular contact, discussion about clinical outcomes
- Talk about patient cases,— not to criticize but to show where there is room for improvement. Tell stories.
- Regularly visit different units to discuss needs, incidents, safety issues
- Listen and ask more questions than give instructions: why do we do it this way, do others do it better, is it possible there is a better way, how do we know?

Hospital management provides a work climate that promotes patient safety

% of positive replies ("strongly agree" and "agree") by hierarchical level

Hospital Survey on Patient Safety Culture within a hospital in Switzerland
The actions of hospital management show that patient safety is a top priority
% of positive replies ("strongly agree" and "agree") by hierarchical level
Hospital Survey on Patient Safety Culture within a hospital in Switzerland
Tools, levers and tips to engage your leaders

- Data on clinical quality and harm.
- Potential savings, value, business case.
- Executive safety walkrounds.
- Disclosure policy
- Transparency policy on results, indicators
- Patient stories
- Bring your boss to the National Forum (or similar)
- Bring a delegation of leaders
- Arrange meetings at the Forum with influential leaders
- Get one Board member to influence others
Perceiving the challenges

- A survey, carried out in the US\textsuperscript{21}, by Board chairs, showed that 66\% perceived quality within their hospital to be better or much better than average, whereas only 1\% perceived it to be worse or much worse than average.

- The same survey, carried out in the UK\textsuperscript{22}, comes to a similar conclusion: only 2\% of Board chairs perceive quality of care to be worse than average in their hospital.

- Generally, boards perceive quality in their hospital much more optimistically than CEOs or nursing leaders\textsuperscript{10}.
**Governance Institute Survey, 2007**

<table>
<thead>
<tr>
<th>Governance practice</th>
<th>Process of care</th>
<th>Risk-Adjusted Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>The board has a standing quality committee (65.2% de Yes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(65.2% de Yes) Yes</td>
<td>90.8%*</td>
<td>4.4%*</td>
</tr>
<tr>
<td>No</td>
<td>87.0%*</td>
<td>4.9%*</td>
</tr>
<tr>
<td>At most board meetings, devotes a significant amount of time to quality issues/discussion (68.5% de Yes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(68.5% de Yes) Yes</td>
<td>83.6%*</td>
<td>4.4%*</td>
</tr>
<tr>
<td>No</td>
<td>82.0%*</td>
<td>4.9%*</td>
</tr>
</tbody>
</table>

## Governance Institute Survey, 2007

<table>
<thead>
<tr>
<th>Unadjusted comparison of responses between top- and bottom-performing hospitals</th>
<th>Nat. Averg</th>
<th>Top perf†</th>
<th>Bottom perf†</th>
<th>P-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality performance is on the agenda at every board meeting</td>
<td>63%</td>
<td>75%</td>
<td>47%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Financial Performance is on the agenda at every board meeting</td>
<td>93%</td>
<td>91%</td>
<td>94%</td>
<td>0.25</td>
</tr>
<tr>
<td>At least 20% of board time is spent on issues of clinical quality</td>
<td>42%</td>
<td>52%</td>
<td>34%</td>
<td>0.001</td>
</tr>
<tr>
<td>At least 20% of board time is spent on issues of financial performance</td>
<td>45%</td>
<td>35%</td>
<td>58%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Board has a quality subcommittee</td>
<td>59%</td>
<td>75%</td>
<td>35%</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Subcommittee reports to full Board at every meeting: 64%, 67%, 53%, 0.03

Attention is the currency of leadership
You can tell what people and organizations care about by how they allocate their resources.
Designing a Patient Safety Improvement Strategy
The case of hand hygiene

Anthony Staines, Ph.D.
Patient Safety Program Director, Fédération des hôpitaux vaudois, Switzerland
Professeur associé, IFROSS, University of Lyon 3, France

Orlando – Minicourse M16
December 5, 2016
Many slides have been designed by Isabelle Amherdt, project manager for the Hand Hygiene Collaborative at Fédération des hôpitaux vaudois

Many thanks to Isabelle Amherdt
FHV, 12 hospitals in the Vaud county

<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>Missions</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Réseau Santé Balcon du Jura vd</td>
<td>Soins aigus, hébergement</td>
<td><a href="http://www.rsbj.ch">www.rsbj.ch</a></td>
</tr>
<tr>
<td>Ensemble hospitalier de la Côte (EHC)</td>
<td>Soins aigus, réadaptation, hébergement</td>
<td><a href="http://www.ehc-vd.ch">www.ehc-vd.ch</a></td>
</tr>
<tr>
<td>Etablissements hospitaliers du nord vaudois (ehnv)</td>
<td>Soins aigus, réadaptation, hébergement</td>
<td><a href="http://www.ehnv.ch">www.ehnv.ch</a></td>
</tr>
<tr>
<td>Fondation de Nant</td>
<td>Soins aigus, réadaptation, hébergement</td>
<td><a href="http://www.nant.ch">www.nant.ch</a></td>
</tr>
<tr>
<td>Fondation Rive-Neuve</td>
<td>Soins palliatifs</td>
<td><a href="http://www.riveneuve.ch">www.riveneuve.ch</a></td>
</tr>
<tr>
<td>Groupement Hospitalier de l’ouest lémanique SA (GHL)</td>
<td>Soins aigus, réadaptation, hébergement</td>
<td><a href="http://www.ghol.ch">www.ghol.ch</a></td>
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<tr>
<td>Hôpital de Lavaux</td>
<td>Soins, réadaptation, hébergement</td>
<td><a href="http://www.hopitaldelavaux.ch">www.hopitaldelavaux.ch</a></td>
</tr>
<tr>
<td>Hôpital Riviera-Chablais Vaud-Valais</td>
<td>Soins aigus, réadaptation</td>
<td><a href="http://www.hopitalrivierachablais.ch">www.hopitalrivierachablais.ch</a></td>
</tr>
<tr>
<td>Fondation Miremont</td>
<td>Soins, réadaptation, hébergement</td>
<td><a href="http://www.miremont.ch">www.miremont.ch</a></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>Missions</th>
<th>Website</th>
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<tbody>
<tr>
<td>Hôpital du Pays-d’Enhaut</td>
<td>Soins aigus, réadaptation, hébergement</td>
<td><a href="http://www.hopital-pae.ch">www.hopital-pae.ch</a></td>
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<tr>
<td>Hôpital Intercantonal de la Broye (HIB)</td>
<td>Soins aigus, réadaptation</td>
<td><a href="http://www.hopital-broye.ch">www.hopital-broye.ch</a></td>
</tr>
<tr>
<td>Institution de Lavigny</td>
<td>Soins, réadaptation, hébergement</td>
<td><a href="http://www.ilavigny.ch">www.ilavigny.ch</a></td>
</tr>
</tbody>
</table>
Methodology

• The chosen methodology is the concept of Breakthrough Collaboratives, developed by Institute for Healthcare Improvement (IHI). It is designed to spread evidence-based practices.
  • Carry out a literature review
  • Gather teams from a range of institutions
  • Explain the Improvement Interventions
  • Implement the interventions, each team in its institution, first in a pilot unit, then by learning and adjusting through the Plan-Do-Study-Act of quality improvement
  • Sharing experience in order to improve
Repeat use of PDSA

Theories
Ideas
Proposals

Data

Changes leading to improvement

System-wide change implementation

Large-scale tests

Follow-up tests

Small scale test

132
Method: Breakthrough Collaborative (IHI).

Invite teams
Preparatory work
Identify and invite experts
Develop models

LS : learning session
AP : action period
PDSA : Plan – Do – Study - Act

LS1 → LS2 → LSn
AP1 → AP2 → APn

Presentations knowledge spread

6 months 18 months
The teams

- FHV member hospitals receive an invitation, sent to the CEO
- Hospitals that register for the collaborative commit to:
  - Support the project by including a member of the Executive Board in the Steering Committee.
  - Appointing a team that will attend all meetings of the collaborative and look after implementation within the institution.
  - Grant the time that is needed for implementation: guarantee resources
  - Measure and share results within the collaborative.
## Timing

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tbody>
<tr>
<td><strong>2012</strong></td>
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<td><strong>Design</strong></td>
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<td><strong>2013</strong></td>
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<td><strong>Invitation</strong></td>
<td><strong>Define teams</strong></td>
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<td><strong>Preparation</strong></td>
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<td><strong>Baseline</strong></td>
<td><strong>Deployment – LS2 – LS5</strong></td>
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<td><strong>2015</strong></td>
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<td><strong>Deployment – LS6 – LS 7</strong></td>
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<td><strong>Post project measurement Assessment Sustainability</strong></td>
</tr>
</tbody>
</table>
WHO Multimodal strategy

The 5 moments for hand hygiene

ONE System change
Alcohol-based handrubs at point of care and access to safe continuous water supply, soap and towels

TWO Training and education
Providing regular training to all health-care workers

THREE Evaluation and feedback
Monitoring hand hygiene practices, infrastructure, perceptions, & knowledge, while providing results feedback to health-care workers

FOUR Reminders in the workplace
Prompting and reminding health-care workers

FIVE Institutional safety climate
Individual active participation, institutional support, patient participation
Strategy (Improvement package)

ONE System change
Alcohol-based handrubs at point of care and access to safe continuous water supply, soap and towels

TWO Training and education
Providing regular training to all health-care workers

THREE Evaluation and feedback
Monitoring hand hygiene practices, infrastructure, perceptions & knowledge, while providing results feedback to health-care workers

FOUR Reminders in the workplace
Prompting and reminding health-care workers

FIVE Institutional safety climate
Individual active participation, institutional support, patient participation

Strategy (Measurement - Indicators)

- Inventory of infrastructure
- Hand-rub consumption
- Perception of availability ergonomics
- Perception of use
- Connection to e-learning
- Perception of access to education
- Compliance by profession, moment
- Compliance vs control group
- Perception of compliance
- Perception of results feedback
- Perception reminder visibility
- Perception of reminder effectiveness
- Safety culture survey
- Perception of importance of HH in Hosp
Hand hygiene compliance
Perception and observation

<table>
<thead>
<tr>
<th>Perception: My compliance</th>
<th>Perception: My colleagues’ compliance</th>
<th>Baseline observation</th>
<th>Collaborative deployment</th>
<th>Compliance after 18 months</th>
<th>Perception: My compliance</th>
<th>Perception: My colleagues’ compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>86%</td>
<td>75%</td>
<td>62%</td>
<td>88%</td>
<td>87%</td>
<td>82%</td>
<td></td>
</tr>
</tbody>
</table>
System change: human factors

- 1 hand-rub dispenser per bed
- Human factors workshops to integrate hand hygiene into the flow of care
1 Human factors

A hand-rub dispenser is within reach at each point of care (specifically 1 dispenser per bed)
On average, how many times per day do you estimate that you use a hand-rub or soap and water for hand hygiene?
2 Education

Hand hygiene education concept

Variety in education interventions

Design and production of an e-learning tool
Have you had continuous education in hand hygiene during these past 3 years?

- No
- Yes
- No reply
Evaluation and feedback

9 compliance audits for hand hygiene, feedback of results and discussion within the teams
3 Evaluation and feedback

Have you had feedback on your ward’s compliance measure?
Feedback

- A video to train local leaders on how to present and discuss compliance results and on how to run a huddle to discuss goals for improvement.
Reminders in the workplace

HYGIÈNE DES MAINS
OBJECTIF POUR OCTOBRE 2015:
85%
DE TAUX
D'OBSEVANCE

QUELS SONT VOS RÉSULTATS ACTUELS?

Retrouvez les chiffres détaillés de vos audits sur l'intranet (publication tous les deux mois).
Sur l'intranet aussi : indicateurs, documentation, etc.

L’hygiène des mains...
J’mainplique

HRC
RSBJ
Leadership and culture

- Executive leaders visit the wards reaching the compliance goal, to congratulate them and to award a certificate.

- Compliance results are published. Local leaders are trained to discuss results with their team.

- Integration of results in executive dashboard and in the Board of Trustee’s dashboard.

Great leaders don’t tell you what to do….they show you how its done
Compliance rate – all participating hospitals together

- % compliance
- Number of observations

Audit | % Compliance | Number of Observations
--- | --- | ---
0 | 61.9% | 6162
1 | 69.2% | 6067
2 | 73.8% | 5826
3 | 76.5% | 5585
4 | 80.5% | 5597
5 | 80.4% | 5449
6 | 83.5% | 5821
7 | 86.3% | 5784
8 | 88.4% | 6852
9 | 88.3% | 6129
Compliance rate – all participating hospitals together
Compliance rate, by profession, all participating hospitals
### Compliance rate for each of the 5 moments, all participating hospitals together

<table>
<thead>
<tr>
<th>Moment</th>
<th>% Compliance</th>
<th>Number of Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before touching a patient</td>
<td>64%</td>
<td>213</td>
</tr>
<tr>
<td>Before aseptic procedure</td>
<td>69%</td>
<td>198</td>
</tr>
<tr>
<td>After body fluid exposure</td>
<td>70%</td>
<td>196</td>
</tr>
<tr>
<td>After touching a patient</td>
<td>65%</td>
<td>197</td>
</tr>
<tr>
<td>After touching patient</td>
<td>65%</td>
<td>203</td>
</tr>
</tbody>
</table>

**Legend:**
- % compliance
- Number of observations

**Audit Dates:**
- Before touching a patient: 213, 198, 196, 197, 203
- Before aseptic procedure: 64%, 69%, 70%, 65%, 65%
- After body fluid exposure: 64%, 65%, 75%, 71%, 71%
- After touching a patient: 66%, 66%, 67%, 65%, 66%
- After touching patient surroundings: 66%, 67%, 72%, 76%, 66%
Compliance across time, participating vs non-participating hospitals
Hand-rub consumption in Liters per 1000 patient days, all hospitals
A context that supports sustainability

In your opinion, how is hand hygiene valued in your hospital?

- 1: To a low degree
- 2
- 3
- 4 To a high degree

2013
2015
The Future of Safety
New challenges

- Safety is, in a number of respects, a constantly moving target. The perimeter has expanded over time.
- Patient safety has evolved and developed in the context of hospital care. New approaches will be required in more distributed forms of healthcare delivery.
- People live longer with chronic conditions which were once fatal. This bring new challenges to home and primary care.
- Rising healthcare costs, rising standards and increased demand will place huge pressures on healthcare systems which will increase the likelihood of serious breakdowns in care.

New thinking required

- We assume high quality healthcare punctuated by occasional safety incidents and adverse events; this as a vision of safety from the perspective of healthcare professionals. We need to also understand risk and harm through the patient’s eyes.

- Viewing safety through the patient’s eyes has the immediate consequence that we need to view safety in the context of the patient journey.

- We have very limited safety strategies for dealing with the day to day realities of healthcare. People adapt and cope, but on an individual basis rather than with a considered team based strategy. Team approaches have to be developed for such situations.

What is the future of safety?

- Safety is a dimension of quality: let’s fold it back in and include all of the dimensions of quality.
- Safety is a way of work not a project: must be part of system level aims.
- Continue to research other means of improving safety- include all branches of science.
- Engage future clinicians as early as possible in training.
- Safety is not a nice to have: it is expected for all patients.
What will we have to do?

- Continue to change the culture and attitudes on clinicians and patients - tools are important but are not enough
- Include risk reduction not currently in our bundles/driver diagrams
- Interprofessional education is necessary
- Understand human condition and design systems and processes to address
- Teach improvement methods
- Respect for patients/families and all staff
- Safety is a system property and not the responsibility of only one area
Framework for Clinical Excellence

Culture

Psychological Safety
Accountability
Teamwork & Communication
Negotiation
Continuous Learning
 Improvement & Measurement
Reliability
Transparency
Leadership
Engagement of Patients & Family

Learning System

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Framework for Clinical Excellence

- Creating an environment where people feel comfortable and have opportunities to raise concerns or ask questions.
- Facilitating and mentoring teamwork, improvement, respect and psychological safety.
- Openly sharing data and other information concerning safe, respectful and reliable care with staff and partners and families.
- Applying best evidence and minimizing non-patient specific variation with the goal of failure free operation over time.
- Improving work processes and patient outcomes using standard improvement tools including measurements over time.
- Being held to act in a safe and respectful manner given the training and support to do so.
- Developing a shared understanding, anticipation of needs and problems, agreed methods to manage these as well as conflict situations.
- Gaining genuine agreement on matters of importance to team members, patients and families.
- Regularly collecting and learning from defects and successes.

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Framework
Thank You