Patient Safety and the Triple Aim

Middle East Forum on Quality and Safety in Healthcare

Derek Feeley
President and CEO
We’ll Cover

- Where are we on patient safety?
- Next phase of safety?
- From safe care to Triple Aim results?
- How will we do that?
Definition

A System design that is one aim with three dimensions:

- Improving the health of the populations
- Improving the patient experience of care
- Reducing the per capita cost of health care
The Best Care Always (BCA) Campaign

- HMC-wide patient safety initiative to reduce adverse events and patient harm in general wards, critical care units and operating theaters
- 58 teams from 8 HMC hospitals participating

Campaign Goals:
- Improve performance to zero incidence of VAP, CLABSI, CAUTI, Pressure ulcers, and SSIs in pilot units
- Develop a sustainable and reusable infrastructure for health and health care improvement within HMC with increased capability and capacity to improve
Pressure Ulcer Count Reduction

Participating Hospital Units: Al Khor ICU, Al Wakra MICU, Al Wakra SICU, Cuban ICU, HGH MICU, HGH SICU, HGH TICU, Heart Hospital CICU, Heart Hospital CTICU, Al Khor Medical Wards, Al Wakra 6 North Medical World, Rumailah Ennaya, Cuban Hospital General Ward, HGH 5 South 1 Surgical Ward, HGH 5 North 1 Medical Ward, HGH Pediatric Unit 2 South 1, Heart Hospital General Ward, NCCCR Ward II Hematology Unit, Rumailah Long-Term Care Units, Rumailah Female Plastic Surgery Ward
Ventilator Associated Pneumonia Rate Reduction

Ventilator Associated Pneumonia Rate Per 1,000 Device Days in Best Care Always Critical Care Pilot Units (U-Chart)

75% Reduction

Participating Hospital Units: Al Khor ICU, Al Wakra MICU, Al Wakra NICU, Al Wakra SICU, Cuban ICU, HGH Pediatric Unit 2 South 1, HGH TICU, Heart Hospital CTICU, Heart Hospital CICU, Women's ICU
Urinary Tract Infection Rate Reduction

Urinary Catheter-Associated Symptomatic Urinary Tract Infections Per 1,000 Device Days in Best Care Always Critical Care Pilot Units (U Chart)

53% Reduction

Participating Hospital Units: Al Khor ICU, Al Wakra MICU, Al Wakra SICU, Cuban ICU, HGH 6 North 1 MICU, HGH MICU, HGH SICU, HGH TICU, Heart Hospital CTICU, Heat Hospital CICU
Surgical Site Infection Reduction

Participating Hospital Units: Al Khor Operating Theater, Al Wakra Operating Theater, Cuban Surgical Wards/Operating Theater, HGH General Surgery ORIF Theater, Heart Hospital CABG Cases, Rumailah Plastic Surgery, Women’s Hospital C-Section Theaters

Percent of Patients Developing Surgical Site Infections in Best Care Always Perioperative Pilot Units (P Chart)

61% Reduction
Next Steps for the Campaign

- Continue the pursuit of zero adverse events and zero patient harm
- Focus on sustainability, scale-up, and spread
- Developing “Safety Champions” at each hospital
- Continue building skills in improvement tools and methods for all staff
2 Big Challenges

1. Spreading the existing program to all units – every patient, every time.
2. Getting to safety as a system property – not only a project or a program
“Up to 70% of improvement projects never spread.”
The Seven *Spreadly* Sins

If you do these things, Spread efforts will fail!

1. Start with large pilots
2. Find one person willing to do it all
3. Expect vigilance and hard work to solve the problem
4. If a pilot works, then spread the pilot unchanged
5. Require the person who drove the pilot to be responsible for system-wide spread
6. Look at process and outcome measures on a quarterly basis
7. Early on expect marked improvement in outcomes without attention to process reliability
“Strong evidence for an innovation is necessary but not sufficient to result in its adoption.”

Mark Freeman
The International Journal of Management Education, 2012
Making Policy (as a metaphor for spread)

Policy¹ (Government, Politics & Diplomacy) a plan of action adopted or pursued by an individual, government, party, business, etc.
A Learning System for Getting to Full Scale

Phases of Scale-up
- Set-up
- Build Scalable Unit
- Test Scale-Up
- Go to Full-Scale

Best Practice exists
- New Scale-up Idea

Leadership, communication, social networks, culture of urgency and persistence

Learning systems, data systems, infrastructure for scale-up, human capacity for scale-up, capability for scale-up, sustainability

Adoption Mechanisms
- Support Systems
FREE FROM HARM: ACCELERATING PATIENT SAFETY IMPROVEMENT FIFTEEN YEARS AFTER TO ERRIS HUMAN

Report of an expert panel convened by the National Patient Safety Foundation argues for looking at morbidity as well as mortality caused by medical errors and going beyond hospitals to improve safety across the continuum of care.

TO ERR IS HUMAN FRAMED PATIENT SAFETY AS A SERIOUS PUBLIC HEALTH ISSUE (1999 ESTIMATES)

- 44,000 - 98,000 Annual deaths from medical error among hospitalized patients
- 43,458 Annual deaths from hospital-acquired conditions (2011-2013) as a result of the federal Partnership for Patients initiative
- 42,297 Annual deaths from breast cancer
- 16,516 Annual deaths from AIDS

1.3 Million Estimated reduction in hospital-acquired conditions (2011-2013) as a result of the federal Partnership for Patients initiative.

TO UNDERSTAND THE FULL IMPACT OF PATIENT SAFETY PROBLEMS, WE MUST LOOK AT BOTH MORTALITY AND MORBIDITY

1 in 10 patients develops a health care acquired condition (such as infection, pressure ulcers, fall, adverse drug event) during hospitalization.

1 Billion Roughly 1 billion ambulatory visits occur in the US each year.

About 35 million hospital admissions occur annually.

ADVANCEMENT IN PATIENT SAFETY REQUIRES AN OVERARCHING SHIFT FROM REACTIVE, PIECEMEAL INTERVENTIONS TO A TOTAL SYSTEMS APPROACH TO SAFETY

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.
7. Partner with patients and families for the safest care.
8. Ensure that technology is safe and optimized to improve patient safety.

NPSF To read the full report and detailed set of recommendations, visit www.npsf.org/free-from-harm
And yet…

“Thought you all may like to know that we have eradicated CLABSI within our ICU & deem it to be like polio or smallpox, namely a disease of the past (see the photo). VAP still a challenge where we hit the 300 day target but we always get one as a rare event. Whole team at the RAH quite proud & rightfully so in my eyes.”

-Kevin Rooney
Safety II

<table>
<thead>
<tr>
<th>Definition of Safety</th>
<th>Safety-I</th>
<th>Safety-II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>That as few things as possible go wrong.</td>
<td>That as many things as possible go right.</td>
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</table>

<table>
<thead>
<tr>
<th>Safety Management Principle</th>
<th>Safety-I</th>
<th>Safety-II</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Reactive, respond when something happens or is categorized as an unacceptable risk.</td>
<td>Proactive, continuously trying to anticipate developments and events.</td>
</tr>
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<table>
<thead>
<tr>
<th>View of the human factor in safety management</th>
<th>Safety-I</th>
<th>Safety-II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accidents are caused by failures and malfunctions. The purpose of an investigation is to identify the causes.</td>
<td>Things basically happen in the same way, regardless of the outcome. The purpose of an investigation is to understand how things usually go right as a basis for explaining how things occasionally go wrong.</td>
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<table>
<thead>
<tr>
<th>Risk Assessment</th>
<th>Safety-I</th>
<th>Safety-II</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Accidents are caused by failures and malfunctions. The purpose of an investigation is to identify causes and contributory factors.</td>
<td>To understand the conditions where performance variability can become difficult or impossible to monitor and control.</td>
</tr>
</tbody>
</table>

New Safety

1. From *as few things as possible* go wrong
   To *as many things as possible* go right
Learning from Success

> 50%

New Safety

2. From *reactive and responsive*

   To *proactive and generative*
Getting to the Thickness of the Ice.....
3. From safety projects
To safety systems
Facilitating and mentoring teamwork, improvement, respect and psychological safety.

Creating an environment where people feel comfortable and have opportunities to raise concerns or ask questions.

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.

Improving work processes and patient outcomes using standard improvement tools including measurements over time.

Applying best evidence and minimizing non-patient specific variation with the goal of failure free operation over time.

Openly sharing data and other information concerning safe, respectful and reliable care with staff and partners and families.

© IHI and Allan Frankel

Framework for Safe, Reliable and Effective Care
New Safety

4. From *fear, blame and liability*
   To *humility, trust, transparency*
New Safety

5. From keeping patients safe
To co-producing safety
Influencers from across the country responded
Safety 2.0

6. From *a narrow definition of harm*
   
   To *a broad definition of harm*
Absence of Dignity is Harm

https://www.youtube.com/watch?v=5XWoJZ4H9ns
### Preventable Harm

#### Medical Management Related
- Disease Progression or End Organ Injury (reversible or permanent) Related to Medical Management
  - Target: 0
  - GQ15: 2, GQ16: 2, Q16: 1, Q216: 0
- Cardiac and/or Respiratory Failure or Arrest Related to Medical Management
  - Target: 0
  - GQ15: 1, GQ16: 0, Q16: 0, Q216: 0

#### Infection Related
- Nosocomial Catheter Associated Bloodstream Infections
  - Target: 0
  - GQ15: 0, GQ16: 0, Q16: 0, Q216: 1
- Nosocomial Surgical Site Infections (SSIs)
  - Target: 0
  - GQ15: 4, GQ16: 3, Q16: 3, Q216: 2
- Nosocomial C. Difficile Infections
  - Target: 0
  - GQ15: 0, GQ16: 13, Q16: 0, Q216: 0
- Other Nosocomial Infection
  - Target: 0
  - GQ15: 0, GQ16: 0, Q16: 0, Q216: 0

#### Care Related
- Falls Resulting in Injury
  - Target: 0
  - GQ15: 2, GQ16: 1, Q16: 1, Q216: 2
- Soft Tissue Injuries (Includes Pressure Sores)
  - Target: 0
  - GQ15: 1, GQ16: 0, Q16: 1, Q216: 1
- Medication Related Adverse Events
  - Target: 0
  - GQ15: 3, GQ16: 4, Q16: 1, Q216: 0
- Procedure Related Harm/Complication (Non Infectious): Surgical Services
  - Target: 0
  - GQ15: 4, GQ16: 0, Q16: 0, Q216: 1
- Procedure Related Harm/Complication (Non Infectious): Non-Surgical Services
  - Target: 0
  - GQ15: 1, GQ16: 1, Q16: 3, Q216: 1
- Neonatal Harm/Complication (Non Infectious)
  - Target: 0
  - GQ15: 0, GQ16: 1, Q16: 0, Q216: 0

**Subtotal:** 18

#### Dignity & Respect Related
- Disrespectful Communication
  - Target: 0
  - GQ15: 11, GQ16: 12, Q16: 14, Q216: 17
- Failure to Maintain an Environment That Preserves Dignity
  - Target: 0
  - GQ15: 6, GQ16: 0, Q16: 0, Q216: 1
- Failure to Provide Appropriate Care After Death
  - Target: 0
  - GQ15: 2, GQ16: 2, Q16: 1, Q216: 0
- Failure to Care for Personal Possessions
  - Target: 0
  - GQ15: 2, GQ16: 0, Q16: 0, Q216: 0
- Other Disrespect Causing Harm to Dignity
  - Target: 0
  - GQ15: 0, GQ16: 0, Q16: 1, Q216: 0

**Subtotal:** 17

**Total:** 35

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The table represents the preventable harm scorecard for the year FY15, with data for Q3, Q4, Q1, and Q2. The columns indicate either favorable or unfavorable comparison in terms of preventable harm incidents.
Absence of Equity is Harm
New Safety

1. Focus on what goes right as well as learning from what goes wrong.
2. Move to greater pro-activity.
3. Create systems for learning from learning.
5. Co-produce safety with patients and families.
6. Safety is more than the absence of physical harm, it is also the pursuit of dignity and equity.
### Health Challenges

<table>
<thead>
<tr>
<th>Health Challenge</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>92% consume less than 5 servings of fruit &amp; veg per day</td>
<td>92%</td>
</tr>
<tr>
<td>32% of men smoke</td>
<td>32%</td>
</tr>
<tr>
<td>76% of antibiotics used in food chain not intended for humans</td>
<td>76%</td>
</tr>
<tr>
<td>64% have a family history of raised blood pressure or hypertension</td>
<td>64%</td>
</tr>
<tr>
<td>17% of Qatari adults have Type 2 diabetes</td>
<td>17%</td>
</tr>
<tr>
<td>20% Qatari school children have asthma</td>
<td>20%</td>
</tr>
<tr>
<td>12th highest city for air pollution (Doha)</td>
<td>12th</td>
</tr>
<tr>
<td>13.7 Transport mortality per 100,000 population (2013)</td>
<td>13.7</td>
</tr>
<tr>
<td>1 in 5 will be affected by mental illness at any given point in time</td>
<td>1 in 5</td>
</tr>
<tr>
<td>70% overweight (BMI &gt;25)</td>
<td>70%</td>
</tr>
<tr>
<td>10% of all non-infectious disease is chronic respiratory</td>
<td>10%</td>
</tr>
<tr>
<td>89% 6 year olds in Qatar have dental caries</td>
<td>89%</td>
</tr>
</tbody>
</table>
The GCC states are witnessing an alarming rise in obesity rates, with countries such as Kuwait and Qatar recording among the world’s highest adult female obesity rates.

- Estimated prevalence of obesity among women in 2013 stood at 58.6 per cent in Kuwait (third highest in the world), and at 54.7 per cent in Qatar (sixth highest globally), according to a recent report by medical journal Lancet.

- Adult obesity rates stand at double digits across all the six Gulf states, the report found.

  - Obesity rate in Kuwait: 43.4% (men) and 58.6% (women)
  - Obesity rate in Qatar: 44% (men) and 54.7% (women)
  - Obesity rate in Saudi Arabia: 30% (men) and 44.4% (women)
  - Obesity rate in Bahrain: 31% (men) and 42.9% (women)
  - Obesity rate in the UAE: 27.1% (men) and 33.2% (women)
  - Obesity rate in Oman: 20.6% (men) and 36.9% (women)
Design Required

Design of a Triple Aim Enterprise

Define “Quality” from the perspective of an individual member of a defined population

The IHI Triple Aim
Population Health

Experience of Care Per Capita Cost

Health Care Public Health Social Services

Individuals and Families
Definition of Primary Care
Integration
Per Capita Cost Reduction
Prevention and Health Promotion

System-Level Metrics
Building Blocks and Set Up

**Aim:** Apply the Triple Aim to a population served by your organization or a population of interest in your region.

- Choose a relevant **Population** for improved health, care and lowered cost
- Articulate a **Purpose** that will hold your stakeholders together
- Develop a **Systems** approach
- Create a **Learning System** and choose **Measures** that will show improvement for the population
- Develop a **Portfolio** (group) of projects that will yield Triple Aim results
  - No individual project can accomplish the Triple Aim but a portfolio of projects that are executed well can move closer to the aims.
- Build a **Team** of individuals who can manage this work: Executive Sponsor, Portfolio Lead, Project Lead, Content Expert, Improvement Advisor and Measurement Lead
- Develop a brisk and realistic plan for **Execution** on projects and accountabilities for results
Health Navigation: Bellin Health

The new gateway to Bellin Health. Personal, tailored treatment to individuals’ needs, learning styles and lifestyles.
Employers

Healthy Employees = Healthy Business

THE PEOPLE IN OUR REGION WILL BE THE HEALTHIEST IN THE NATION.
Employer Results

Employers with:
- Consumer Driven Health Plans
- Onsite services
- Incentives for participation
- Prevention coverage

...results 21% below cost average

http://youtu.be/1hoW-xZw4wk
Trends in Health Plan Costs and Health Measures (Bellin Health, 2002-2010)
Bellin – Best Quality Pioneer ACO

20 Medicare ACOs with the highest quality scores in 2014

Written by Emily Rapleye (Twitter | Google+) | August 31, 2015 | Print | Email

The 353 Pioneer and Medicare Shared Savings Program accountable care organizations improved their performance for most quality measures in 2014, according to CMS.

The Pioneers increased average quality scores to 87.2 percent, up from 85.2 percent in 2013 and improved an average of 3.8 percent compared to 2013 on 28 of the 33 quality measures.

MASSP ACOs, on the other hand, showed improvement in 27 of 33 quality measures, especially in clinician-patient communication, patient ratings of physicians, tobacco screening and cessation, blood pressure screening and EHR use.

Here are the top 10 ACOs in each program who topped the list for highest overall quality scores. For more information on overall quality scores from CMS, click here.

Pioneer ACOs

1. Bellin-ThedaCare Healthcare Partners (Green Bay, Wis.) — 94.24 percent overall quality score
2. Beacon Health (Brewer, Maine) — 92.27 percent
3. Atrius Health (Newton, Mass.) — 91.40 percent
4. Mount Auburn Cambridge Independent Practice Association (Brighton, Mass.) — 91.36 percent
5. OSF HealthCare System ACO (Peoria, Ill.) — 90.26 percent
6. Franciscan Alliance (Indianapolis) — 89.65 percent
7. Partners HealthCare ACO (Needham, Mass.) — 88.85 percent
8. Both Israel Deaconess Care Organization (Westwood, Mass.) — 87.89 percent
9. Dartmouth-Hitchcock Health Pioneer ACO (Lebanon, N.H.) — 87.62 percent
10. Trinity Pioneer ACO (Fort Dodge, Iowa) — 87.49 percent

HealthPartners, Minnesota

- Integrated health care organization providing health care services, health plan financing and administration, medical education and research.

- **Approach:**
  - **Consistency:** Reliable processes supported by electronic medical record
  - **Customization:** Adapted to individual needs and values and responding to patient values and preferences
  - **Convenience:** Access, on-line services, email, coaching
  - **Coordination:** Medical Home to reduce hospital use, and manage chronic illness
### Partners for Better Health: 2014 Goals

<table>
<thead>
<tr>
<th>Health Success</th>
<th>Experience Success</th>
<th>Affordability Success</th>
</tr>
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<tbody>
<tr>
<td><strong>Improved health for our customers and community as measured by:</strong></td>
<td><strong>Deliver an exceptional experience that customers want and deserve at an affordable cost as measured by:</strong></td>
<td><strong>Lower health care costs for our customers as measured by:</strong></td>
</tr>
<tr>
<td>• Better well being, more satisfied and healthy lives.</td>
<td>• The best performance on customer’s willingness to recommend our clinics, hospitals and health plan to family and friends.</td>
<td>• Cost trends that are at or below general inflation (Consumer Price Index, a leading economic indicator).</td>
</tr>
<tr>
<td>• The best local and national health outcomes and the best performing health care costs in the region.</td>
<td>• Feeling well-supported, respected and cared for throughout life.</td>
<td>• The best performing overall health care costs in the region.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• HealthPartners clinics and hospitals will be in the best 10 percent in the region in overall costs of health care.</td>
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</table>
Saves 364 Hearts, 68 Legs & 625 Pairs of Eyes Each Year (Diabetic Population)
How do they do that?

You look puzzled.
## Typical v. Exceptional

<table>
<thead>
<tr>
<th>Typical</th>
<th>Exceptional</th>
</tr>
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<tbody>
<tr>
<td>They invest in comprehensive strategy</td>
<td>They have a bias toward starting.</td>
</tr>
<tr>
<td>development.</td>
<td></td>
</tr>
<tr>
<td>They have general goals for adoption.</td>
<td>They have explicit national and local aims. (Aim Primacy)</td>
</tr>
<tr>
<td>Leadership creates standards.</td>
<td>Leadership removes barriers.</td>
</tr>
<tr>
<td>They have “theory lock.”</td>
<td>Improvisation is a virtue.</td>
</tr>
<tr>
<td>Data is for assessment.</td>
<td>Data is for rapid adjustment.</td>
</tr>
</tbody>
</table>

Adapted from work by Joe McCannon
Good to Great (Jim Collins)
The “Flywheel”

✓ There was no single defining action, no grand program, no one killer innovation, no solitary lucky break, no miracle moment.

✓ Instead they followed a predictable pattern of buildup and breakthrough.

✓ Like pushing on a giant, heavy flywheel, it takes a lot of effort to get the thing moving at all, but . . .
The “Flywheel”

- The flywheel builds momentum. . .
- Eventually hitting a point of breakthrough.
- Alignment follows from results and momentum, not the other way around.
Momentum!

"The amount of effort needed at the start pales in comparison to what your momentum can ultimately produce in the end."

- Lincoln Patz

One Way to Keep Momentum going is to have constantly greater goals.

- Michael Korda