



# BC Hospitalists and Quality Improvement

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# Outline

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- I. The Hospitalist Model and Quality Improvement
- II. Overview of the BC VTE Collaborative
- III. IHI Model for Improvement
- IV. Planning for Large Scale Change – Lessons  
learned from the BC Hospitalists VTE  
Collaborative

# Definition of Hospital Medicine

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- A medical specialty dedicated to the delivery of comprehensive medical care to acutely ill hospitalized patients.
- A hospitalist typically accepts referrals from the ED and manages patients thru their hospital stay
- CHF, Pneumonia, COPD, MI, Stroke, Cellulitis, Dementia/Delirium

# Hospitalist Movement in North America

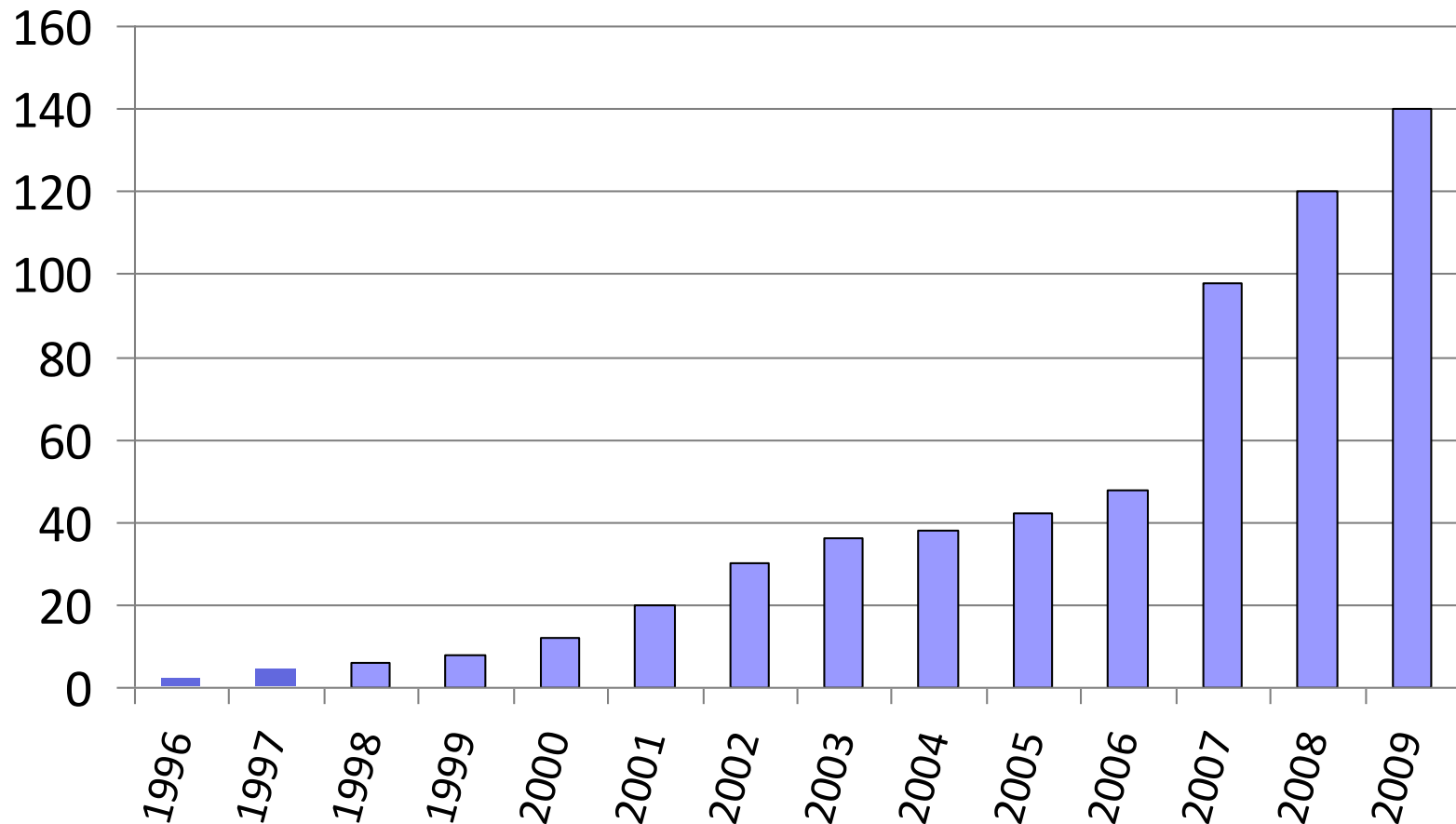
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- Hospital Medicine is the fastest growing medical specialty in history.
- There are an estimated 28000 Hospitalists practicing in North America today.
- Hospitalist Model adopted by:
  - Mayo and Cleveland Clinics
  - Harvard Teaching Hospitals
  - University of San Francisco
  - Major teaching hospitals in Canada

# Growth of Hospitalist Programs in Canada

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The number of Hospitalist Programs across Canada has also undergone rapid growth.



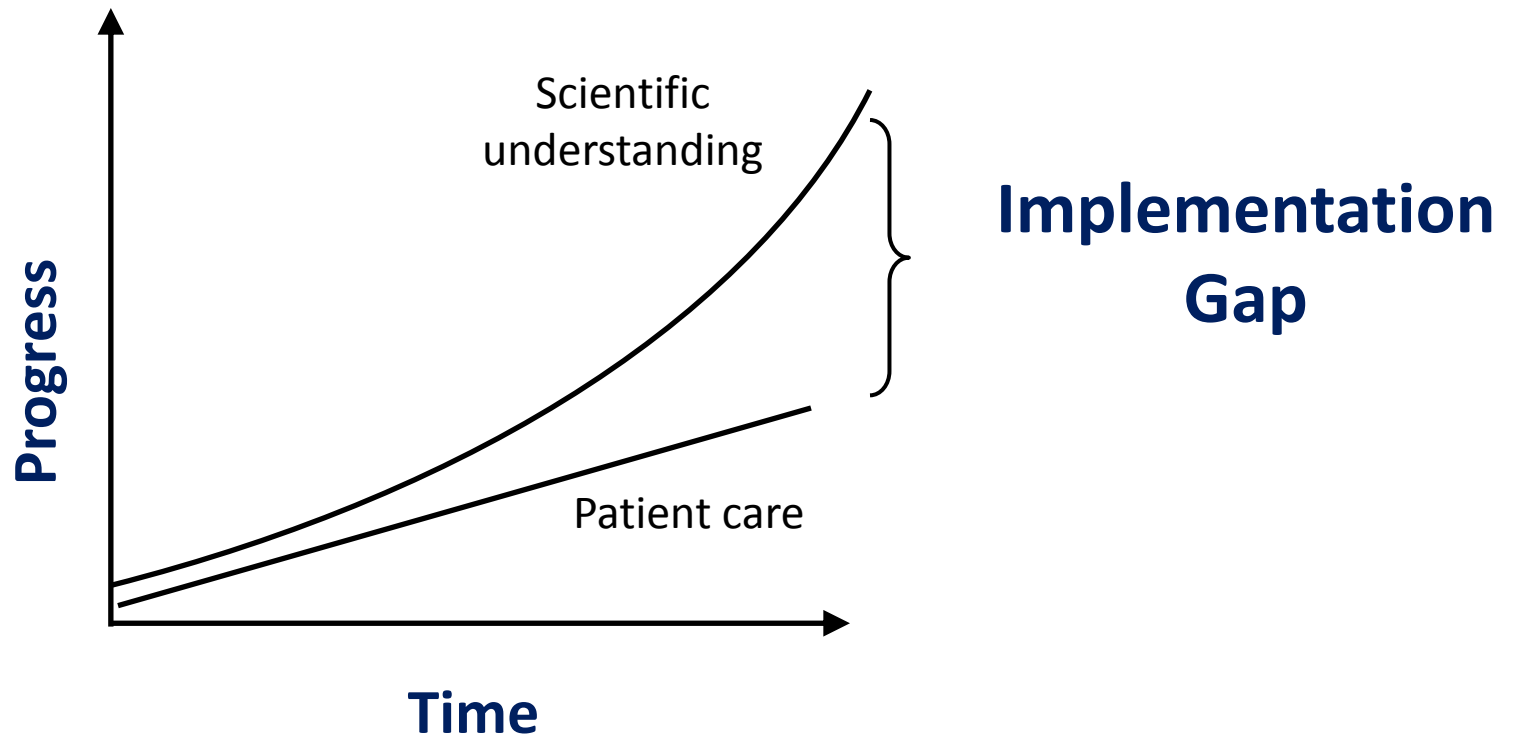
# The Hospitalist Model and Quality Improvement

# The Fit between Hospitalists and QI

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- **Geographic Based Specialty**
  - Extraordinary Availability
  - “Own” vs. “Rent”
- **Focused Practice**
  - QI a Core Competency of Hospital Medicine
- **Team Players**
  - QI Requires a Multidisciplinary Approach
- **Group Organizational Structure**
  - Improves Standardization/Compliance
- **Alternate Payment Structure**
  - Allows Creative Alignment of Incentives With Quality Improvement.
- **Broader Physician Community**
  - Liaison between hospital based specialists and community primary care

# Bridging the Implementation Gap



# The BC VTE Prevention Collaborative

# In the Beginning

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- November 2009 BC Section of Hospital Medicine AGM
- Theme for AGM – Hospitalists taking the lead in QI
- Major QI focus - VTE prophylaxis
- Keynote speaker – Dr. Greg Maynard
- Established a Framework for a “Mentored Quality Improvement Collaborative”

# Why Pursue Quality Improvement?



Toos

"Ok, how about this motto: 'If you are unhappy for any reason, we will feel really bad'."

# Why Pursue Quality Improvement ?

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- Institute of Medicine Study 2000
  - medical errors result in 44000 to 98000 unnecessary deaths annually
  - Adverse events result in 100000 unnecessary injuries annually
- Canadian Adverse Events Study 2004
  - 7.5% of hospitalizations associated with an adverse event
  - 70000 preventable adverse events annually

# Current VTE Prophylaxis KPI's in BC

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- In BC, the current rate of VTE prophylaxis in programs without a formal VTE Prevention strategy is 30 – 50%.
- This results in 510 preventable VTE's (DVT's = 357, PE's =153) per year under Hospitalist care.
- 28 patients die each year as a result of inadequate VTE prophylaxis provided by Hospitalists in BC.

# Even Experts Make Mistakes



# Estimated Financial Benefits in BC

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- If the target goal of VTE prophylaxis of 90% of Hospitalist patients was achieved, then the annual benefits are estimated at:
  - 297 preventable DVT's;
  - 127 preventable PE's;
  - 23 unnecessary deaths would be prevented per annum.
- The annual cost saving of this QI initiative in BC alone would be CDN\$5.5 million.

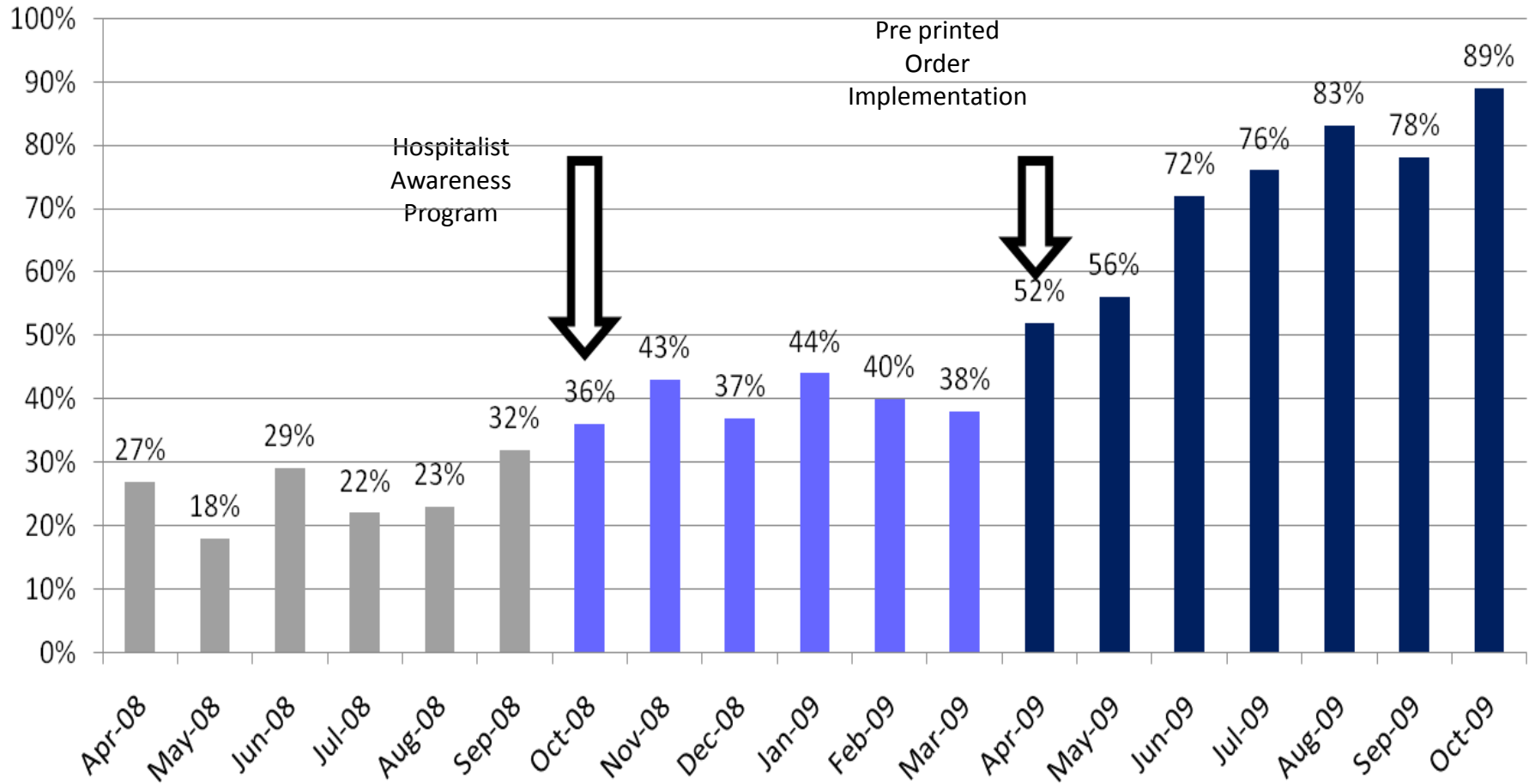
# The VGH Implementation Overview

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- Pilot commenced at the VGH in April 2009
- Targeted only patients under Hospitalists care
- Retrospective analysis was performed
- Interventions included:
  - CME Dinner
  - General Physician awareness
  - **Implementation of a pre-printed order set with an embedded risk stratification tool for VTE prophylaxis**

# VGH Results

## VTE Prophylaxis Compliance %



# Goals of the VTE Collaborative

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- Improve compliance with VTE prophylaxis guidelines to > 90% in patients cared for by BC Hospitalists
- Create a structure and framework to coordinate future provincial (potentially national) hospitalist QI collaboratives
- Develop expertise within the Hospitalist community to lead Quality Improvement in health care

# BC Hospitalists VTE Protocol

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- A standardized VTE risk assessment tool embedded in PPO's (Maynard "three bucket model")
- A menu of appropriate prophylaxis options (linked to the risk assessment)
- Documentation of contraindications to pharmacologic VTE prophylaxis

# Proposed Implementation Timeline

## Pre Planning / Feasibility

To 31 Jan 2010

- Identify key Quality Improvement area (HA VTE)
- Identify appropriate implementation team (BC Hospitalists)
- Identify and involve stakeholders
- Develop VTE protocols, procedures and standardized documentation

## Initial Steps

1 Jan – 31 March

- Develop multidisciplinary advisory board
- Develop web based Resource Room with Tools / Strategies
- Gather Baseline Data 30 chart audits per month (Mentored Implementation Collaborative)
- Establish methodology to collect outcome data (Radiology)
- Integrate Risk Stratification in to PPO's
- Build awareness of VTE prophylaxis with MD's
- Finalise initial funding

## Implementation Phase 1

1 April – 29 Aug

- Implement PPO/Risk Stratification tool
- Implement Internal Transfer Tool
- Collect Performance Data (40 audits/month)
- Refine data collection and metrics

## Implementation Phase 2 : Measurevention / Refinement

1 Sept – 30 Nov

## Ongoing Implementation : Review / Refine / Report

1 Dec – 31 Jan

<ul style="list-style-type: none"> <li>□ <b>Low Risk</b> <b>(Must be independently ambulatory outside of room 3 times daily)</b> Observation patients, expected LOS less than 48 hrs: Minor/Ambulatory surgery <b>or</b> Age less than 50 and <b>NO other risk factors</b>, or already on therapeutic anticoagulation</li> </ul>	<ul style="list-style-type: none"> <li>□ Early ambulation, education</li> </ul>
<ul style="list-style-type: none"> <li>□ <b>Moderate to High Risk</b> Most medical or surgical patients CHF, pneumonia, active inflammation, advanced age, dehydration, varicose veins, less than fully and independently ambulatory, and other risk factors. All patients not in the Low or Highest Risk Categories</li> <li>□ Add Serial Compression Device for Highest Risk Patients Elective hip or knee arthroplasty, Multiple Trauma, Abdominal or Pelvic surgery for cancer, Acute spinal cord injury)</li> </ul>	<p><b>CHOOSE ONE</b> pharmacologic option:</p> <ul style="list-style-type: none"> <li>□ LMH (<b>DALTEPARIN</b> 5000 units OR <b>ENOXAPARIN</b> 40MG OR SC q24h) until discharge</li> <li>□ <b>HEPARIN</b> 5000 units <b>q8h until discharge</b></li> </ul> <p><b>*OR*</b></p> <p>If weight less than 40 kg (except patients with active cancer or previous thromboembolic event):</p> <ul style="list-style-type: none"> <li>□ <b>LMWH (DALTEPARIN</b> 2500 units SC OR <b>ENOXAPARIN</b> 30 mg q24h) <b>until discharge</b></li> <li>□ <b>HEPARIN</b> 5000 units subcutaneous <b>q12h until discharge</b></li> </ul>
<ul style="list-style-type: none"> <li>□ <b>Contraindication to Pharmacologic Prophylaxis</b> <ul style="list-style-type: none"> <li>□ Active bleeding of clinical significance</li> <li>□ High risk of serious bleeding into a critical site (intracranial, intraspinal, pericardial, intraocular, retroperitoneal, intra-articular)</li> <li>□ Known major bleeding disorder or a coagulopathy</li> <li>□ Platelet count less than 50 X 10<sup>9</sup>/L</li> <li>□ History of Heparin Induced Thrombocytopenia</li> <li>□ Already on Therapeutic Anticoagulation</li> <li>□ Other(specify) _____</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>□ Mechanical prophylaxis with sequential compression device. Interrupt for skin care, assessments, toileting and ambulation only</li> </ul> <p><b>*OR*</b></p> <ul style="list-style-type: none"> <li>□ Contraindicated (peripheral vascular disease or wounds)</li> </ul> <p>Reassess daily to start pharmacologic prophylaxis when contraindication resolves</p>

# Audit Tool

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- Pre-printed Admission Order Set Used Y/N ↑
- Pharmacologic Prophylaxis Currently Ordered Y/N
- Mechanical Prophylaxis Ordered Y/N
  - ↑
- Mechanical Prophylaxis in Use at Time of Audit Y/N
  - ↑
- **Current Prophylaxis is Appropriate (as per risk assessment tool)↑** Y /N

# VTE Key Points-Recommendations

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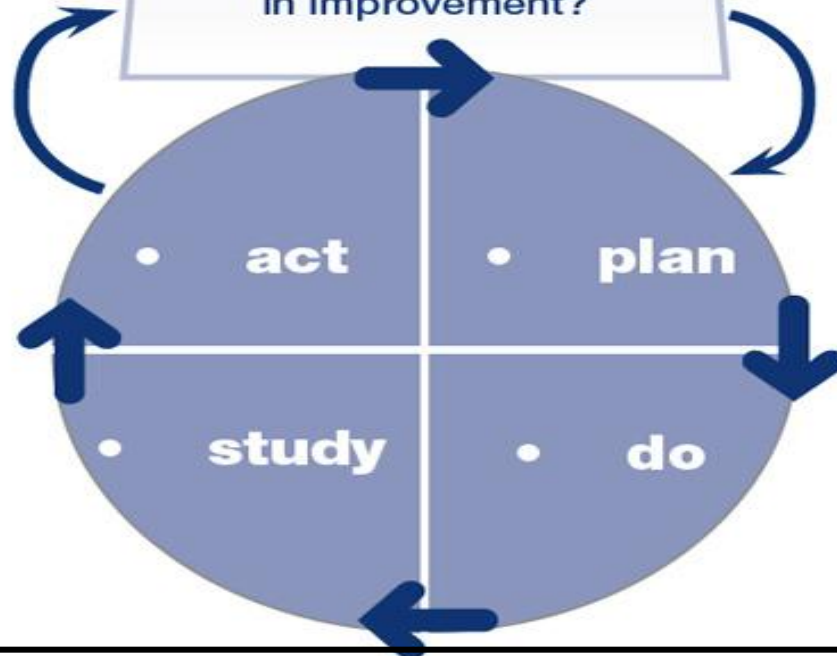
- QI framework should be used
- Multifaceted approach is needed
- VTE protocols embedded in order sets
- Simple risk assessment
- Collaboratives accelerate improvement

# Framework for Improvement

What are you trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?



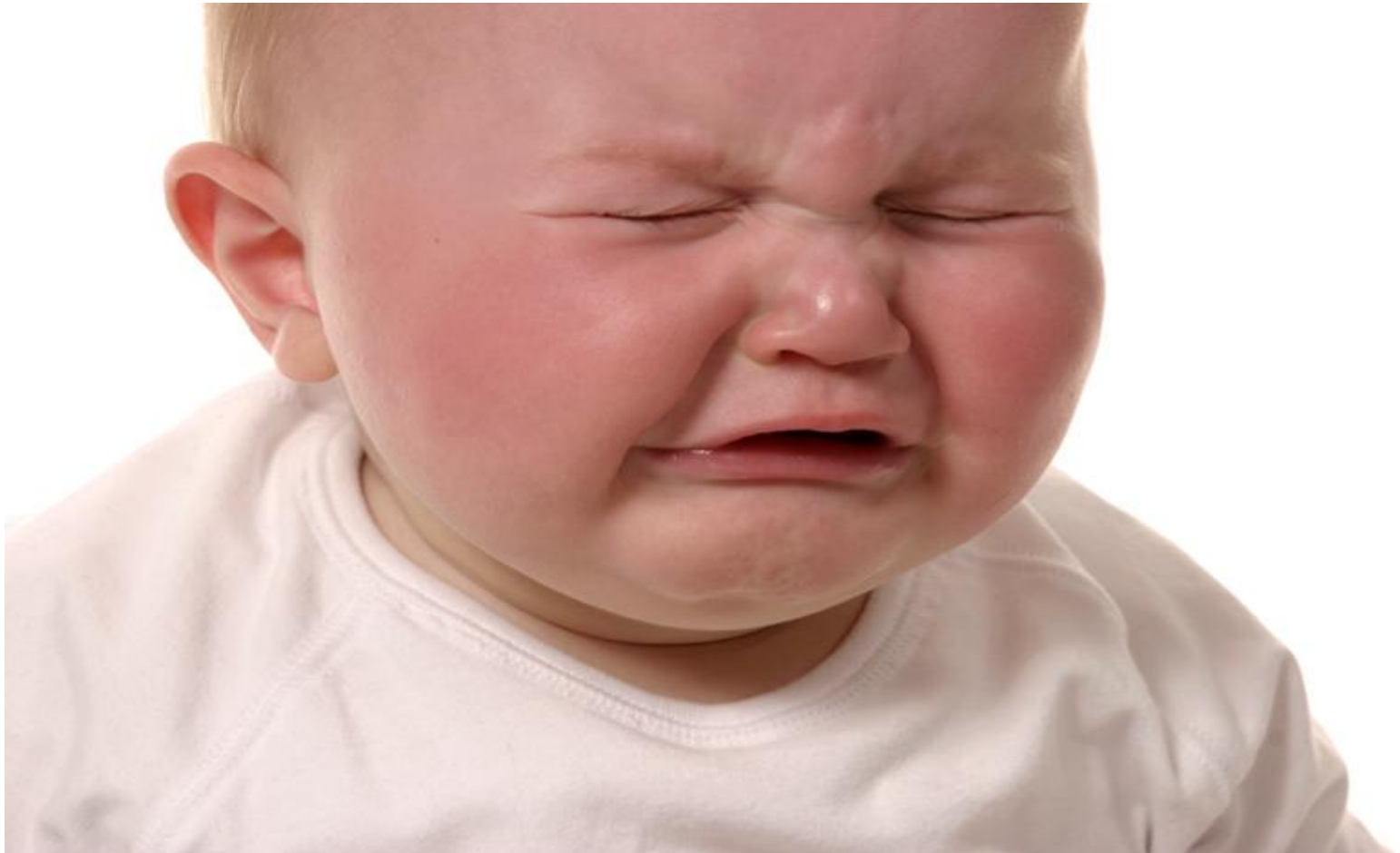
Implement Change

**Spread Change**



# Planning for Large Scale Improvement Initiatives

**Only babies like to be changed!**



# Six Questions to Guide Planning

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1. Motivation

2. Foundation

3. Aim

4. Nature of the Intervention

5. Nature of the Social System

6. Network Building

- IHI White Paper 2008 – Planning for Scale: A Guide for Designing Large Scale Improvement Initiatives (McCannon, Schall, Perla)

# Motivation

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- What about your Initiative drew your attention/inspires you?
- Why would anyone want to join your initiative?
- What is the scale of change or improvement?

# Motivation

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## Non-monetary motivators for Hospitalists

- **Autonomy** – The Hospitalist movement in B.C. wanted to become leaders in quality improvement in Hospital care. (Advance the development of their specialty)
- **Mastery** – An opportunity for Hospitalists learn QI implementation skills and create a QI network. (Job satisfaction)
- **Higher Purpose** – We would save lives!

# Foundation

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**Where does this fit into the larger narrative?**

**First step, middle step or final step?**

- Hospitalist network already existed
- Need to develop unity of purpose
- Early in the development of QI implementation skills
- Needed to promote physician leadership skills

# Foundation

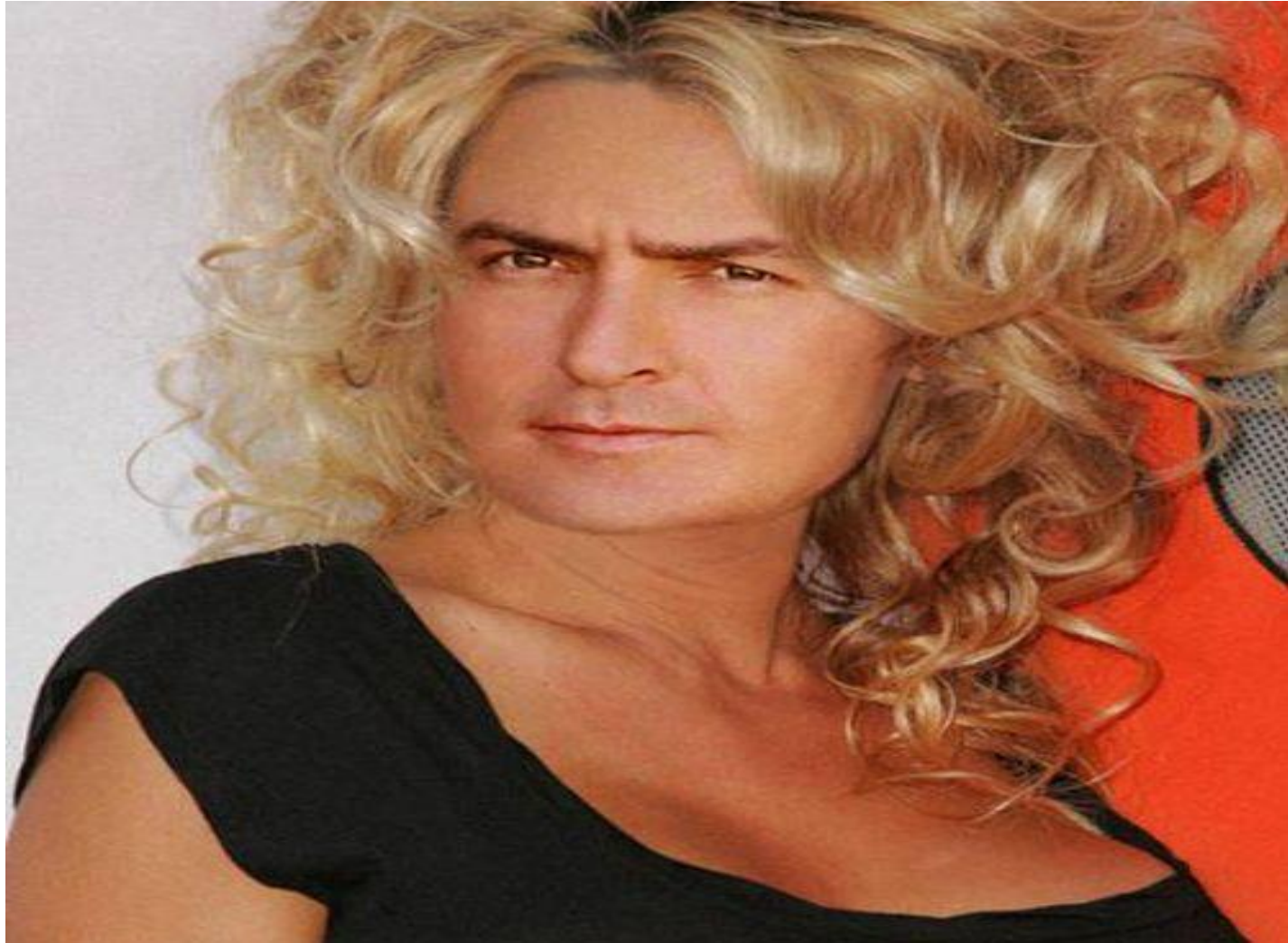
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**How will your change occur?**

**What sequence of events needs to happen?**

- Develop our common goals/educate
- Identify “Best Practice” and an implementation strategy.
- Implement by embedding “Best Practice” in a **useful** tool; The Admission Pre printed Order Set
- Measure the change we made and communicate that change

**Do you have a charismatic leader?**



# We did not!

- In our case, leadership was chosen by default!
- Leadership skills, good communicator, and has a broad platform from which to communicate
- Perceived alignment with the purpose

# Foundation

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## **Are the relevant hierarchies (Hospital, Region, HA, Ministry) on board?**

- We did not have this completed when we started
- Get a commitment of support for the project by key offices and individuals
- Obtain Executive and Department support before starting if possible

# Aim

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- What is the explicit aim/outcome
- What is the timeframe for achieving the aim?
  - be realistic!
  - be precise!
- Does the effort have embedded aims?

# Nature of the Intervention

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- Any large-scale improvement effort has at its center a set of actions (e.g., a best practice to reduce VTE) that participants will adopt in order to achieve the shared aim (e.g., reducing overall harm or mortality)
- In our case, using an Admission PPO with risk stratified VTE prophylaxis embedded in it

# Nature of the Intervention

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## Questions to ask about the Nature of your intervention

- Does it have key attributes (relative advantage, simplicity, does it make the users life easier)?
- Is there any controversy over the evidence base/implementation?
- How many components does the intervention have?
- Are there any successful pilots already completed?

# Nature of the Social System

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- **Understanding context is imperative**
- The initiative cannot force best practices into organizations and networks that will not accept them
- Resistance can be reduced/eliminated through the understanding of sources of energy and dissent, and an appreciation of the architecture of the system (find champions from within the system)

IHI White Paper 2008 – Planning for Scale: A Guide for Designing Large Scale Improvement Initiatives (McCannon, Schall, Perla)

# Nature of the Social System

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## Questions to ask about the nature of the social system

- What is the structure of the system into which you want to spread the new practice? (Acute care Hospitals, LTC etc)
- How is the system currently set up? (management, governance, financial)
- How busy do prospective participants already feel?
- What level of resources (financial/other) will be needed?
  - can you remove “lack of resources” as an excuse?

# Network Building

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- Countless initiatives languish because planners believe that the existence of a new, better practice is, in and of itself, sufficient to guarantee its adoption
- They rely on existing channels (e.g., government mandates, guidelines, or publications) to spread their ideas

IHI White Paper 2008 – Planning for Scale: A Guide for Designing Large Scale Improvement Initiatives (McCannon, Schall, Perla)

# Network Building

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## Questions to ask about your communication and support network

- How will you reach and support targeted participants?
- What form of measurement/evaluation will be used?
- How will you generate and feedback useful data to front-line teams?
- What recognition and frequency of recognition does each stakeholder require?
  - monetary and non-monetary

What we think or what we believe is,  
in the end, of little consequence. The  
only thing of consequence is what  
we do.

**John Ruskin**

# Contact Details

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