

## Do Collaboratives work?

Dean Sandham

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## Does any intervention work?

- Consider the approach of critical appraisal
- Look to the literature
- Classify the evidence
- Form opinions/conclusions
- But—With QI initiatives problems
  - Lack of studies
  - Lack of agreed methodology
  - Publication selection

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*What's in a name? that which we call a rose  
By any other name would smell as sweet;*  
(Shakespeare's Romeo and Juliet, 1594)

- Achievable Benchmarks of Care - ABCs
- Continuous Improvement - CI
- Continuous Process Improvement - CPI
- Continuous Quality Improvement - CQI
- Making It Better - MIB
- Performance Improvement - PI
- Quality Assurance - QA
- Quality Care - QC
- Quality Control - QC
- Quality Function Deployment - QFD
- Quality Improvement - QI
- Six Sigma Quality
- Total Quality Control - TQC
- Total Quality Engineering TQE
- Total Quality Improvement - TQI
- Total Quality Management - TQM

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Mills PD, Weeks WB. Characteristics of successful quality improvement teams: lessons from five collaborative projects in the VHA. *Jt Comm J Qual Saf.* 2004 Mar;30(3):152-62.

Success Defined as a 20% improvement

Topic	# of Teams	% Successful
Drug Events	27	51
Safety In ICU/OR	22	68
Primary Dementia Care	20	50
Fall Reduction	37	65
Pension Process	28	50

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Effect of a scoring system and protocol for sedation on duration of patients' need for ventilator support in a surgical intensive care unit. *BMJ.* 2002 Jun 8;324(7350):1386-9. Brattebo G et al

Characteristics	First 11 months mean (SD)	Last 11 months mean (SD)	Difference ( 95% CI)
Ventilator time (24 hr days)	7.4(7.5)	5.3(4.5)	2.1(0.65 to3.55)
LOS in ICU	9.3(8.7)	8.3(7.5)	1.0 (-0.89 to 2.89)

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Asch SM, Baker DW, Keeseey JW, Broder M, Schonlau M, Rosen M, Wallace PL, Keeler EB. Does the collaborative model improve care for chronic heart failure? *Med Care.* 2005 Jul;43(7):667-75.

- 4 Sites IHI BTS on CHF
- Before and after intervention chart review on a total of 489 pts.
- Participants similar to non participants
- 23 indicators of care measured
- Results, aggregate score
  - Nonparticipants 1% improvement
  - Participants 17% improvement (P <0.0001)

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## CCIPCS Setting

- Initiated in 2003 by a group of critical care physicians,
- Structured as a Breakthrough Series Collaborative, adapted to fit the Canadian context.
- Funded by an unencumbered educational grant from industry.
- An annual call to action outlined the topics and aims
- Initially, 12 multidisciplinary teams in 8 institutions.
- Within 3 years, over 97 teams from 53 different institutions across 8 provinces in a national network
  - 76 teams from adult critical care
  - 15 from Pediatric ICUs.
- 68 academic institutions
- 23 community hospitals.

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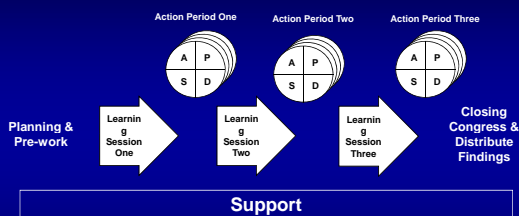
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## Collaborative Approach



*\*Key Concept: Testing small changes as part of process experimentation*

\*Moen RD, Nolan TW, Provost PP. Quality Improvement Through Planned Experimentation. (1991, 1998) McGraw Hill

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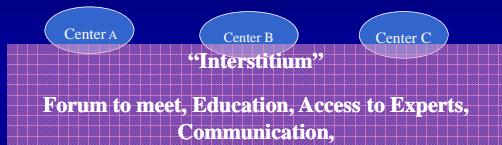
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What do we need for a National Initiative?

**Individual Centers** provide local resources, teams and leadership commitment



This “Interstitium” has been provided by IHI in the USA, by the NHS in Britain, and by DOH at Federal and State levels in Australia. In our project this was funded by industry and provided by Improvement Associates of Edmonton

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### CCIPCS Interventions

- Initial topics:
  - Improving transfusion practices
  - Preventing ventilator-associated pneumonia
  - Reducing harm from high-risk medications (insulin and sedation).
- Later:
  - Reduction of mortality from severe sepsis/septic shock
  - Reduction of in-hospital cardiac arrest by using medical emergency teams
  - Reduction of overall incidence of catheter-related sepsis.

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### CCIPCS Interventions

- Pre-learning session conference calls on enrolment
- Three 1.5-day face-to-face learning sessions each year
  - Plenary presentations on specific topics of interest, storyboard/network periods, and presentations by teams that had accomplished significant results.
  - Curriculum included:
    - Basic concepts of the improvement model
    - Measurement techniques
    - Use of process control charts
  - Extensive small group work where teams:
    - Created charters
    - Planned PDSA cycles
    - Problem-solved specific issues
- Access to regular conference calls to share problems and receive coaching
- A web site and listserv allowed access to educational materials and interactive discussions.

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### Outcome Measurement

- Hospital Discharge Abstract Database held by the Canadian Institute for Health Information (CIHI) was used to compare trends in standardized in-hospital mortality for facilities participating in the collaborative and matched non-participants.
  - Specifically, the number of incremental “lives saved” per 1000 patients between April 2004 and March 2006 (follow-up period) compared with April 2003 to March 2004 (baseline period) was calculated.

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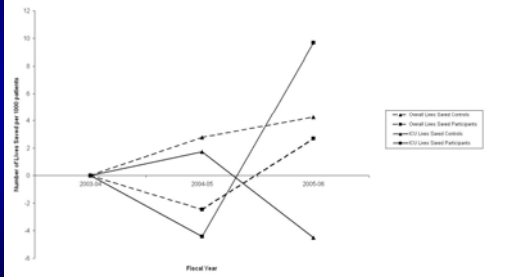
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Annual number of lives saved per 1000 patients compared to 2003-04 (overall and ICU-specific)  
Data from CIHI



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### Study limitations

- Observational Cohort study with a limited follow-up period,
- Association in improved outcome noted, not causality
- But... **Study strengths**
- Study describes a feasible, sustainable model for a national collaboration that is associated with better outcomes for patients. It can be easily generalized to both teaching and community hospitals.

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### Acknowledgements

- Support of Unencumbered Educational Grants from the following institutions: Ortho Biotech; Eli Lilly Canada; Canadian Patient Safety Institute. We also the staff of *Improvement Associates Ltd.*

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## What do you need for a successful collaborative?

- Methodology is very widespread
- We need more knowledge about what works and what does not
- We need more knowledge about predictors or essential support for success
- Recent "expert opinion" reviewed literature, agreed on 10 recommendations and a research agenda

Ovretveit J, Bate P, Cleary P, Cretin S, Gustafson D, McInnes K, McLeod H, Molfenter T, Plsek P, Robert G, Shortell S, Wilson T. Quality collaboratives: lessons from research. *Qual Saf Health Care*. 2002 Dec;11(4):345-51.

Wilson T, Berwick DM, Cleary PD. What do collaborative improvement projects do? Experience from seven countries. *Jt Comm J Qual Saf*. 2003 Feb;29(2):85-93.

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## 1. Choosing the right subject

- Evidence of effective interventions and a gap between best and current practice
- Real examples of how improvements have been made in practice
- Professionals feel the proposed improvement is important and are willing to work for it
- The subject is likely to be strategically important to organizations
- Participants can exchange ideas that can be generalized across a wide number of settings

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## 2. Participants must define objectives and benefits to them

- Teams need to have an idea what they want to achieve
- We (organizers) need to recognize differences in team needs and goals
- We (organizers) need to also identify the things that cannot be achieved by this collaborative
- A clear idea of effort involved is needed

*Defined in prework and creation of charter*

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### 3. Define roles

- Planning and support group
- Expert faculty
  - Topic content
  - Methodology content
- Team members
  - Leaders
  - Facilitators
  - Support

*Key: Internalization of the fact that we are all accountable-this is not a project but an integral part of our professional work*

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### 4. Team building and preparation for the collaborative

- Understanding roles
- Gaining support of clinical and managerial leaders
  - Visibility
  - Commitment
  - “self assessment to benefit”

*Part of the prework. Because of the nature of any collaborative, it is “ground up” and gaining support of leaders is crucial*

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### 5 Enable mutual learning rather than teaching

- Concepts are easy
- Application is tough
- The best teachers are your colleagues
- Consistently noted by participants the the most valued time is that spent informally with colleagues

*Support for 4 learning sessions, conference calls, and bulletin board*

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## 6. Motivate and give power to teams

- Challenge for every collaborative
- Mutual support is helpful
- Conference calls can be a chance to get revitalized
- Reporting and sharing results
- In the final analysis-if we provide a project that helps you get better care for your patient, this is the major motivator

*The tools are there if you use them*

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## 7. Ensure measurable and achievable targets

- Failure to have good measures is the commonest cause of team failure
- Common measures across the collaborative are helpful
- Regular reporting provides internal as well as external timetables

*Measures are defined at start*

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## 8. Help collecting data

- Need a change from sample size to sampling
- Need help displaying data
- \*\*\*\*Help relating testing changes and the relevance to measures
- \*\*\*\*Help instituting changes

*Tools for simple data collection, and software to aid in displaying data are useful*

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9. Planning for sustainability

10. Planning for spread

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Determinants of success for teams

- Teamwork ability
- Ability to learn and apply quality methods
- Importance of your work to your home organization
- Culture of your home organization
- Type and degree of support from management

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Do Collaboratives work?

- Yes if you have:
  - Leadership
  - Implementation
  - Institutional culture
  - Measurement help
  - Methodology help

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