IHI Methodology – Is it really a breakthrough?

Kaye KI, Maxwell DJ, Graudins L, on behalf of the NSW Therapeutic Assessment Group (NSW TAG) Drug Use Evaluation (DUE) Support Group
PO Box 766, Darlinghurst NSW 2010

Background: The Institute for Healthcare Improvement (IHI) Breakthrough Methodology has been heralded by national and state government groups as a new tool for improving patient safety. It has been promoted by clinicians and others as the best way forward for such improvement. Drug Use Evaluation (DUE) methodology has been used by pharmacists for many years as a process for optimising prescribing practice and therefore improving patient outcomes. As a methodology it is not well known outside of pharmacy circles. NSW TAG has extensive experience with DUE methodology and is currently coordinating a multi-centre DUE to optimise pethidine prescribing in Emergency Departments (ED), funded by the National Institute for Clinical Studies (NICs).

Aim and Method: This comparison aims to demonstrate similarities and differences between IHI methodology and DUE. To facilitate comparison, published literature describing the two methodologies was reviewed and the key features of each methodology were identified, summarised and presented in relation to the Pethidine in ED Project.

IHI Breakthrough Methodology

Focus: Accelerating Improvement in multiple settings

Tests ideas for system change. Relies on spread and adaptation of existing knowledge to multiple settings. Uses proven methods to achieve significant improvements (not specifically prescribing)

Process (Institute for Healthcare Improvement, 2002 www.ihi.org)

1. Set aims: numerical target for ‘stand-out improvement’
2. Form team: system, technical and day-to-day leadership
3. Establish measures
4. Test changes:
   - Do: Collect data: process and outcome indicators
   - Study: Evaluate data
   - Act: Make changes

Features

- Aims to close the gap between science and practice
- Aims to lower costs or improve patient outcomes
- Enter quality cycle at action phase: use data to test actions
- Collaborative model: learning from one site spread to others
- Not intended for a single-setting focus: shares strategies from ‘best practice’ sites; typically involves 10-100 organisations
- Depends on peer pressure: aims to create competition and urgency
- Emphasis on rapid action: “What can we do by Tuesday?”
- Data collection focussed on usefulness, not perfect; small samples
- Requires high level management and clinical support, with associated funding allocation

Pethidine in ED Project

1. Aim

To promote rational prescribing of pethidine in participating EDs and reduce pethidine prescribing by 50% in each DUE cycle. Multi-site focus.

2. Team

Hospital coordinators nominated to lead hospital teams involving key stakeholders. Expert clinical reference committee convened. Support provided by NSW TAG. High level management approval obtained. Study approach approved by hospital teams.

3. Measurement instruments

Data collection forms approved by hospital teams. Criteria for evaluation agreed (NSW TAG guidelines, Therapeutic Guidelines).

4. Action

Collect data:
- stock issued from pharmacy (process)
- regular audit of prescriptions (process)
- feedback from ED staff (outcome)

Evaluate data:
- compare with agreed criteria

Report and feed back:
- standard report format; share outcomes with others

Implement action:
- develop targeted educational messages for hospital coordinators to share with their teams.

Funding and support
Funding provided by NICS for coordination

DUE Methodology

Focus: Improving prescribing in single or multiple settings

Uses audit and feedback to evaluate prescribing and promote change in line with evidence-based best practice. Uses proven methods to achieve significant improvements (particularly prescribing)

Process (SHPA DUE Starter kit, 1998; Dartnell JGA, 2001)

1. Identify target: aim for ‘stand-out improvement’
2. Form team: design and approve study
3. Develop measurement instruments and criteria
4. Co-ordinate action:
   - Collect data: process and outcome indicators
   - Evaluate data
   - Report and feedback
   - Implement action

Features

- Aims to close the gap between science and practice
- Aims to lower costs or improve patient outcomes
- Enter quality cycle at data phase; use data to direct actions
- Consulting model: usually single setting focus
- Multi-site design can be used; strategies from ‘best practice’ sites can be shared with others
- Utilises peer pressure amongst prescribers within an institution
- Rapid action encouraged
- Emphasis on good data collection and feedback as part of strategy to change practice
- High level management and clinical support identified as desirable; funding allocation limited

Results and Conclusion

DUE Methodology and IHI Breakthrough Methodology both result in the development of similar activities: identifying desired practice, measuring current practice, developing and implementing changes and feeding back into the process, using iterative cycles. There is significant overlap between the two methodologies and clear parallels exist between the two. Both are successful tools for improving patient care, but each has different points of emphasis.

IHI methodology is less of a breakthrough than it might first appear. DUE remains a robust tool for improving medication management and has been designed specifically to focus on and promote improvements in prescribing practice. Pharmacists experienced in DUE should be able to effectively lead medication-related quality and safety initiatives using either methodology.

NSW TAG is an initiative of NSW clinical pharmacologists and pharmacists, funded by the NSW Health Department.

For more information about the NSW TAG network, visit our web site at www.nswtag.org.au.