Integrating quality improvement and education: A tale of two QI projects

Tristan Gommed1, Lydia Chevalier1, Bettina B. Hoepner1, Kelsey Han1, Rajesh Gandhi2, Kimon Zachary3, Virginia Triant1, Robert J. Birnbaum1,2,3

1Department of Psychiatry, Massachusetts General Hospital
2Department of Psychiatry, Harvard Medical School
3Department of Infectious Diseases, Massachusetts General Hospital

Project Aims
- Design and implement two different types of QI projects
- Compare the two programs strengths and weaknesses
- Develop more efficient strategies for implementing educational + QI projects

Background
- Quality improvement (QI) efforts are a key component of ensuring quality and standardized care
- There are many ways to approach quality improvement
  - Single problem or process focused initiative (Project 1)
  - Department/hospital wide project or collection of QI projects (Project 2)
- QI programs can have a range of education and data personalization combinations
  - Calculating the Framingham cardiac risk
  - Referring patients with dyslipidemia to physicians were more likely to choose more intensive follow-up care and wrote a virtual progress note. The two different measures served as distinct screening tools for problems with risk assessment of suicidality.

Program Comparisons

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>QI Type</th>
<th>Ed. Type</th>
<th>Example</th>
<th>Efficiency</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Green)</td>
<td>Standardized</td>
<td>Standardized</td>
<td>Clinic Audit and Journal Club</td>
<td>+ Traditional, electronic data capture in charts</td>
<td>– Does not educate on actual discovered gaps</td>
</tr>
<tr>
<td>2 (Blue)</td>
<td>Standardized</td>
<td>Personalized</td>
<td>Simulation Assessment + Personalized Remediation (Project 2)</td>
<td>+ Scalable, cost and time effective, education based on performance</td>
<td>– Not based on individual QI data so may not address specific gaps</td>
</tr>
<tr>
<td>3 (Yellow)</td>
<td>Personalized</td>
<td>Personalized</td>
<td>AMA PI CME</td>
<td>– Chart review requires significant time</td>
<td>+ Education addresses specific gaps for each provider, very detailed data</td>
</tr>
<tr>
<td>4 (Red)</td>
<td>Personalized</td>
<td>Standardized</td>
<td>AMA PI CME (Project 1)</td>
<td>– Chart review requires significant time</td>
<td>+ Education addresses overall gaps of providers, very detailed data</td>
</tr>
</tbody>
</table>

Conclusions
- Each approach illustrates a different combination of QI data and education individualization and are useful in their own ways
- The HIV PI CME project was effective because it provided a comprehensive evaluation of physicians as well as targeted educational interventions
- The OPPE project demonstrates a method of quality improvement that is cost and time efficient, easy to disseminate and scalable
- Clinic audits with a journal club or PI CME programs are useful for other types of QI and education needs

Project 1: HIV PI CME
- Program Design:
  - Members of the Massachusetts General Hospital (MGH) Psychiatry Academy partnered with HIV experts in the MGH Infectious Disease department to develop a Performance Improvement Continuing Medical Education (PI CME) program.
  - The program was designed to examine and improve two areas of practice that experts agreed could be improved: smoking cessation and lipid management in patients with HIV.

Demonstrated Outcomes:
- Physicians were more accurate in judging the frequency of some of their practices (ex. frequency of smoking cessation counseling than others (ex. referring patients to outside cessation practices)
- Identified gaps
  - Referring patients to smoking cessation specialists
  - Checking lipids 8 weeks after ART initiation
  - Referring patients with dyslipidemia to nutritionists
- Calculating the Framingham cardiac risk score
- Educational intervention programs were developed based on these gaps and will consist of:
  - Smoking cessation educational talk by motivational interviewing expert and smoking cessation specialist
  - Educational intervention on new lipid guidelines and importance of Framingham score
  - Online community forum for physicians to discuss findings and changes in practice

Project 2: OPPE
- Project Design:
  - A web-based simulation of a clinical risk assessment was developed using a computer simulation assessment tool (CSAT) platform and was emailed to members of the MGH psychiatry department as part of a ongoing professional performance evaluation (OPPE).
  - The simulation was designed to test physicians’ risk assessment skills, especially those related to assessing a patient with unclear suicidal and homicidal ideation.

Demonstrated Outcomes:
- The use of a CSAT was effective in:
  - quickly gathering (92% completion rate within 3 weeks) performance data on all clinicians in a department
  - selecting clinicians that required additional evaluation through focused professional practice evaluation (FPPE) (75/410 clinicians)
- The simulation elucidated how different types of clinicians respond to the same clinical case
  - physicians were more likely to choose more intensive follow-up care (ex. hospitalization)
  - non-physicians were more likely to recommend out-patient care

Lessons Learned
- It is important to examine the specific aims and scope of your QI project before choosing a method.
- Chart reviews are better for targeted issues and in depth investigation
- Simulations are better for large scale projects with time limitations