Maximizing the Impact from the Bottom of the Totem Pole

*IHI National Forum*

Session Code C5
#IHI27FORUM

Tuesday
December 8, 2015
1:30-2:45 pm

Presenters

- Mingyang Gray, MD, MPH: PGY 1, Icahn School of Medicine at Mount Sinai
- Aditi Dasgupta, BA: T3, Tulane University School of Medicine
- Andrew L. Wickerham, MPH: T4, Tulane University School of Medicine/School of Business
- Geraldine E. Menard, MD: Section Chief, General Internal Medicine and Geriatrics, Tulane University School of Medicine

The presenters have nothing to disclose.
Objectives

- Identify appropriate opportunities to improve systems and patient safety in a hospital or clinic setting from the perspective of a student
- Demonstrate examples of successful projects conducted by the students of the New Orleans Healthcare Improvement Group
- Develop realistic action plans and timelines for gathering support and executing a basic improvement cycle

Tulane University School of Medicine

- Founded in 1834 in New Orleans Medical College of Louisiana
- 185 medical students/class
- 30% of medical students obtain combined degree of MPH, MBA, or PhD prior to graduation
Tulane Medical Center

- 1 of 3 primary teaching sites
- Joint ownership between HCA and Tulane
- 235 licensed beds
- 630 physicians with admitting privileges
- Tertiary referral center with abdominal transplantation, cancer center and bone marrow transplant, cardiovascular and neurosurgical services.
- ACC/AHA Stroke Center of Excellence-first in LA

Tulane Healthcare Improvement Group

- First IHI Open School Chapter at Tulane and in Louisiana
- Founded in 2010 by T2 medical students: Christina Le, Phillip Hitchcock, Billy Smith, and Clinton Piper
- Faculty advisor: Frank Rosinia, MD
- Introductory launch session held with 15 students and 20 invited faculty
- First group attendance at IHI National Forum 2011
- Expanded in 2013 to include LSU students and formation of New Orleans Healthcare Improvement Group
Chapter History

2010
- Tulane Open School Chapter forms
- Online modules, projects identified

2011
- First group travels to IHI National Forum
- Interest generated, increased projects

2013
- Expansion to include LSU Open School Chapter
- New Orleans Healthcare Improvement Group (NOHIG)
New Orleans Healthcare Improvement Group

A Joint Tulane and LSU Chapter of the IHI Open School for Health Professionals

Introduction
The New Orleans Healthcare Improvement Group (NOHIG) is a community of health care professionals, academic faculty, and students committed to advancing education and quality improvement in health care in New Orleans, Louisiana. We are a chapter of the Institute for Healthcare Improvement (IHI) Open School for Health Professionals, a global organization that provides resources and training for individuals seeking to become agents of change in modern health care. Our community members come from the multiple schools and health care systems established by Tulane University and The Louisiana State University School of Medicine.

Join / Contact
Go to the “Join” page to join the NOHIG email list and stay up to date with upcoming events, speakers, IHI news and more. Or, email us directly with any questions at ihig@tulane.edu.

About
The Tulane Healthcare Improvement Group (THIG) was founded in 2010 by Tulane University School of Medicine students Christina Le, Phillip Hitchcock, Billy Smith, and Clinton Piper, and faculty advisor Frank Rassmussen, MD. In 2013, LSU and Tulane merged their chapters, creating NOHIG and establishing broader network of individuals dedicated to improving healthcare in New Orleans. The organization is led by a committee of students, residents, and faculty from both the Tulane and LSU healthcare communities.

Growth

IHI National Forum Participation

<table>
<thead>
<tr>
<th>Year</th>
<th># faculty</th>
<th># students</th>
<th># posters</th>
<th># workshops</th>
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<td>5</td>
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<td>2015</td>
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A Typical Year at Tulane

**August**
- Open table for T1 students at Student Fair

**September**
- IHI Open School QI lecture presentation-invite all interested students
- Add to listserv; send out communications of project ideas

**October**
- New projects begin with new students
- Prior year’s projects-prep and design storyboards for IHI Open Forum submission

**December**
- Attend IHI National Forum
- Lunch talks

**March**
- Continue with current projects started in Fall; Plan for development of those and timeline for recruitment of new students in Fall.

**July**
- 1-2 Students attend IHI Student Leadership Academy
Student Interest Groups at Tulane Medical School

1. (AOA) Alpha Omega Alpha  
2. AAMC Student Representatives  
3. (AMA) American Medical Association  
4. (AMSA) American Medical Student Association  
5. (AMWA) American Medical Women’s Association  
6. (APAMSA) Asian Pacific American Medical Student Association  
7. (DGH) Doctors for Global Health  
8. (MSFC) Medical Students for Choice  
9. (NOHIG) New Orleans Healthcare Improvement Group  
10. (PCP) Primary Care Progress  
11. (PHR) Physicians for Human Rights  
12. (SNMA) Student National Medical Association  
13. (WIS) Women in Surgery  
14. Clinical Specialty Interest Groups  
15. (AIG) Anesthesiology  
16. Bioethics Interest Group  
17. (CTR) C. Thorpe Ray Internal Medicine Society  
18. (DIG) Dermatology  
19. (FMIG) Family Medicine Interest Group  
20. (NSIG) Neurosurgery  
21. (Ob/Gyn) Obstetrics and Gynecology Interest Group  
22. (PARTS) Pathology Interest Group  
23. (PIG) Pediatrics Interest Group  
24. (PMRIG) Physical Medicine & Rehabilitation Interest Group  
25. (PSIG) Physician Scientist Program [MD/PhD]  
26. (Psych) Psychiatry Interest Group  
27. (RIG) Radiology Interest Group  
28. (RMSS) Rudolph Matas Surgical Society  
29. (SIGN) Student Interest Group in Neurology  
30. (SINUS) Sub-speciality Interest Network Under Surgery  
31. (SMIG) Sports Medicine  
32. (TEMIG) Emergency Medicine  
33. (TGIG) TUSOM Genetics Interest Group  
34. (TOIG) Tulane Ophthalmology Interest Group  
35. Student Life  
36. (CMSA) Catholic Medical Student Association  
37. (LAMSA) Latin American Medical Student Association  
38. MedArt  
39. (MMSA) Military Medical Student Association  
40. (MkM) Music and Medicine  
41. Owl Club  
42. Phoenix Society  
43. (PrEPARE) Tulane HIV Pre-Exposure Prophylaxis Awareness and Rx Education  
44. (SAMSA) South Asian Medical Student Association  
45. (SARBA) Students Against Right Brain Atrophy  
46. (SICC) Student Clinic Council  
47. Tulane Teaching Kitchen Student Group  
48. (TCMA) Tulane Christian Medical Association  
49. Tulane University Run and Fun  
50. (TOGA) Tulane Organization for Gays and Allies  
51. Uvula Acapella Group

Why Do Students Get Involved?

“I love that quality improvement takes a multidisciplinary approach to solving problems, and I can learn from the experiences of nurses, public health professionals, and hospital administration while working to improve outcomes. Too often, one’s perspective is limited by his/her specific role in the pipeline.”  
- 3rd year medical student

I got involved to have a hand in the natural experiment of redesigning healthcare delivery in post-Katrina New Orleans.  
- 4th year medical student

“While competence and skills are important in providing excellent care to our patients, a lack of efficiency and unified effort compromise the quality of care in our community. I hope to recognize, share, and improve such hindering factors.”  
- 2nd year medical student
CR safety score reflects rates of:
- Mortality 65+
- Readmission 65+
- Scanning 65+
- Infections all patients
- Communication all patients

Why Do Students Get Involved?

Locations Where Students Implement Projects

- Gracehouse
- Bridgehouse
- New Orleans Mission
- Ozanam Inn
- NOLA East
- Ruth Fertel

Tulane Medical School

Student run-clinics

Tulane Medical Center

Affiliate hospitals

Family Medicine Rotation

Louisiana

Mississippi

University Medical Center

East Jefferson

Children’s Hospital

Many more
Family Medicine Rotation Project

- 6-week 3rd year clerkship rotation in rural Louisiana or Mississippi
- Most students work with a Family Medicine physician in their private practice, live in the town they work in
- Students have to complete a project for the clerkship with the option of 3 different concentration areas:
  - Public Health
  - Clinical Question
  - Quality Improvement
- All students are required to take the first 4 modules of IHI’s Open School, which teaches the fundamentals of PDSA cycles and implementing a quality improvement project

Family Medicine Rotation Project: Expanding Access to Diabetic Shoes in Jennings, LA

- Literature review on diabetic therapeutic shoes
- **Aim:** Increase the distribution of diabetic shoes to eligible patients at LaCombe Family Medicine by 50% by August 11, 2015
- Outcome measure: Percent of eligible diabetic patients who had diabetic shoes
  - Balance measures considered
- Intervention: Contacted all patients within the practice with diabetes and a documented foot complication. Scheduled a morning of foot exam appointments and coordinated so that the Medical Equipment representative was present to fit the patients for shoes
## Results

<table>
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<tr>
<th>Category</th>
<th>Count</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Eligible patients</td>
<td>77</td>
<td>100%</td>
</tr>
<tr>
<td>Unable to contact</td>
<td>54</td>
<td>70.1%</td>
</tr>
<tr>
<td>Already has pair</td>
<td>5</td>
<td>6.5%</td>
</tr>
<tr>
<td>Not interested</td>
<td>4</td>
<td>5.2%</td>
</tr>
<tr>
<td>Interested</td>
<td>14</td>
<td>18.2%</td>
</tr>
<tr>
<td>Scheduled appointments</td>
<td>10</td>
<td>13.0%</td>
</tr>
<tr>
<td>Came to appointments</td>
<td>9</td>
<td>11.7%</td>
</tr>
<tr>
<td>Received shoes</td>
<td>9</td>
<td>11.7%</td>
</tr>
</tbody>
</table>

**Before intervention:** 5/77 patients with diabetic shoes 6.5%
**Post intervention:** 14/77 patients with diabetic shoes 18.2% or 180% increase

## CAUTI Workgroup: 2013-2015

**August**
- Open table for 11 students at Student Fair

**September**
- IHI Open School QI lecture presentation; invite all interested students
- Add to list; send out communications of project ideas

**October**
- New projects begin with new students
- Prior year’s projects prep and design storyboards for IHI Open Forum submission

**December**
- Attend IHI National Forum
- Approximately 4-5 faculty and 12-15 students

**March**
- Continue with current projects started in Fall; Plan for development of those and timeline for recruitment of new students in Fall.
Background and Timeline

- Formed in 2013 in response to Consumer Reports quality data showing high CAUTI rate at TMC

- Successfully adapted, piloted, and implemented protocol based on the Michigan (Keystone) Bladder Bundle during 2013-2014 academic year

- Long-term project; biweekly meetings 2013-2014; now quarterly

- Multidisciplinary team with varied experiences:
  - Nurse Managers (RN)
  - Infection Control and Prevention (RN, MPH)
  - Physician Leaders (MD)
  - Medical Students (MPH, MS, BA)

Student Roles

- **Andrew: The Systems Guy**
  - Dartmouth MPH with quality improvement experience
  - Interested in internal medicine
  - Comfortable with different provider types and moving parts of the system

- **Trevor: The Data Guy**
  - MS in cellular biology
  - Former Bristol-Myers-Squibb lab researcher
  - Nonplussed by auditing daily and reams of data entry
Student Roles

- **Josh: The Auditor**
  - Dual MD-MPH student
  - No prior QI experience
  - Did a deep dive into IHI methodology

- **Nikhil: The Stats Guy**
  - Former Deutsche Bank analyst
  - No hands-on exposure to the audit
  - Happy to crunch numbers on demand

Protocol
Pilot Audit

- 90-day pilot
- Student auditors
- Multiple PDSAs
  - Audit tool
  - Protocol
Ongoing Follow-Up

- Protocol approved by Medical Executive Committee March 2014
- Electronic version Spring 2014
- Additional systems changes (new catheters, insertion training, changes to the electronic version) through Fall 2014
- Meeting quarterly to track data

Challenges

- Issues with students in charge
  - Projects are a learning opportunity for medical students to be the “team leader,” but not always appreciated
  - “Top of the license” issue
- Feedback loops
  - Established mechanism for rapid feedback
- Student schedules
  - Less of an issue with this project
CAUTI

Housewide Adult CAUTI Control Chart
Q1 2014 - September 2015

Foley Utilization

ICU and Med/Surg Foley utilization Rates Jan -
August 2015
Where Do I Go from Here?

3 pieces of advice
2 project outlines
1 take home message

1. Define Your Locus of Control

- Classmates
- Team
- Organization or student run clinic
- Unit
- Department
- Hospital system
2. Be the Little Engine

3. Leverage Your Resources
2 Project Outlines

- **Brainstorm:**
  - Where to begin
    - Near miss, complication, patient complaint...
  - What to change
    - System
    - Culture
  - How to change
    - Manpower
    - Time
    - Resources
  - Measurement of process/progress
  - “Going public”

Rapid Think – Pair – Share

- Identify 3 opportunities for improvement
  - Recent near miss, morbidity/mortality, patient complaint, frustrating encounter...
- Choose 2 tools at your disposal
  - Time, resources, peers, admin support, systemic policy change
- Briefly outline 1 project:
  - Problem \( \rightarrow \) process \( \rightarrow \) outcome
- Share your idea with someone next to you!
1 Take Home Message

2014 IHI National Forum