



# RLI Power Hour



## How I Started In Quality Improvement

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# Objectives

- Describe my quality improvement journey
- Articulate a few **ideas** for developing a QI career
- Identify resources for those interested in quality improvement



# Early QI germination



## College ambulance service:

- *Problem:* It was hard to restock an ambulance that had 200 different items, some of which were potentially life saving.
- *Solution:* Implemented equipment management system.



# Medical school: QI roots expand



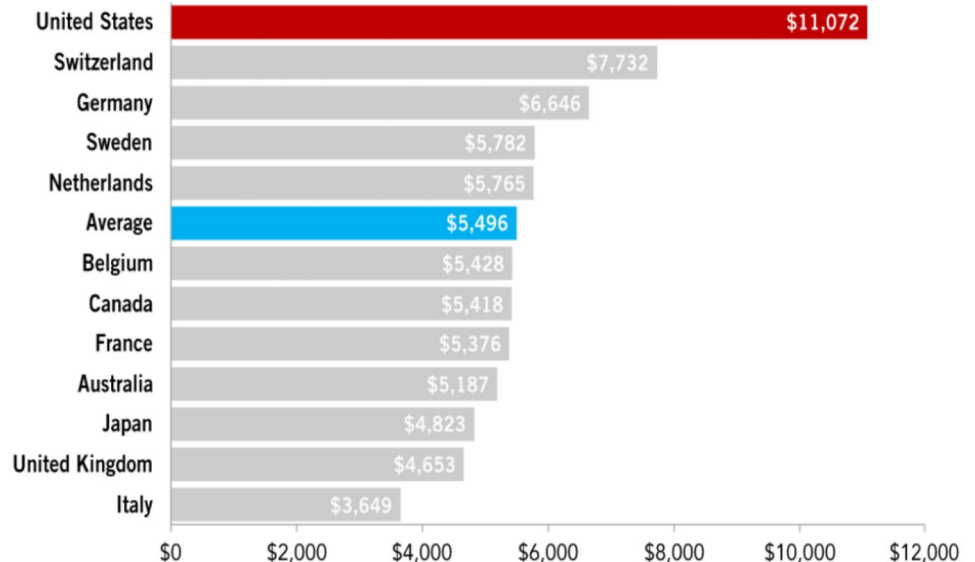
- We ordered many tests, cost and value was unknown.
- Asked questions about the system, affordability, quality, value, etc.
- Was directed to a summer healthcare economics course at the business school
- Realized I had an interest not just in providing care but also in designing the system around care
- Enrolled in the combined MD MBA program.
- My 2008 class graduated 4 MD MBA students.



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U.S. per capita healthcare spending is almost twice the average of other wealthy countries

HEALTHCARE COSTS PER CAPITA (DOLLARS)



SOURCE: Organisation for Economic Co-operation and Development, OECD Health Statistics 2020, July 2020.

NOTES: The five countries with the largest economies and those with both an above median GDP and GDP per capita, relative to all OECD countries, were included. Average does not include the U.S. Data are for 2019. Chart uses purchasing power parities to convert data into U.S. dollars.

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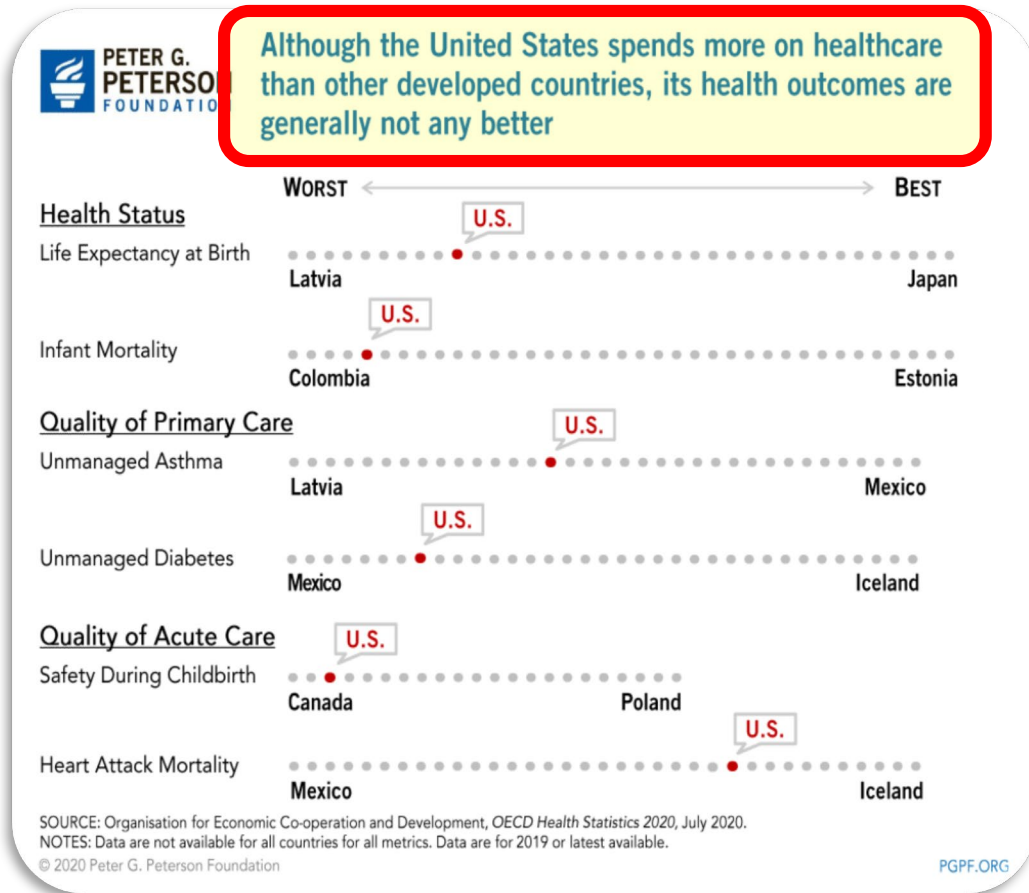
PGPF.ORG

**Question the status quo. Strive to create value.**

# Medical school: QI roots expand



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# QI leaves emerge

## My first QI project, although I didn't know it at the time

- Find a mentor
- Evaluated the quality of reporting of a series of articles.
- Helped me understand the importance of being thorough in planning and reporting quality projects



### Abstract Archives of the RSNA, 2003

#### K16-1001

#### Application of Standards for Reporting of Diagnostic Accuracy (STARD) to the MR/US Literature on Benign Uterine Abnormalities: A Systematic Review

*Scientific Papers*

*Presented on December 3, 2003*

*Presented as part of [K16: Health Services, Policy and Research \(Issues in Research Methodology\)](#).*

Conclusion: **The series of articles reviewed is deficient in reporting items to assess their internal and external validity.** Resources spent yearly treating these patients may be misguided. Researchers should apply the STARD recommendations to improve the accuracy and completeness of reporting of studies of diagnostic accuracy.

# Residency: QI flower buds



- Residency strengths: IT, education
- *Problems:* Trainees often didn't know their reports had been edited, didn't learn from those experiences, and other trainees were unable to learn as well.
- *Solution:* Created a system to visualize report changes, log discrepancies, and make them available to all trainees.

**Focus on problems people care about. Learn IT. Leverage local resources. Solve problems.**

**Trainee Report Dashboard**

Display Control:  Date  Type  Section  Study

Database queries:   Start: 2013-3-10 End: 2013-6-8

DL List					Report List			
Date	Type	Section	Study	Text	Date	DL?	Study	LD%
2013-04-04	GoodJob	MIR	MRABD*	Excellent report. Please review final version of report for formatting changes.	2013-06-05		MRSJLD-	8
2012-12-11	report	ENT	CTHEFAC-	I would not have used the facial bone template (which is for trauma) for this case. Dental clearance would be more appropriate.	2013-06-05		MRKNEE-	3
2012-11-20	4	NEURO	CTHE-	edema is considerably worse with mass effect. Not "similar". Should have come down much harder on new edema and mass effect. I called Neurosurgery - They did treat this as edema and put the patient on steroids with a taper and will be followed in 2 weeks. In this case no harm was done. Look at how much more mass effect on the sulci and ventricles.	2013-06-05		MRCSP-	2
2012-11-20	3	NEURO	CTSTROKE	Prior infarcts in the cerebellar hemispheres and left superior frontal lobe.	2013-06-05		BRDIADIGL	11
2012-11-19	FYI	NEURO	CTHE-	For someone 49 years old - considerable atrophy and White matter changes - definitely abnormal - not mentioned at all in your report - check report compare. Not a big deal in this case since Additional history as per ER note - HIV, cancer, DM and hepatitis.	2013-06-03		BRDIADIGL	0
2012-11-17	FYI	CT	CTABDPEL-	Foley balloon is in the prostate.	2013-06-04		MRTSP-	0
				FINAL REPORT: Re -discussed with [redacted] at 840 AM on 11/17/2012. Additional history from note is that orbital dermoid [redacted]	2013-06-04		BRSCRDIGB	0
					2013-05-30		BRDIADIGB	3
					2013-05-30		BRDIADIGR	12
					2013-05-24		CTSIN-	0
					2013-05-24		CTHE-	0
					2013-05-24		CTHE-	0
					2013-05-24		MRCSP-	0
					2013-05-24		CTHE-	0
					2013-05-24		MRHEBR*	0
					2013-05-24		BRCON	38

View Exams, 1 Patient(s) selected

Referring: Unassigned, Provider

Patient History Timeline

US 05/30 08:08 MG 05/02 13:11 MG 03/03 11:08 US 04/04 04:04 MG 02/05 06:06 CR 19/23

Most Recent: 5/20/2013 Least Recent: 10/23/2009

Published: 29 September 2011

Radiology Report Comparator: A Novel Method to Augment Resident Education

Richard E. Sharpe Jr. <sup>1</sup>, David Surrey, Richard J. T. Gorniak, Levon Nazarian, Vijay M. Rao & Adam E. Flanders

Journal of Digital Imaging 25, 330-336 (2012) | Cite this article

J. Digit. Imaging, 2013 Aug; 26(4): 678-682.

Published online 2013 Feb 5. doi: 10.1007/s10278-013-9574-y

PMCID: PMC3705016

PMID: 23381098

QRSE: a Novel Metric for the Evaluation of Trainee Radiologist Reporting Skills

David Surrey, Richard E. Sharpe Jr. <sup>2</sup>, Richard J. T. Gorniak, Levon N. Nazarian, Vijay M. Rao, and Adam E. Flanders

INFORMATICS 2105

RadioGraphics

**Trainee Report Dashboard: Tool for Enhancing Feedback to Radiology Trainees about Their Reports<sup>1</sup>**

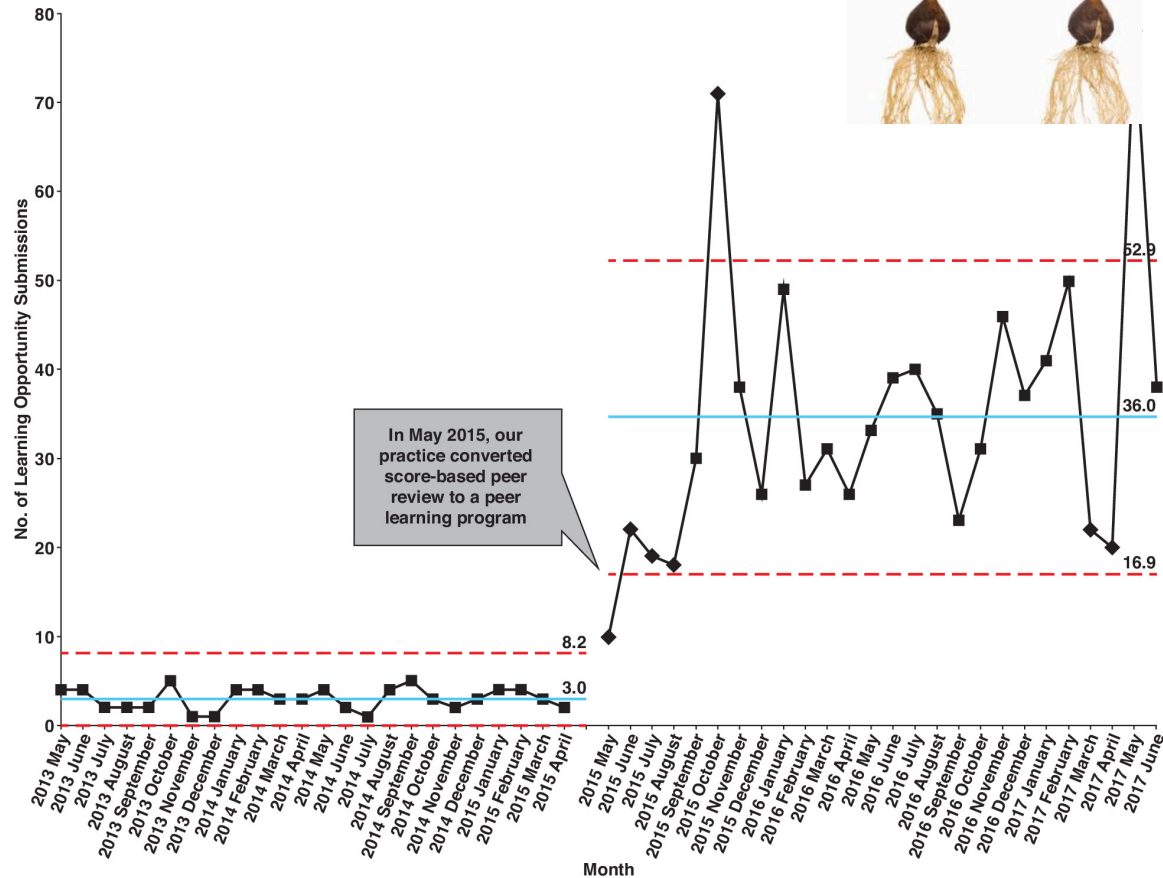
TEACHING POINTS

Richard J. T. Gorniak, MD • Adam E. Flanders, MD • Richard E. Sharpe, Jr, MD, MBA

# QI flower grows: 1st attending position



- Started first attending position.
- Attended a peer review meeting uninvited. Wasn't asked to leave
- Kept suggesting changes to improve the practice and spread learnings
- 3 meetings later was asked to lead quality and peer review
- Created peer learning, a new transparent way of identifying QI opportunities, then using them to learn and improve the practice
- ACR has recently approved peer learning as an alternative to peer review



**Choose a team that values improvement. Show up. Be brave. Think differently.**



**Implementation of a Peer Learning Program Replacing Score-Based Peer Review in a Multispecialty Integrated Practice**

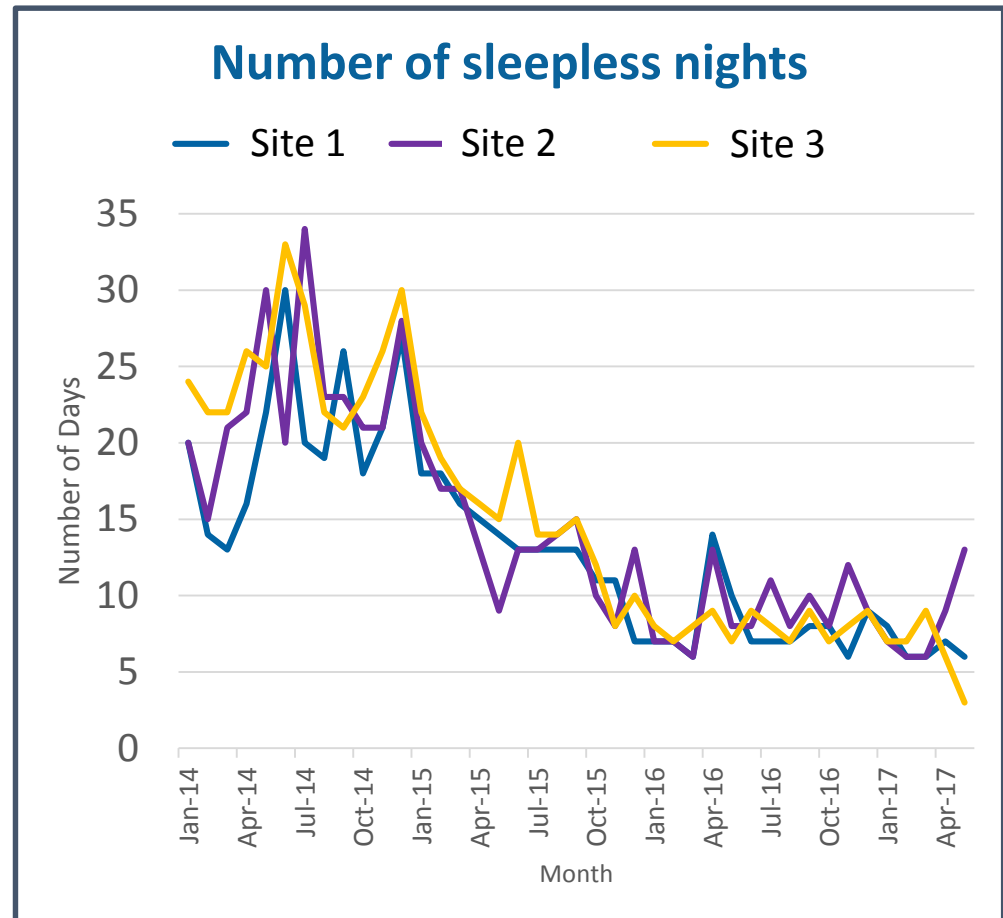
Richard E. Sharpe, Jr.<sup>1</sup>  
 Ryan I. Huffman  
 Robert G. Congdon  
 L. Alan Plunkett  
 Brian A. Tschumper  
 David T. Stewart  
 Eric K. Bode



# QI flower grows: reduce sleepless nights

- Problem:
  - Most women spent > 1 month awaiting results of their evaluation for breast cancer.
- Solution:
  - Socialize the problem
  - Obtain data and create patient centered metric your team can relate to and wants to improve: # Sleepless nights.
  - Ideate improvements
  - Implement changes
  - Track gains
  - Repeat

**Focus on the patient.**



# Align enterprise: QI flower matures

- Appointed Chair of the Kaiser Permanente Interregional Radiology Clinical Practice Group
- *Problem:*
  - Imaging care varied across the 9 states we operated. Some care must have been lower quality.
- *Solution:*
  - Created practice parameters to standardize management of common conditions.
  - Create electronic safety net to ensure appropriate follow up.

**Align with organizational priorities.  
Standardize high quality care across  
the enterprise.**



# Suggestions to develop a QI career:

- **Learn!**
  - Read quality articles
  - Join quality listserves: LCIR google group
  - Take courses at radiology meetings, in person/online
  - Earn a certificate (ACR Radiology Leadership Institute, RSNA Advanced Level Quality)
  - Earn a degree: MBA, MPH, MMM, MSc, others
- **Practice!**
  - Join a team that values practice improvement
  - Join a quality project
  - **Identify a quality improvement opportunity, recruit a team to improve it!**
  - Formal vs less formal approaches
- **Align!**
  - Align your improvement efforts with your organization's goals and priorities
  - Team will better understand the impetus for change.
  - Resources will be more available.
  - Quantify current state, document gains as improvement is implemented.

# Summary: Your patients need you. Improve systems to provide better care.

- Show up
- Find a mentor
- Be brave
- Think differently
- Learn IT
- Question the status quo
- Create value
- Focus on problems people care about
- Leverage local resources
- Create patient centered metrics that your team can relate to and wants to improve
- Align with organizational priorities
- Standardize high quality care across the enterprise.



# How I started in quality improvement



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# Heavy lift projects: Flower maturing

**Create care value streams across multiple disciplines to ensure consistent high quality care.**

- Problem:
  - Some imaging studies need follow up, yet those studies are not always performed
- Solution:
  - Bring together leaders in multiple specialties, radiologists, QI experts, data analysts, software engineers, nursing staff to create an electronic safety net.

