

Using Quality Improvement (QI) Methodology to Develop a Standardized QI Educational Curriculum for Internal Medicine Residents

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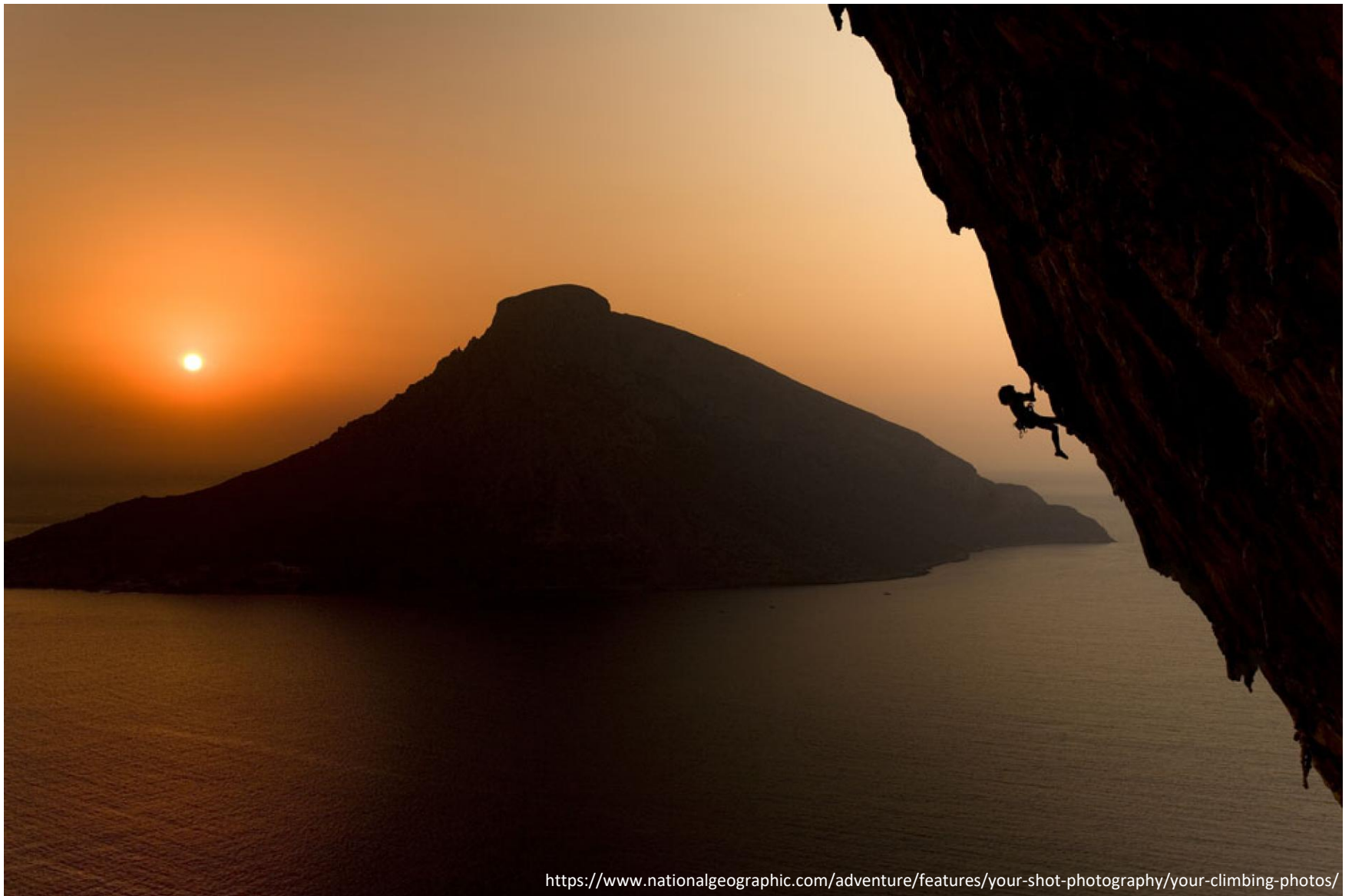
<https://blog.producthunt.com/how-will-the-world-change-over-the-next-50-years-5355e10ea30c>

The hospital is a bustling and complex environment.



<https://www.istockphoto.com/ca/photos/light-bulb>

Knowing how to create positive change can be daunting for learners and physicians alike.



<https://www.nationalgeographic.com/adventure/features/your-shot-photography/your-climbing-photos/>

Attempting to identify deficits and find solutions to benefit patient care can seem impossible.



<http://storiesfromschool.org/class-size-and-deathless-prose-clamor-in-the-classroom/>

Fortunately, residency training now places an emphasis on learning about quality improvement (QI).



QI Improvement Training

- The need for residents and physicians to have the understanding and ability to take part in quality improvement (QI) initiatives has become increasingly important
- Participation in a scholarly project is an accreditation standard and is part of the Canadian Royal College Certification in Internal Medicine
- Residents previously encouraged to take part in QI projects, however most did not have a framework or the QI knowledge needed to translate a project into reality

Using QI principles to develop a QI curriculum

Defining Opportunity

- **Problem Statement:**

Currently, core internal medicine residents at the University of Alberta do not have a standardized quality improvement (QI) educational curriculum. This limitation impacts the number of QI physician champions who can teach QI and actively support QI projects.



Defining Opportunity

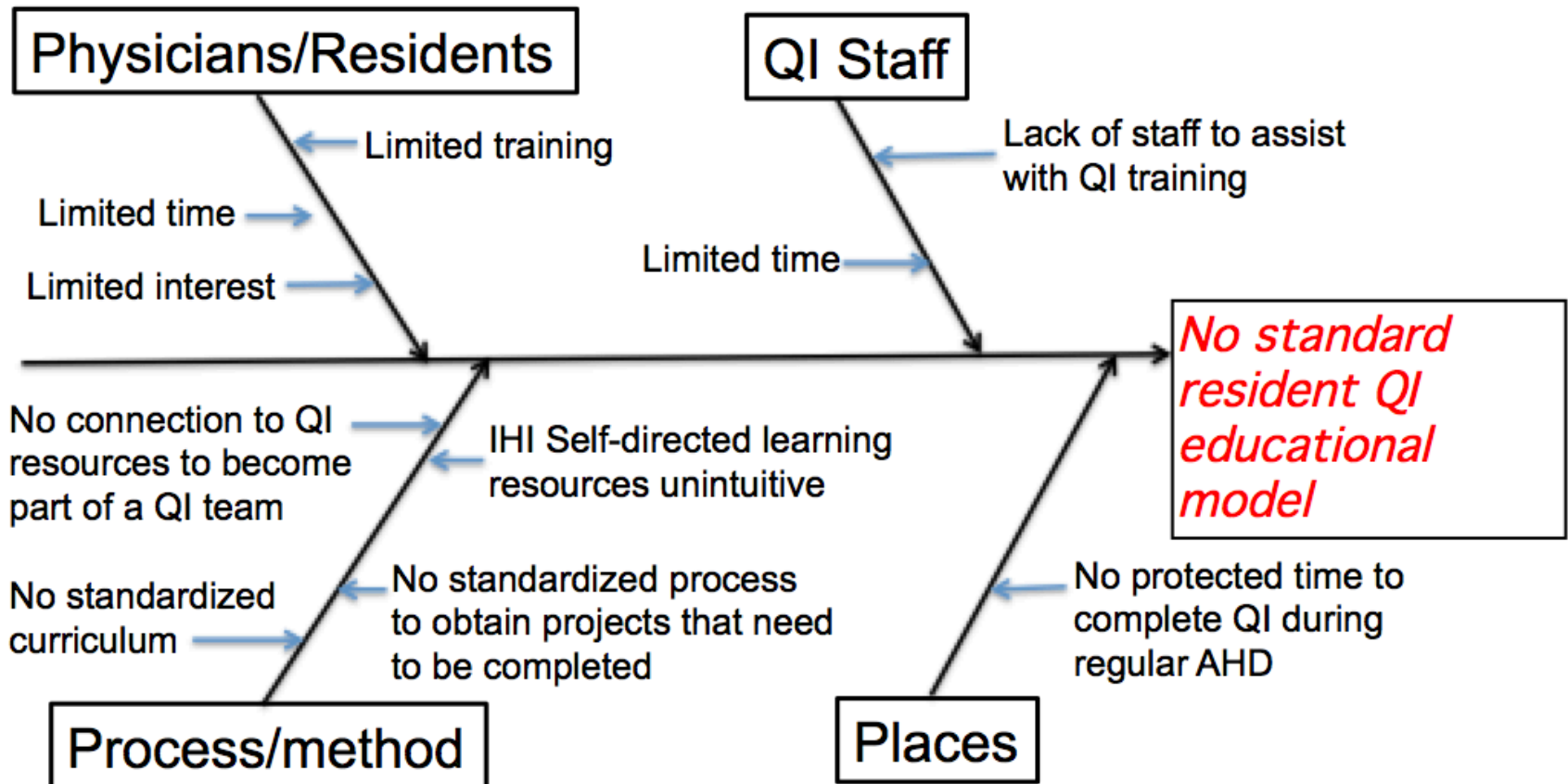
- **Aim Statement:**

To develop and implement a standardized QI curriculum using QI principles by June 2018. Objectives were to:

1. Provide core internal medicine residents the Evidence-based Practice for Improving Quality (EPIQ) training course,
2. Have resident teams develop potential QI projects during the course,
3. Identify resident QI champions to coach future EPIQ sessions the next calendar year,
4. Where appropriate, align residents to active QI projects with staff physicians and multidisciplinary teams within the AHS quality management framework (QMF).

Where did the gaps exist?

Building Understanding





Act to Improve: PDSA #1

- Time was allocated during 3 academic half-day times to complete the EPIQ training course
- Residents were grouped into teams of 6-10 to develop potential QI projects and work through the 10 steps of EPIQ
- 100 PGY-1s, PGY-2s and PGY-3s completed the EPIQ course



Act to Improve: PDSA #1

- April 12, 2018 – each group presented their potential QI project ideas at academic half-day
- All group presentations were evaluated by a designated QI consultant

Act to Improve: PDSA #1

- QI Project Ideas:
 - Daily weights measurement
 - Transition from IV to po antibiotics
 - Handover
 - Time to complete a consult in the ED
 - Goals of care documentation
 - Delirium in hospital
 - Colonoscopy preparation
 - Prophylaxis for patients on steroids
 - Creatinine ordering for dialysis patients
 - Paging process

Results

- Post-course surveys were completed to evaluate:
 - Understanding of QI principles
 - Likelihood of residents to take part in future QI projects
 - Interest in learning more about QI
 - Interest in being an EPIQ facilitator

Post-Course Survey Results

- 52 residents complete the survey
- Pre-EPIQ:

Did you have a clear understanding of what QI is? (basic understanding of QI principles)	42% YES
Would you have felt comfortable taking on a QI project?(pursuing a QI project)	25% YES
Were you interested in QI?	50% YES
Were you previously involved in QI or a QI project?	29% YES

Post-Course Survey Results

- Post-EPIQ:

Do you have basic understanding of QI principles?	98% YES
Do you feel comfortable working through the EPIQ 10 steps?	88% YES
Are in interested in pursuing a QI project?	65% YES
Are you interested in becoming a QI EPIQ facilitator?	17% YES

Post-Course Survey Results

- 56% absolute increase in understanding of QI principles
- 15% absolute increase in interest in pursuing a QI project
- 17% of residents are interested in EPIQ course facilitation
- 94% of PGY-2 and PGY-3 residents preferred this method of learning QI to the previous years

Next Steps...

- Continuing to encourage residents who have completed the course to join staff physicians and multidisciplinary teams to develop and complete QI projects
- 38 internal medicine residents completed the AHS AIW yellow belt certification and 18 residents involved in active QI projects

Next Steps: PDSA #2

- 5 groups planned for the current R1 cohort – December 2018
 - Residents will be encouraged brainstorm potential QI project ideas prior to attending EPIQ
 - Each group will complete a pre- and post-course test and survey completed on the day of the EPIQ course



<https://www.istockphoto.com/ca/photos/learning?excludenudity=true&mediatype=photography&phrase=learning&sort=mostpopular>

Residents and staff physicians are being trained in QI principles and methods.



Working through problems using QI principles gives residents the tools to create positive change in our hospitals.



Now, more residents are involved in QI projects than ever before.



<https://evelynparham.com/5-favorite-quotes-to-inspire-positive-change/>

As more residents are trained in QI, our goal is to have the curriculum sustained by residents, thereby fostering an atmosphere within our healthcare system to create ongoing positive change.

Questions?

- Special thanks to:
Pamela Mathura
Dr. Narmin Kassam
Dr. Anca Tapardel

Reference: EPIQ Workshop Development Committee. Evidence-based Practice for Improving Quality (EPIQ) QI Workshop. Canadian Neonatal Network, Toronto. 2018