



Shared Leadership | Culture
Relentless Drive | Clear Quality
Widespread QI Training
Annual Transform Conference
Disciplined Investment
Framework | Ranking and
External Comparison
Clear Direction | Start Early
Smooth Transition | Methodology
Leadership Commitment
Diversity and Synergy
Visibility and Recognition

FINAL REPORT | MAYO CLINIC

KEY FINDINGS | FEBRUARY 2018



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Executive SUMMARY

In November 2017, the Specialist Services Committee (SSC) supported 22 health leaders to visit the Mayo Clinic in Phoenix, Arizona. The key purpose of the visit was to learn new ideas and “gems” that could be incorporated into the SSC’s Physician Quality Improvement (PQI) program. The PQI program is active and running in six BC health authorities, where physicians who want to work on a QI project are provided the opportunity to do so through training and with the support of teams of six or seven technical staff in each health authority (HA). The main objectives of PQI are to:

- Promote a culture of quality and safety with physicians
- Promote the IHI Quadruple Aim
- Align with provincial and health authority quality initiatives
- Provide learning opportunities for physicians to increase their capability for quality improvement
- Provide learning opportunities for the PQI members to support in leadership and change management
- Facilitate physicians and teams to engage in quality improvement activities
- Provide access to infrastructure resources, where possible, to assist with physicians’ quality improvement projects

The agenda for the visit to Mayo was created by a joint planning committee including both Mayo and BC representatives. **Key feedback from the post-event evaluation included:**

90%

INDICATED

"Mayo visit was
a good use of my time"

95%

INDICATED

"the visit has enhanced
working relationships with my
provincial colleagues"

87%

INDICATED

"I learned new material that
I will bring back
and apply to my PQI work"

84%

INDICATED

"the content was relevant
to me and my PQI work"

The 22 attendees all contributed this Final Report and have collectively noted 35 gems and takeaways that can be applied here in BC and within PQI. Based on post-trip feedback and discussions, there seems to be preference and interest to explore:

- ✓ Physician recognition and creation of a network of QI champions (Mayo pins)
- ✓ Communication to physicians (Mayo tools)
- ✓ Dyad leadership learnings from Mayo
- ✓ Enhanced physician capability through providing training and leadership opportunities
- ✓ Start of QI training by working with the academic sector
- ✓ Increased visibility and presence of QI in BC health care

The focus in the upcoming months will be to share the findings in this report with other BC health leaders and prioritize those ideas the PQI team can implement.





BACKGROUND

Report Purpose


Twenty-two senior health leaders from BC had the opportunity to travel to the Mayo Clinic in Phoenix, Arizona, to learn about how they deliver high-quality health services. This report captures the key learnings of the visit so as to support knowledge translation and dissemination. The primary audiences for this report include:

- Six HA/SSC PQI Steering Committees
- PQI Staff
- SSC Core Initiatives
- Facility Engagement Working Group
- JCC Co-Chairs
- HA Leadership Tables (HAMAC, SET, etc.)

Why the Mayo Tour?

The birth of PQI was the result of two primary factors, the first being the work led by the General Practice Services Committee's (GPSC) Practice Support Program (PSP), where the SSC along with the Shared Care Committee and the GPSC participated in an oversight steering committee. While great work was taking place, the SSC determined that there was a need to a better job at addressing the particular needs of specialists, perhaps with a different approach. The second factor was that a number of SSC representatives participated in a joint tour with JCC representatives and health authority senior leaders to the Cleveland Clinic in November 2012 and January 2013. Here, the SSC learned of the true possibility of creating a culture of QI and creating the capability for specialists to support and lead QI efforts. The learnings were brought back to BC, where the SSC created the PQI program.

The PQI file is still in its formation/developmental phase. Implementation at health authorities is still in the early stages, and as such, learning and experience are still increasing. Health authorities and physicians are collaboratively providing oversight to the initiative and strengthening relationships between the groups. While great work is taking place in BC with the application of ideas from the Cleveland Clinic, PQI leaders expressed an interest in continuing to learn by visiting other high-functioning health systems. The two key objectives for visiting the Mayo Clinic included:

 <h1 style="font-size: 48px; margin: 0;">1st</h1> <p style="text-align: center; font-weight: bold;">KEY OBJECTIVE</p> <p style="text-align: center;">Learn new ideas or “gems” that can be brought back and applied to the PQI file.</p>	<h1 style="font-size: 48px; margin: 0;">2nd</h1> <p style="text-align: center; font-weight: bold;">KEY OBJECTIVE</p> <p style="text-align: center;">Use this opportunity to further enhance relationships between HAs and the SSC</p> <p style="font-size: 0.8em; margin-top: 10px;"><i>a. Note: there are not many files that are truly collaboratively managed; the PQI leadership team comprises four distinct groups (HA, SSC, clinically active physicians, and patients) that come together to provide oversight.</i></p>
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Agenda Creation

The learning objectives for the Mayo Clinic were first discussed at the Provincial PQI Network meeting in May 2017. With agreement at this table to move forward with this visit, a briefing note was brought forward to the SSC for approval in June 2017. A planning committee (see table below of membership) was formed including representation from Mayo. Three teleconference meetings were held to develop the agenda; the agenda was then shared with all attendees who provided additional refinements.

BC REPRESENTATIVES	MAYO REPRESENTATIVES
Dr. Adele Harrison (VIHA)	Ryan Fix
Aman Hundal (SSC)	Beth Heinrich
Dr. Celine Kim (PHSA)	Gabi Nesengani
Dr. Kathy Lee (SSC)	John Osborn
Candice Manahan (NHA)	Eileen Oswald
Dr. Monty Martin (PHSA)	Dr. Steven Ressler
Dr. Curt Smecher (FHA)	
Dr. Dave Williams (FHA)	

The following four key questions were used to anchor the development of the agenda. Please refer to [Appendix A](#) for the full agenda and objectives.

1. How can an organization shift its culture towards “quality improvement and patient centric care”?
2. How is the capability of physicians/staff enhanced by providing QI training?
3. How does the Mayo Clinic support grassroots QI projects and ideas?
4. Measurement at times can be difficult. What concrete actions has the Mayo Clinic undertaken to support the evaluation of QI activities?

The planning committee understood that the Mayo physicians were salaried (similar to majority of PHSA physicians) but still wanted to understand how their learnings can be translated into BC’s mostly fee-for-service environment.

Selection of Attendees

Mayo staff advised that the group of visitors should be no more than 25 individuals with a preference for approximately 20 individuals. The SSC connected directly with the HA PQI Sponsors to identify how the seats should be allocated. This group agreed to the need to have a mix of attendees, and the overall process and list of attendees was signed off by the HA PQI Sponsor prior to invitations being sent. The following table includes the list of the attendees:

HEALTH AUTHORITY HA PQI Sponsor EMD Quality & Safety	CLINICALLY ACTIVE PHYSICIANS Physician QI Advisor Chair, PQI Steering Committee	SSC DoBC Representative Staff Representative
Vivian Chan (VCH/PHC)	Dr. Ron Collins (IHA)	Dr. Andrew Attwell
Dr. Adele Harrison (VIHA)	Dr. Karen Dallas (PHC)	Dr. Frank Ervin
Candice Manahan (NHA)	Dr. Vinay Dhingra (VCH)	Dr. Kathy Lee
Dr. Rod McFadyen (VIHA)	Dr. Daisy Dulay (VIHA)	Dr. Gordon Hoag
Dr. Dayan Muthayan (FHA)	Dr. Celine Kim (PHSA)	Aman Hundal
Dr. Alan Stewart (IHA)	Dr. Sam Kohen (VIHA)	
Catherine Syms (PHSA)	Dr. Monty Martin (PHSA)	
Dr. Dave Williams (FHA)	Dr. Anurag Singh (NHA)	
	Dr. Curt Smecher (FHA)	

Please refer to [Appendices B](#) and [C](#) for a full list of BC attendees and their bios. Please refer to [Appendices D](#) and [E](#) for a full list of Mayo presenters and their bios.

A short confidential survey was completed by the BC attendees, who rated the overall visit as very positive. To view the full evaluation feedback please refer to [Appendix F](#). Key feedback from the post-event evaluation included:

- 90% indicated “Mayo visit was a good use of my time”
- 95% indicated “the visit has enhanced working relationships with my provincial colleagues”
- 87% indicated “I learned new material that I will bring back and apply to my PQI work”
- 84% indicated “the content was relevant to me and my PQI work”



Key LEARNINGS

PRESENTATION 1: Mayo Overview

PRESENTERS: Dr. Wyatt Decker - VP & CEO, Arizona
Paula Menkosky - CAO, Arizona

PRESENTATION SUMMARY:

- 150 years old; 1915 expanded scope into education & training.
- Three Shields: Research, Patient Care, Education. Largest shield being Patient Care.
- 63,000 employees, (6,500 physicians); 70 sites; \$11 billion revenue.
- Three main campuses: Rochester, Minnesota; Jacksonville, Florida; Phoenix/Scottsdale, Arizona.

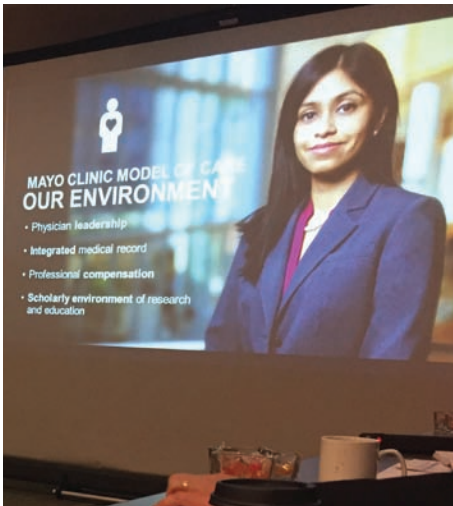
- Face similar challenges: ACCESS to Care; a system that pays for VOLUME instead of value; AGING population; COMPETITIVE markets; high COST OF CARE.
- Mayo approach: Integrated team and medical record, unhurried exam; physicians go to patient; physicians navigate the care for patients; highest quality with compassion and trust; physician leadership; scholarly environment of research and education.
- Shifting from Cerner to EPIC.
- All staff on salary, with no incentive for volume.



KEY GEMS AND TAKEAWAYS:

“The best interest of the patient is the only interest to be considered” - William Mayo

1. **Shared Leadership** model which is now shifting to a “Triad from Dyad” management model. The organization was founded by physicians and continued with physician involvement and leadership. It was great seeing the presentation from Wyatt and Paula; they complemented each other and a few times completed each other’s sentences. It was clear that there was real respect for the other’s perspective and experience and did not appear to be a “token” role for physicians. Later during the visit, we learned that even their Communications Department had a Medical Director. Many of the presentations that Mayo delivered to us were in this Dyad model – with two presenters. In BC, many of the administrators at the hospital or regional level are nurses who have moved up the system; thus, we may not necessarily need to move to a Triad leadership structure to the same extent as Mayo. Nonetheless, there are a number of takeaways to strengthen a Dyad leadership models in BC.
2. **Culture** of Mayo was very apparent. Throughout the two days in the learning room where leaders provided presentations, culture was mentioned at least 40 times. Touring the facility further reinforced the culture that Mayo has created. Wyatt and Paula clearly articulated the purpose and mission of Mayo and while not all staff can state the strategic priorities and objectives, they know why they are there. There are many signs and visible displays of their values and mission. In BC, at times we get too focused on the “delivery of health care” whereas at Mayo the focus was strictly on patient-centred care. Creating this culture at Mayo did not just happen by chance; they have worked very hard to create and maintain it. For example, with the onboarding of medical staff, it takes three years for a physician to go from an “associate” to “consultant.” For some specialties like surgeons, they undergo direct observation at their home facility by a Mayo surgeon, whereas for others, they have video recording in the operating room and new physicians are recorded and provided direct, specific feedback. To shift and mold physicians into this culture, physicians receive 360° evaluations from their administrative and physician peers. Mayo emphasized the need for new physicians to meet both the “clinical” requirements/competencies as well as the “behavior” cultural fit, thus resulting in a longer provisional status to assess cultural fit. Quality really permeates through all levels of the Mayo organization.
3. **Relentless Drive** at Mayo where they seek to identify and remove non-value-added steps, with focus on getting physicians and nurses “back to bedside.” Their culture is supported with safety but they follow the motto: “don’t be afraid to fail.” Quality is one of the hardest words to describe and is used extensively in health care; it was great to see at Mayo that they have clearly defined it to include outcomes, safety, and service.



PRESENTATION 2: Quality Overview

PRESENTERS: **Dr. Richard Zimmerman** - Dean of Education; Professor of Neurosurgery;
Chair of Quality Committee, Arizona

Eileen Oswald - Vice Chair, Mayo Clinic Quality Management Services
(Enterprise Level & Arizona Campus)

PRESENTATION SUMMARY:

- The overall Mayo Quality Construct is based on the following key components:
 - Culture: transparency; fair & just; leadership developing; roles and expectations clarified; safety behaviors.
 - Engineering: standard work; disciplined approach to project development; pairing of academic analytics and practical solutions; human factors.
 - Execution: quality committees; project charters; project teams.
 - Infrastructure: education; quality academy; medical school; clinical decision support; simulation centre; management of quality information.
- Had a strong boost to this movement in 2008, defined Value as their main focus.
- System competency (standardization + diffusion of best practices) + behavioral competency (commitment to safety in a fair & just culture) = safe care.
- Higher Reliability - Mortality Review Example:
 - 100% Mortality Reviews (examined for care and process issues) and closing of the loop, with information in a shared database and letter goes to the department or practice with results.
 - Mortality Review Committee (25 to 30 individuals who distribute the workload of 15 to 20 deaths, resulting in each physician participating in one to two per month)
 - It's an expectation to participate and learn for improvement.
 - Request feedback and action plan with a production of an Annual Report.



KEY GEMS AND TAKEAWAYS:

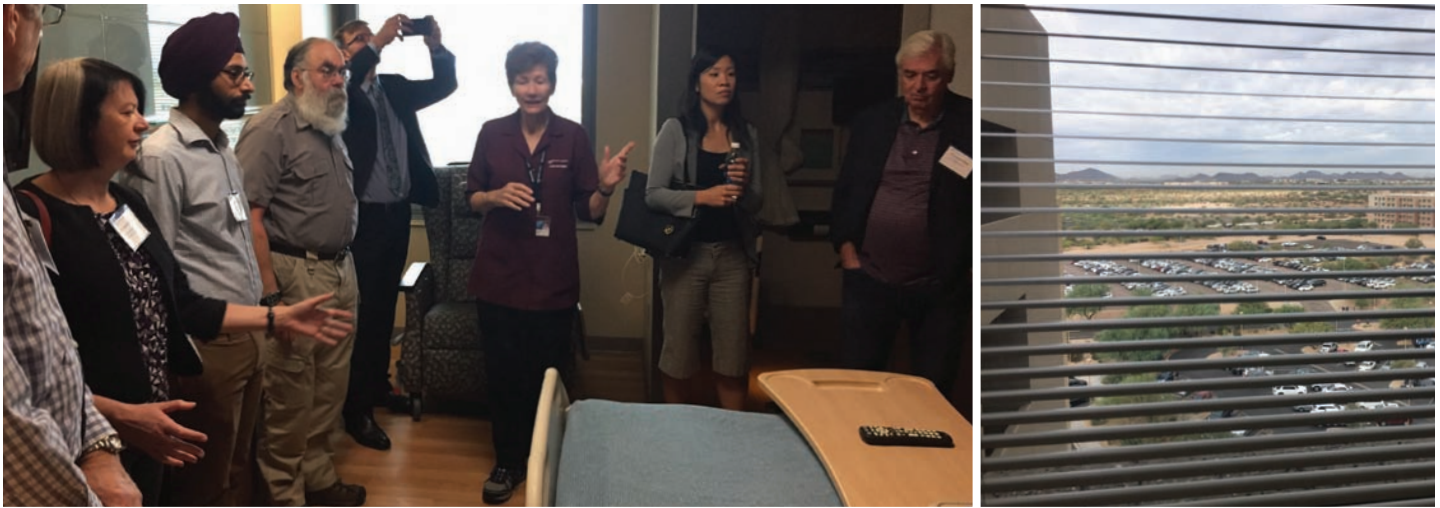
*“You don’t have quality at all
if you don’t have quality improvement,
and to have improvement,
you need change” - Dr. Richard Zimmerman*

4. **Clear Quality Framework** model that is easy to understand and share with others. Each of the components is well laid out and appeared to be well resourced. A lot of this information is important and similar to what we work towards in BC, but have not really fleshed out what it means here. For example, “Roles and Expectations Clarity.”

EXAMPLES:

- Quality = outcomes, safety, and service
- 100-day discipline (from measure to control)
- Safety culture builds on system competency and behavioral competency

5. **Ranking and External Comparison** was highlighted where Mayo receives timely feedback on where they stand relative to others. Annually at a national level, Mayo's three large sites place within the top five of all US hospitals; in fact, the sites compete against each other for ranking. Physicians tend to be very competitive, and creating a safe and healthy competition in BC for quality will allow it to come to the forefront.
6. **Clear Direction** on areas of focus with top-down priority setting to support system competency in standardization and diffusion of best practice. “Bottom-up” improvement is supported through leadership rounding and local level data. In BC, physicians are encouraged to become involved in quality improvement but are provided very little discretionary time to do this.



PRESENTATION 3: Patient Safety & Risk Management

PRESENTERS: Dr. Shari Ochoa - *Patient Safety Officer*
 Cindy Stemper-Bartkus - *Manager, Risk Management & Patient Safety, Arizona*

PRESENTATION SUMMARY:

- Mayo patient safety activities – Patient safety subcommittee; M & M conferences; Leadership rounds; Incident reporting; AHRQ patient safety indicators; Mortality review; JC sentinel event alerts; Commitment to safety; Proactive risk management; Communication (SBAR, rapid response, debriefings); RCA reviews; JC national patient safety goals.
- Safe patient care = Safety culture + detection/response + maintenance programs + proactive/developmental.
- Patient Safety Subcommittee: focus on decreasing adverse events, facilities activities across multiple sites, connect and align with strategic plan, diffusion of best practices, standardize incident reporting.
- Incident reporting: able to do remote data entry, 100% review by department, report up to leadership, have a clear review process flowchart, clear action plan.
- Established “Five Safe Behaviors” with accountability for these behaviors:
 - 1) Pay attention to detail;
 - 2) Communicate clearly;
 - 3) Have a questioning and receptive attitude;
 - 4) Hand-off effectively;
 - 5) Support each other.
- Employ QI model in team-based setting (team engagement model).
- Fair and just culture approach to safety, recognizing actions as human error, risky behaviors and reckless behaviors.
- There is a clear distinction between system adverse event reporting and behavioral incident reporting.



KEY GEMS AND TAKEAWAYS:

7. **Identification of Preventable Harm** is a focus for the approach to safety. Where identified, quality improvement methodology is applied, linking review process to QI such that a team-based approach to improvement is integral to safety.
8. **Teamwork Focus** is strong and the foundation to their approach to patient safety; impressed with the “support each other” climate. A culture of patient safety is built on a climate of caregiver safety. A cascading level of reviews provides opportunity for physician involvement in identifying and enhancing patient safety, supported by a committee structure that provides oversight and promotes shared learning. Physician training in patient safety through IHI PSO courses is supported.
9. **Incident Reporting** was done for physicians and they are not required to fill out the form. Most physicians just call Risk Management and they state, “we don’t care how we get the data in, we just want it in.” They make reporting easy.





PRESENTATION 4: Application of Quality to Education Programs at Mayo

PRESENTERS: Dr. Neera Agrwal - *Consultant, Division of Hospital Medicine, Arizona*
 Dr. Devyani Lal - *Consultant, Otolaryngology, Arizona*
 Bella Panchmatia - *Operations Manager, Mayo Clinic School of Health Services*
 Dr. Richard Zimmerman - *Dean of Education; Professor of Neurosurgery;
 Chair of Quality Committee, Arizona*

PRESENTATION SUMMARY:

- Mayo has one national medical school with a distributed learning model via their three campuses. Note: there is a single government model.
- A key milestone was the AMA putting a call for “Accelerating Change in Medical Education” and providing grant funds for the development of QI into the medical curriculum. Prior to the grant support, QI was taught only two to four hours in year 1.
- Expanded competencies for the 21st century physician: focus on patient needs and experiences; think with systems view; measure performance; manage change in complex systems; optimize cooperative work; innovate to improve safety, quality and satisfaction; use technology; eliminate waste, increase efficiency; be accountable for system results; accept accountability for personal expertise and lifelong learning.
- Mayo QI curriculum – undergrad:
 - Year 1 – Intro to QI methods and tools: four hour didactic and interactive course: learn systems, processes, outcome, DMAIC framework (define SIPOC-R, process maps, etc.), PDSA, Six Sigma, Lean, interactive exercise to utilize DMAIC during class.
 - Year 3 – Application of QI methods and tools: four-hour in class session – before class, students prompted to bring clinical gap and read examples of four “good” QI projects; in class, students:
 - a) complete SIPOC-R for identified gap; b) score four projects using QIPAT and discuss common pitfalls in QI project planning, execution.

- Mayo QI curriculum – graduate:
- Uses Quality Academy resources, including:
 - Bronze-level certification for all trainees at orientation (basics of QI, online module).
 - Silver-level certification optional (class, exam, QI project).
 - Each program has its own QI project requirement; could also be done in groups.
- Future state includes that all medical students participate in a QI project.



KEY GEMS AND TAKEAWAYS:

10. **Smooth Transition** into the Mayo organization for medical students who learn about QI and participate in QI projects. For example, they use the same content and recognition levels from the Quality Academy.
11. **Start Early** at Mayo with introducing QI and encouraging to students to get involved in this area. The students are welcomed and asked to be part of system improvement. They present this subject as a science of improvement. Mayo not only is working with their broader staff by having 100% complete bronze-level participation, but also with the future workforce by engaging them directly in school. This allows undergrads to get very purposeful exposure to QI.



PRESENTATION 5: Quality Education & Diffusion

PRESENTERS: Dr. Neera Agrwal - Consultant, Division of Hospital Medicine, Arizona
 Jolene Anderson-Rau - Operations Manager, Department of Education, Quality Academy, Rochester
 Robert Graber - Quality Improvement Advisor III, Quality Academy, Arizona

PRESENTATION SUMMARY:

- Mayo Quality Academy is aligned and fits well with operating plan objectives.
- Clear vision: By December 31, 2019, 100% of Mayo staff will obtain formal quality improvement certification through the Mayo Quality Fellows Program.
- Mayo Quality Academy commenced in 2006 and the department now has 13 core staff and 47 volunteer faculty along with annual budget of \$2 million. Mayo has implemented four levels:

LEVEL	CREATED	FELLOWS	% ARE PHYSICIANS (note total workforce is 13% physicians)	TRAINING	PROJECT
Bronze	2009	35,698	11%	Online 90 minutes	n/a
Silver	2010	6,765	10%	1 day training, need to pass 30 multiple choice exam with 80%	1 QI Project
Gold	2011	264 (33 docs)	13%	A few days' training, need to pass 100-question exam with 80%, plus 3 years of QI experience	2 QI Projects and Publication
Diamond	2014	10		10 years of experience leading QI at Mayo.	

- The education through the Quality Academy is separate from the intake process for doing quality projects. However, the focus on project work as the vehicle to develop staff competency is recognized.
- Mayo does not have any preferred methodology; rather they use whatever works (Just Do It; PDSA; Lean; Six Sigma).
- In general there is no “release time” for QI projects; staff/physicians need approval to do the work and fit it within their workload/schedule.



KEY GEMS AND TAKEAWAY:

12. **Leadership Commitment** at Mayo is very apparent. They have developed and resourced the Quality Academy well with an annual \$2 million budget. Their focus is strictly on the education of QI and another department leads the project support. Even though 42,700 staff have at least one of the levels completed, they set a goal for 100% by the end of December 2019. This department has created a sustainable “distributed faculty” that includes 47 volunteer members.
13. **Visibility and Recognition** at Mayo is a key component of their Quality Academy. In addition to certificates, staff receive “pins” to recognize the level of training they have completed. These pins are displayed proudly on their individual’s name badge. All staff are encouraged to list this training on their CVs, and for some senior positions at Mayo, at least a Silver level of training is needed. Moreover, the hallways and walls of Mayo have signage and other references to staff training. When you go into a meeting at Mayo with a QI team, the level of experience and expertise is apparent as soon as you sit down.
14. **Methodology** does not matter at Mayo and they train and support it all. At times in BC, these methodologies compete for resources and attention, but at Mayo they include everyone in the “tent” and create a sense of community for those who work together as a team.
15. **Widespread QI Training** throughout the organization ensures there is support for all QI initiatives at the local level without the need for an extensive external team. There is a focus on just “having a go” without an emphasis on perfecting techniques. Minimal formal training and a coaching model using volunteer instructors is common. Working in teams is recommended and many physicians manage the time commitment by working in groups on a QI project. There seemed to be a clear and stated link between physician development and expanding roles, where additional training is linked to a leadership role. Physicians who engage in leadership training or QI training should be recognized with a role.
16. **Different Types of Training** are offered at Mayo, including workshops for teams who have already identified and want to come as a group and focus on their problem.



PRESENTATION 6: Quality Improvement Tools

PRESENTER: Jim Frye - Unit Head, Department of Management Engineering & Internal Consulting, Arizona

PRESENTATION SUMMARY:

- Mayo, with roots in engineering, has a long history with the work of Dr. Henry Plummer who was a Mayo physician from 1901 to 1936. Plummer is considered by many to be the “architect of the modern medical practice.” A systems thinking perspective was later fostered in 1947.
- Mayo has created a central department called MEIC (Management Engineering & Internal Consulting) that is tasked with supporting all organizational improvement activities. Their core areas of focus include business consulting; analytics and business intelligence; management engineering; operations research; and project management
- The MEIC team consists of 180 leaders with a multi disciplinary background (nursing, management, IT, finance, HR, organizational development). Their staff have background experience in 34 different industries; staff have lived and worked in 36 different countries.





KEY GEMS AND TAKEAWAY:

- 17. Diversity and Synergy** are important ingredients for health care transformation. Many of the problems we face are complex and difficult. At Mayo, they have built up a team (MEIC) and seek diversity to ensure they can tackle these complex problems through new perspectives. The staff in the department are from a mixture of different professionals (nursing, finance, etc.) and have worked in other industries and countries. By hiring staff with different backgrounds and training them in QI, they are creating synergies by co-locating these individuals. In BC, many of these improvement teams reside in different portfolios and at times have little opportunity to inter-mix.
- 18. Investment** into quality improvement at Mayo was apparent. Of their 63,000 staff, 180 individuals work in the MEIC department. This is a large investment in quality improvement that is in addition to the Quality Academy, with 13 staff who provide the educational training. In some BC health authorities with 20,000 staff, they only have a dozen staff who support quality where the focus primarily is on assurance and not improvement.



THINK **BIG** start small **MOVE FAST**™

OUR APPROACH
 We start with big ideas around people's needs, frame them as opportunities, refine the concept and move fast to validate tangible models that can be scaled.

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PRESENTATION 7: How to Go from Ideation to Implementation

PRESENTERS: Dr. James Yiannias - *Consultant, Division of Dermatology, Arizona*
 Naomi Woychick - *Coordinator, Centre for Innovation, Arizona*

PRESENTATION SUMMARY:

- Mayo has created a dedicated group that focuses on diffusion and spread of great work.
- The Kern Centre is a small team of seven staff whose key components of work include:
 - Centre for the Science of Health Care Delivery (uses data-driven science to improve quality, safety and value).
 - Translational informatics and knowledge management (organize and present info and knowledge for use by practice and research).
 - Centre for Innovation (transform the experience and delivery of health care).
- Methodology (design thinking; deep collaboration; rapid experimentation) allows for the ability to co-create an unparalleled health care experience.
- “Think BIG, start small, move FAST” approach: “We start with big ideas around people's needs, frame them as opportunities, refine the concept, and move fast to validate tangible models that can be scaled.” Moreover, the permission to fail is key!
- They take an exclusively collaborative approach to innovation; if someone brings an idea forward and has a solution and is not open to exploring the problem collaboratively, they do not work with that individual/team.
- Innovation building blocks:
 - Build a discipline of innovation.
 - Recruit a diverse team with an innovation phenotype.
 - Unleash creative confidence and design thinking.
 - Recognize that environments matter.
 - Co-create with your customers and stakeholders.
 - Organize around Big Idea platforms.
 - Collaborate inside and outside.

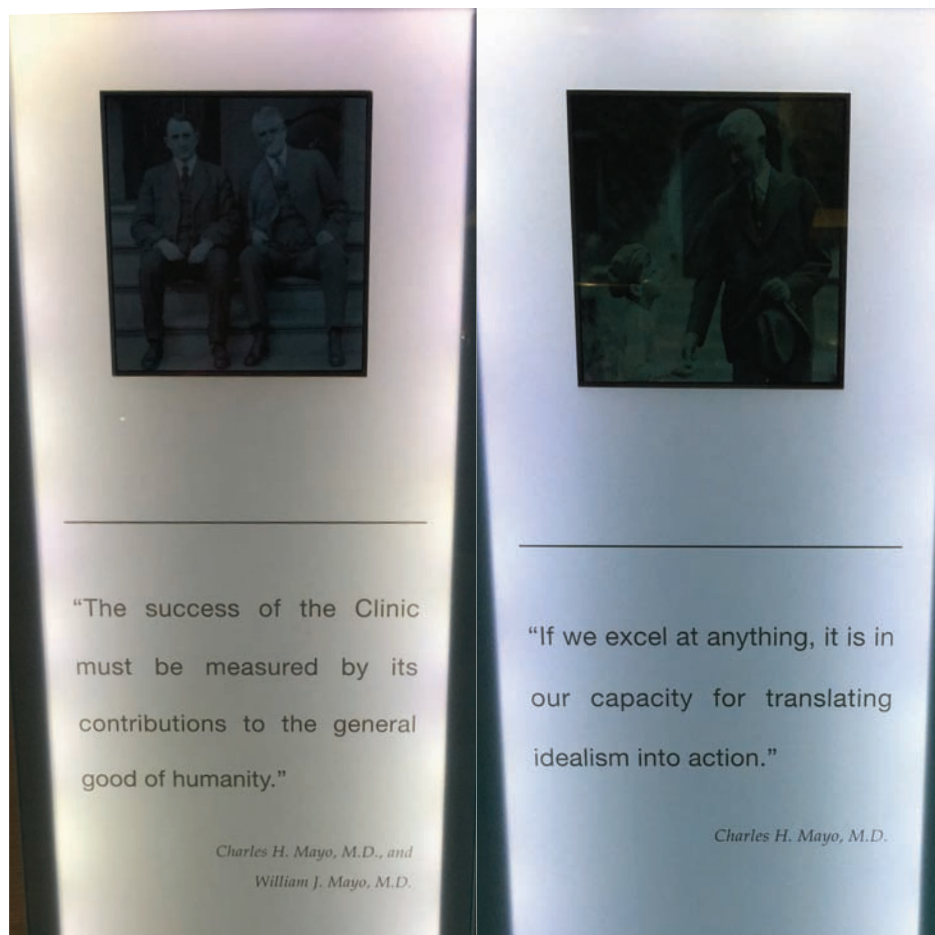


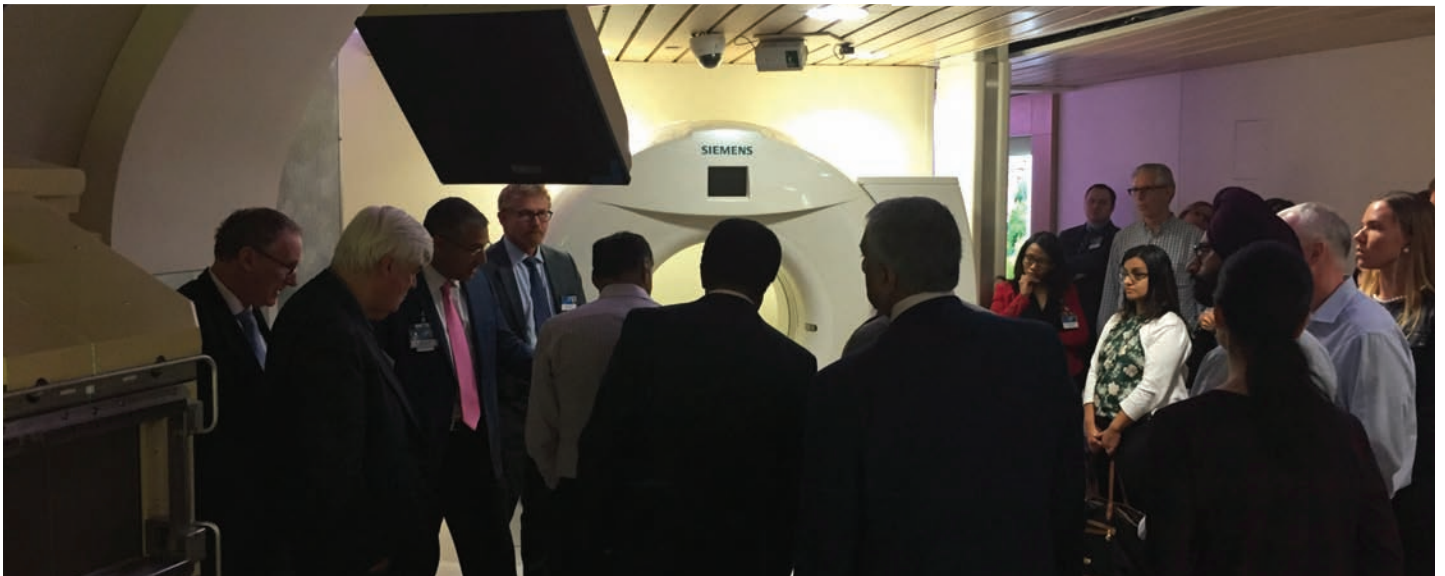
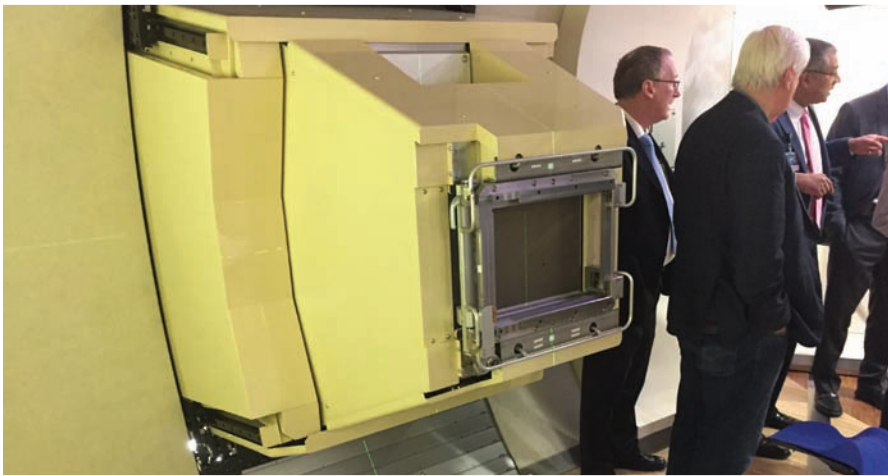
KEY GEMS AND TAKEAWAY:

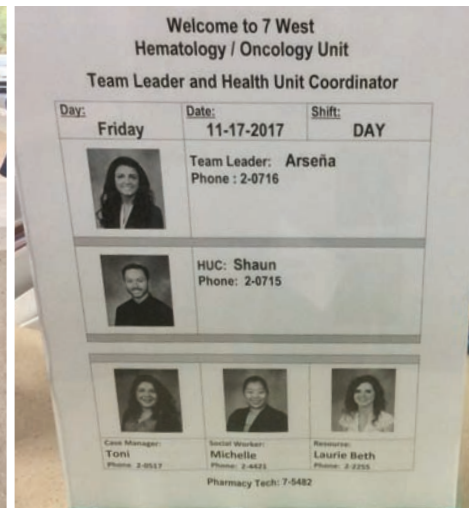
“THINK BIG start small MOVE FAST”

- Mayo Centre for Innovation

19. **Disciplined** approach has been created with respect to seeking ideas and supporting them. The Kern Centre is working on many diverse projects through their defined approach. It's through this discipline that they are able to work on a large health care organization with 63,000 staff. This clarity not only helps them define what they are, but what they are not.
20. **Annual Transform Conference** is held where the department has an opportunity to bring together internal and external partners to celebrate and share knowledge. Innovation is not easy, but bringing together the brightest minds and facilitating knowledge dissemination is key to supporting this environment and strengthening the culture.







FACILITY TOUR

GUIDES: Dr. Steven Ressler - Chair, Division of General Internal Medicine, Arizona
Justin Cox - Manager, Provider Relations, Arizona

TOUR AREAS:

- Simulation Lab (Physician Office; Patient Room; Operating Room)
- Inpatient Ward
- Cancer Care (Proton Beam Therapy Program)



KEY GEMS AND TAKEAWAY:

- 21. Signage** throughout the building showed that there was a visible display of Mayo's focus on patient care through recognition of their staff and pictures of their local leadership. For example, they promote the clear identity of the Mayo culture (i.e., Three Shields: education, research, patient care). When you enter the hospital, there is a large sign that thanks and recognized the staff. It states: "Thanks to the people of Mayo Clinic for leading the nation in patient-centric care." It was these types of examples that validated what we heard in the boardroom by the Mayo leaders and what we saw. The whole campus was designed based on feedback from patients/family members who stated they did not want the facility to look or feel like a hospital.
- 22. Free Parking** for visitors and patients at the Mayo Clinic. The campus is built on 260 acres and they have plenty of room for future expansion. The physical presence was very welcoming and easy to access. Many areas of the hospital have carpet to help create a homey atmosphere versus that of a large institution.
- 23. Patient Communication** is enabled and simplified in patient rooms with one full wall available with a glass surface so that care providers and family members can place notes.
- 24. Direct Observation** is heavily used at Mayo with the recording and direct viewing of care providers in the simulation rooms. This recording allows for experts to watch, make notes, and provide timely, accurate feedback to care providers.
- 25. Improvement Boards** were visible on entry to the patient care areas, displaying local level data.

5811

The Village at Mayo Clinic



Mayo Clinic Walking Trails



★ You Are Here

 MAYO CLINIC



Mayo Clinic Proton Beam Therapy Program





PRESENTATION 8: Quality Monitoring & Quality Improvement in Surgery

PRESENTER: Dr. David Etzioni - Chair, Division of Colon and Rectal Surgery, Arizona

PRESENTATION SUMMARY:

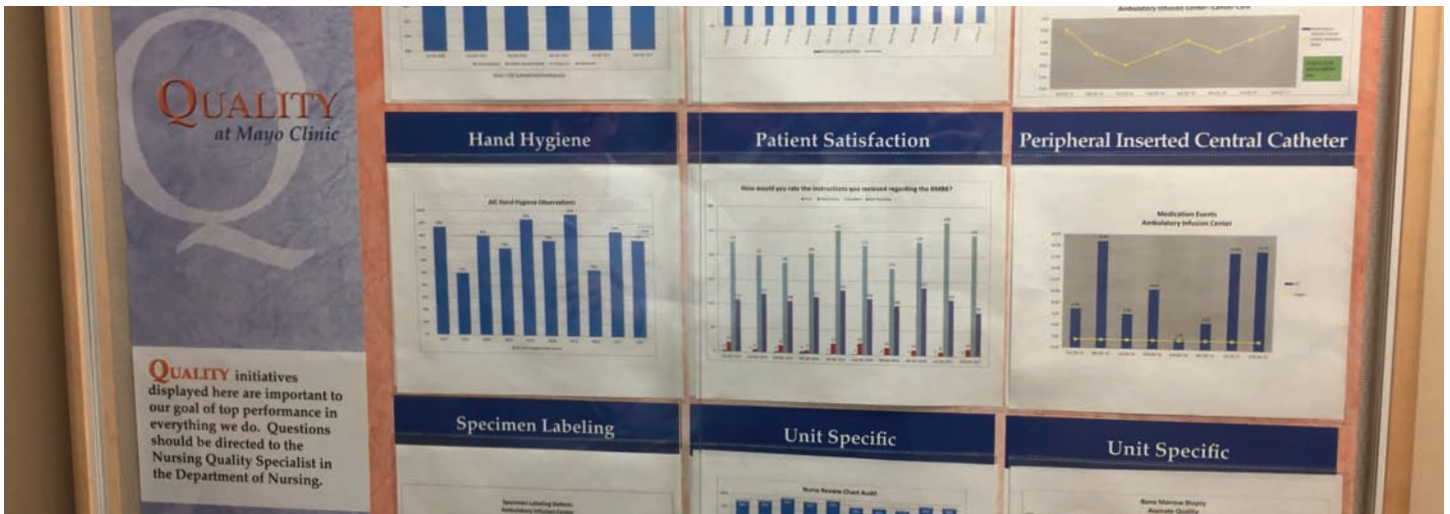
- Presentation about the challenges of measuring quality and the various reporting tools along with how Mayo has adapted these tools into their environment.
- Quality measured through:
 - Structure: setting in which care takes place; includes facilities, providers, administrative structure.
 - Process: specific activities evidence based.
 - Outcome: patient experience of care, mortality, readmission, return to work, etc.
- Why is it so hard to measure quality?
 - Generally, we measure the relationship between the independent variable and the dependent variable. In RCTs, we can account for confounders; in Quality, you can't measure them.
 - Administrative data (e.g., "billing data") versus Registry data (e.g., NSQIP, National Health care Safety Network, Cancer registries) – ongoing conflict. The question is – is administrative data sufficient? If not, is registry data quality worth paying more for?
 - How accurate is the process by which clinical phenomena are translated into codes (e.g., "sepsis" definition example) There is a spectrum between "no occurrence" and "occurrence" of event (there is a zone of "up for debate" that has to be interpreted clinically).
- Unintended consequence:
 - Risk aversion example.
- Summary/Future
 - Good outcome data is really hard to obtain.
 - Process measures may be under developed.
 - Culture is an enormous target.
 - Vertical alignment.

- All digital data starts out as analogue data as it originates from humans. Administrative data can be thought of as that which is “sufficient and necessary.” This data is comparable to the Canadian Discharge Abstract Database and hence CIHI data which, when following a clinical occurrence, needs to be recognized and then documented (by a clinician), before being abstracted by a coder. Registry data has a specific purpose (e.g., NSQIP). In registry data, specific criteria are described and data is obtained by trained abstractors according to specific definitions, and does not rely on MD charting. These two methods will therefore result in different data collection and hence will provide different data sets. Understanding the purpose is key to interpreting the data.
- The use of data for outcomes is challenging. The “early sepsis example” could be seen as showing an increase in complication rates if sepsis has a more generous definition; however in risk-adjusted mortality for sepsis, a more generous definition may reduce overall mortality rates as the “sicker patient” (by early sepsis definition) are adjusted for.



KEY GEMS AND TAKEAWAYS:

26. **Understanding** the makeup of reports and measurements (i.e., NSQIP) is important. As shown in this presentation and depending on how Mayo measures the same activity, they place differently on the ranking reports. The measurement or ranking is not as important as creating a safe culture that supports QI where the team understands the inputs and outputs.
27. **Engagement in Data** is more about recognizing the data for what it is rather than a relentless pursuit of “the perfect data element.”



PRESENTATION 9: Metrics & Reporting

PRESENTERS: Toni Yubeta - Manager, Quality Practice Administration, Arizona
 Dr. Richard Zimmerman - Dean of Education; Professor of Neurosurgery;
 Chair of Quality Committee, Arizona
 Darin Goss - Hospital Administrator, Arizona

PRESENTATION SUMMARY:

- Mayo has developed a very clear and simple way to understand their Strategic Plan: build on People, Processes, and Outcomes. This plan then has key performance indicators that are presented through a "Balanced Scorecard Performance" mechanism to leaders throughout Mayo.
- Results are provided by quarter, with a current value along with the target and a visual arrow displaying the direction the indicator is going.
- All information is fed up to the Arizona Executive Operations Team (EOT), which is supported by a number of committees including the Clinical Practices Committee, which is supported by the Clinical Practices Quality Oversight Subcommittee.
- This committee provides oversight of quality and process improvement activities within Mayo Clinic Arizona.
- Priorities," the process they use is:
 - 1) data review,
 - 2) gaps in performance,
 - 3) impact analysis, and
 - 4) priority selection.
- Indicators are presented at all levels of the organization. Defined tactics are set at enterprise level for implementation at the service line level.
- Target for all metrics is the top 10% of participating US hospitals.



KEY GEMS AND TAKEAWAYS:

28. **Effective Monitoring** of key indicators through the use of a Balanced Scorecard. Management receive similar reports with an accurate snapshot of their performance. This enables Mayo leaders to speak the same language and focus energy/resources on their agreed priority areas.
29. **Leaders are Challenged** to enhance patient care through the targets Mayo sets; this helps create a competitive environment, where highly skilled staff are working together and are professionally challenged. There is healthy competition between the three core campuses (i.e., Minnesota, Florida, and Arizona). Often rankings in health care magazines have these three sites in the top five and annually there is a challenge where each strives for first place.
30. **Benchmarking** of all key indicators with external organizations with a clear target for success.



PRESENTATION 10: Patient Experience

PRESENTERS: Dr. Kenneth Poole - *Medical Director, Patient Experience, Arizona*
Kelly Vorseth - *Director of Patient Experience, Arizona*

PRESENTATION SUMMARY:

- **Patient Experience Goal:**
 - To consistently deliver an extraordinary human experience.
- **Primary Value:**
 - The needs of the patient come first.
- **Strategic Vision:**
 - To provide an unparalleled experience as the most trusted partner in health care.
- Have clearly defined strategic objectives that ties into Patient Experience. While 20 objectives have been identified for the next five years, the focus for 2018 includes working on four of them.
- Focus includes transparency, patient communication education programs, partnering with each medical area of practice, timely resolutions, increase patient engagement, and permeate patient experience into the everyday lives of Mayo staff.
- Each of the Mayo campuses has a Medical Director of Patient Experience who partners with their administrative leads in dyads.
- Office of Service Recovery acts as a clearing house for patient concerns/complaints similar to the BC Patient Care Quality Office. Local level managers see success as dealing with concerns at the clinical level and few concerns are reported through the Office. Trend data is provided to leadership.
- Early days of Patient Reported Outcomes and Patient Reported Experience metrics. Messaging to local level is that the information is “patient perception” and “opportunity for improvement.” A strategy for empathy and communication training, focus on service excellence, and coaching in the moment as well as webinars is underway to support the sharing of metrics at the local level.



KEY GEMS AND TAKEAWAYS:

31. **Resourced** well to achieve their strategic objectives. They have the medical and administrative personnel to effectively manage this file. Much of the high-level messaging is around patient-centric care and it's great to see that the organization goes well beyond the "catchy statements" to resourcing this department and integrating it throughout all of its campuses.
32. **Orientation** of new staff has a strong component of patient experience education including empathy training, tools, and a focus on service excellence. The hire for "fit" was key.



PRESENTATION 11: Strategies to Communicate with Physicians

PRESENTERS: Carol Benson - *Senior Communications Specialist, Public Affairs, Arizona*
 Sandra Burrowes - *Senior Communications Specialist, Public Affairs, Arizona*

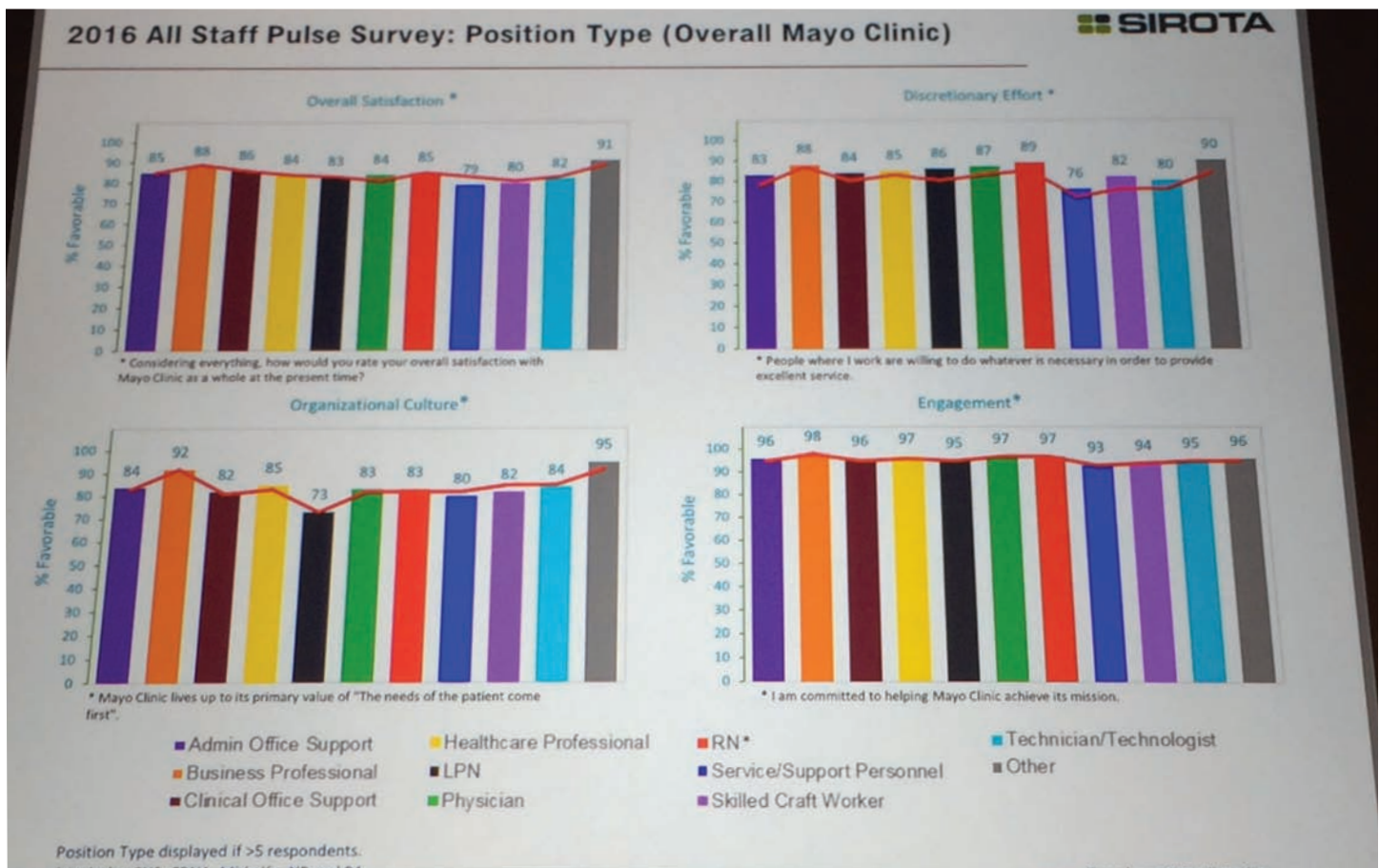
PRESENTATION SUMMARY:

- Mayo has approximately 6,500 physicians working across 70 sites. Within their team, they have a physician lead assigned to communications to work in a Dyad leadership model and ensure the communications to physicians is effective.
- Mayo faces similar challenges of getting institutional information to front-line physicians and communicating a large volume of information. Administration is overcoming this by better equipping department chairs. After meetings, they present them with PowerPoint slides (maximum four) which they can use to share with their teams.
- Mayo tries to put right information in the right venues and strives to keep all communication very brief. In all communication, they are clear about what the physician needs to do with the information.
- For Mayo they found the most effective tactics are:
 - Department/division chair meetings in which professionally produced PowerPoint slides (maximum four) containing key messaging using well-chosen words and phrases would be presented by the meeting chair, *The Scope*, meetings with Mayo's senior leaders.
- For Mayo they found the least effective tactics are:
 - Meeting minutes, digital signage, internal websites.
- *The Scope* (electronic newsletter; delivered three times per week Mon/Wed/Fri, email format very short one-pager, maximum six articles per newsletter, clinical practice committee oversight, with editorial criteria that is tightly followed).
- *59 Prime* (short 59 second videos, produced by physicians for physicians).
- Get to Know John & Jeff (bi-weekly teleconference early morning, where any staff can call in and hear directly from the top; there is opportunity where callers can ask questions).



KEY GEMS AND TAKEAWAYS:

33. **Humble Leadership** within the Communications Department where they don't assume they know how to communicate or what to communicate to physicians. Every two years, they do a survey and simply ask. In alternate years, they hold physician focus groups. Communication does this also with all other staff.
34. **Simply Yet Effective Tools** such as the 59-second *Prime*, *The Scope* and slides that physician leaders receive to help them communicate to their team. Many tools are produced by physicians for physicians. One of their tools included a bi-weekly teleconference with their CEO, where not only information was shared but any caller had the opportunity to ask questions. This really signaled an open and accessible senior executive. In short, the tools that Mayo uses, we in BC do not use, and the tools we use they indicate are "less effective" and stay away from using.
35. **It's Working Well at Mayo**, where their recent staff engagement scores as measured through Workplace Pulse 46 questions, the overall physician satisfaction is 84% and engagement score is 97%. We were particularly struck by the response of the Mayo presenters to a question about how to achieve physician engagement. The mystified response was: "of course they are engaged, they are physicians!" This is a fresh perspective on the tiresome effort of health authorities to engage physicians.



NEXT STEPS

One of the key purposes of the Mayo visit was to explore new ideas and “gems” that can be brought back and applied to the PQI file. The attendees have noted 35 gems and takeaways that are of significance. The next steps for the BC team include:

1. Provincial PQI Network to meet and review all thirty-five gems and organize them into themes and prioritize which of the ideas are actionable by PQI and which can be passed on to others to implement. A full list of gems and takeaways can be found in [Appendix G](#). It is recommended that this leadership group phase in the ideas to ensure higher probability of execution.
2. Share the findings of this report with others to help socialize new ideas and to bring other perspectives into the implementation of ideas. It was great to see that even prior to this report being completed, some of the attendees had shared a high-level summary on their visit to various leadership tables. Suggested stakeholders and leadership tables where the Final Report can be shared with include:
 - a. Specialist Services Committee
 - i. PQI: Steering Committees; PQI staff; Provincial PQI Network
 - ii. SSC Facility Engagement Working
 - iii. Joint Collaborative Committees Co-Chairs
 - b. Doctors of BC
 - i. Board of Directors
 - ii. Executive Management Team
 - iii. Regional Advocates
 - c. Medical Directors of BC
 - d. Physician Management Strategic Executive Council
 - e. Health Authorities:
 - i. Board Quality Committee
 - ii. Senior Executive Team
 - iii. HA Medical Advisory Committee
 - iv. HA-wide Quality & Safety Committee
 - v. Executive Medical Directors Leadership Meeting
3. PQI file to conduct a high level “check-in” 18 months from the visit to evaluate which gems were implemented and where the report/findings were shared.

To view the full set of slides shared during the Mayo Clinic visit please refer to [Appendix H](#).

APPENDICES

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APPENDIX A: FULL DETAILED AGENDA

Mayo Clinic Care Network – Mayo Clinic Arizona & Specialist Services Committee

Day 1 - November 16 2017 (Residence Inn at Mayo Clinic - Phoenix)

Time	Topic	Objective	Slides	Mayo Clinic Participants
8:00-8:30	Welcome and Introductions <ul style="list-style-type: none"> Mayo Clinic Overview: <ul style="list-style-type: none"> Dyad Leadership History Culture of Safety 	1a	A	Wyatt Decker, M.D. Paula Menkosky
8:30-8:45	Specialist Services Committee <ul style="list-style-type: none"> Overview & Welcome 			Andrew Attwell, M.D. Gordon Hoag, M.D.
8:45-9:45	Quality Overview <ul style="list-style-type: none"> Definition of Quality at Mayo Clinic Mayo Clinic's Quality Journey <ul style="list-style-type: none"> Evolution to Culture of Safety Organization Structure <ul style="list-style-type: none"> Service Lines Quality Care Coordination of quality management activities 	1b 1c 1d	B	Eileen Oswald Richard Zimmerman, M.D.
9:45-10:00	Break			
10:00-11:00	Patient Safety & Risk Management	1c	C	Shari Ochoa, M.D. Cindy Stemper-Bartkus
11:00-12:00	Application of Quality to Education Programs at Mayo Clinic	2c 3a	D	Neera Agrwal, MD Devyani Lal, MD Bella Panchmatia Richard Zimmerman, M.D.
12:00-12:45	Lunch			
12:45-2:15	Quality Education & Diffusion <ul style="list-style-type: none"> Overview of Quality Academy <ul style="list-style-type: none"> Structure Curriculum (Method of delivery) Quality Improvement training <ul style="list-style-type: none"> Overview of Medical curriculum How much time is spent on QI? Challenges with QI training Project vetting & approval Recognition 	2a 2c 2b 3b 3d	E	Neera Agrwal, M.D. Jolene Anderson-Rau Robert Graber
2:15-2:30	Break			
2:30-3:30	Quality Improvement Tools <ul style="list-style-type: none"> Overview of Management Engineering & Internal Consulting Mission, Vision, Value Proposition Business and service Lines Example Projects and Strategic alignment 	1d 2c 3b 3c	F	Jim Frye
3:30	Wrap-up & Adjourn			
3:30-4:45	Reception / Informal Networking			

Mayo Clinic Care Network – Mayo Clinic Arizona & Specialist Services Committee
Day 2 - November 17, 2017 (Phoenix Campus - Waugh Auditorium)

Time	Topic	Objective	Slides	Mayo Clinic Participants
8:00-9:00	How to go from Ideation to Implementation <ul style="list-style-type: none"> Center for Innovation Overview/Role Center for Science of Healthcare Delivery? 	3a	G	James Yiannias, M.D. Naomi Woychick
9:00-10:30	Facility Tour <ul style="list-style-type: none"> Phoenix Campus (details TBD) Breakout into 3 Groups 			Donna West
10:30-11:30	Quality Monitoring and Quality Improvement in Surgery	1d 4a	H	David Etzioni, M.D.
11:30-12:30	Lunch			
12:30-1:30	Metrics and reporting <ul style="list-style-type: none"> What metrics are measured and reported? Quality Dashboard 	4a	I	Toni Yubeta Richard Zimmerman, M.D. Darin Goss
1:30-2:30	Patient Experience <ul style="list-style-type: none"> Overview Press Ganey Survey Process & reporting Improvement collaboratives 	4a 4c	J	Kelly Vorseth Kenneth Poole, M.D.
2:30-2:45	Break			
2:45-3:45	Strategies to Communicate with Physicians <ul style="list-style-type: none"> Broader mass communications Effective tools Physician Engagement 	1d	K	Carol Benson Sandra Burrowes
3:45	Wrap up & Adjourn			

SSC Team Building Schedule

Date	Event	Time	Topic
Wed Nov 15	Camelback Mountain (climbing easier side "cholla") http://climbcamelback.com/cholla/	3:15	Shuttle departs to Mountain
		3:45	Climb Mountain <ul style="list-style-type: none"> (50 mins up; 20 min hang out at top; 35 mins down)
		5:30	Shuttle departs to hotel (Note Sunset 5:25pm)
		6:00	Shuttle arrives at hotel
Thur Nov 16	Desert Botanical Garden (fixed time Guided Tour) https://www.dbg.org/	5:15	Shuttle departs hotel
		5:45	Botanical Garden <ul style="list-style-type: none"> Guided Tour (6:00 to 7:00) Dinner (7:00 to 8:00)
		8:00	Shuttle departs to Hotel
		8:30	Shuttles arrives at Hotel

SSC Learning Objectives

Culture Shift / QI Structure

1. How to shift an organizational culture towards “quality improvement and patient centric care”
 - a. What are the structures and supports in place at the Mayo Clinic to support QI?
 - b. How does QA and QI work unfold? Is there tension or division between these works?
 - c. What does integration of the quality and safety agenda of physician departments in the mainstream work of the organization look like at Mayo?
 - d. How does Mayo do the overall coordination of organization wide quality management activities?

Training & Capability Development

2. Enhancing the capability of physicians/staff by providing QI training:
 - a. How do they provide QI training, what topic areas are covered, what else in addition to QI is being taught. Method of delivery? Do staff and physicians train together?
 - b. Is QI training in the medical curriculum? What QI material is in the medical curriculum? How much time is spent on QI? How difficult was it to get into curriculum? What was their journey with adding QI to the curriculum? Where do they want to take this in the next five to 10 years?
 - c. Do they have physician champions that focus on QI? What QI expectations are included in job descriptions or annual reviews, etc.?

Support Bottom-up Idea

3. How does the Mayo Clinic support grassroots QI projects, ideas?
 - a. How does Mayo balance grassroots ideas with the broader organizational strategic priorities?
 - b. What back office supports are provided? Who decides which projects go forward? How do they collect and track all of the QI projects and activity underway?
 - c. For successful projects, how do they support spread?
 - d. What form of recognition is provided to physicians who lead QI projects or have been successful?

Evaluation of QI

4. Measurement at times can be difficult, what concrete actions has the Mayo Clinic undertaken to support the evaluation of QI activities?
 - a. What is being measured (i.e. Triple Aim; ROI)?
 - b. What back office supports are being provided to support evaluation?
 - c. Do Mayo quality initiatives measure patient health or experience? How is that being done?

APPENDIX B: LIST OF BC ATTENDEES

Organization		Name	City	Specialty	Title(s)
1)	Northern Health	Dr. Anurag Singh	Prince George	Internal Medicine (Nephrology)	• Chair, SSC/NHA PQI Steering Committee
2)	Northern Health	Candice Manahan	Prince George	N/A	• Executive Lead, Physician Quality • HA Executive Sponsor (PQI) & HA Rep for SSC
3)	Interior Health	Dr. Alan Stewart	Kelowna	Internal Medicine	• Chief Medical Health Officer, Quality & Patient Safety • HA Executive Sponsor (PQI)
4)	Interior Health	Dr. Ron Collins	Kelowna	Anesthesiology	• Physician QI Advisor (PQI)
5)	Fraser Health	Dr. Dave Williams	Abbotsford	Internal Medicine (Respirology)	• Executive Medical Director, Quality & Safety
6)	Fraser Health	Dr. Dayan Muthayan	Abbotsford	Emergency Medicine	• Executive Medical Director, Physician Partnerships & Performance • Co-Chair SSC/FHA PQI Steering Committee • HA Executive Sponsor (PQI) & HA Rep for SSC
7)	Fraser Health	Dr. Curt Smecher	Abbotsford	Anesthesiology	• Physician QI Advisor (PQI) • Provincial QI Specialist (PQI)
8)	Vancouver Coastal Health	Dr. Vinay Dhingra	Vancouver	Internal Medicine (Critical Care Medicine)	• Chair, SSC/VCH PQI Steering Committee • Medical Director Quality Critical Care, Vancouver Acute
9)	Vancouver Coastal Health	Vivian Chan	Vancouver	N/A	• Director, Physician Quality • HA Executive Sponsor (PQI)
10)	Providence Healthcare	Dr. Karen Dallas	Vancouver	Pathology	• Physician QI Advisor (PQI)
11)	Provincial Health Services	Dr. Monty Martin	Vancouver	Diagnostic Radiology	• Co-Chair, SSC/PHSA PQI Steering Committee
12)	Provincial Health Services	Dr. Celine Kim	Vancouver	Pediatrics (Emergency Medicine)	• Physician QI Advisor (PQI)
13)	Provincial Health Services	Catherine Syms	Vancouver		• Corporate Director, Risk Management
14)	Island Health	Dr. Rod McFadyen	Victoria	Emergency Medicine	• Executive Medical Director, Medical Staff Engagement & Development • HA Executive Sponsor (PQI) & HA Rep for SSC
15)	Island Health	Dr. Adele Harrison	Victoria	Pediatrics	• Executive Medical Director, Quality Safety & Improvement
16)	Island Health	Dr. Sam Kohen	Comox	Internal Medicine	• Physician QI Advisor (PQI)
17)	Island Health	Dr. Daisy Dulay	Victoria	Cardiology	• Physician QI Advisor (PQI)
18)	Specialist Services Committee	Dr. Kathy Lee	Vancouver	General Surgery	• DoBC Representative
19)	Specialist Services Committee	Dr. Andrew Attwell	Victoria	Internal Medicine (Medical Oncology)	• DoBC Representative
20)	Specialist Services Committee	Dr. Frank Ervin	Maple Ridge	Respirology	• DoBC Representative
21)	Specialist Services Committee	Dr. Gordon Hoag	Victoria	General Pathology	• DoBC Representative • Co-Chair, Shared Care Committee • Medical Director, Laboratory Medicine, Pathology and Medical Genetics
22)	Specialist Services Committee	Aman Hundal	Kelowna	N/A	• SSC Liaison

APPENDIX C: BC ATTENDEES' BIOS

APPENDIX C - BC Team - Mayo Tour Attendees' Bios



Anurag Singh, MBBS, PhD, FRCPC
Co-lead Regional PQI Steering Committee

Anurag is a Clinical Assistant Professor with the UBC and a staff nephrologist at the University Hospital of Northern BC in Prince George. He has a passion to improve access and quality of specialist care to rural, remote areas of BC and leads several QI projects in this area. He is the Medical Lead of the Northern Health Kidney Care program and chairs the Medical Advisory Committee at the BC Provincial Renal Agency.



Candice Manahan, MSc
Executive Lead, Physician Quality Improvement, Northern Health

Candice is working to coordinate resources and connect physicians to quality improvement opportunities across the region. Candice represents Northern Health on the Shared Care Committee and Specialist Services Committee. Candice completed her BSc and MSc degrees at UNBC with a focus on improving health services in Northern BC. Candice worked at both Uvic and UNBC within a number of Aboriginal and rural health research projects, partnering with various health organizations and physicians across our region. Candice is interested in increasing access and efficiency in health services for rural/northern populations, specializing in quality improvement and the recruitment/retention of health care providers.



Alan Stewart, MD, FRCPC
Chief Medical Officer, Quality and Patient Safety

Dr Alan Stewart is Chief Medical Officer, Quality and Patient Safety and a practicing General Internist at Interior Health. He provides medical leadership to the development and implementation of IH's quality improvement and patient safety strategic plan, oversees patient safety incident investigations, and facilitates medical staff engagement in quality. He is a member of the Specialist Services Committee and co-chairs the Provincial Medical Services Executive Council. Alan is passionate about having restful weekends with his wife Farin and their son, Milad.



Ron Collins, MD
Physician Advisor, PQI, Interior Health

Ron is a full-time anesthesiologist, practicing at Kelowna General Hospital for over 26 years. He has initiated and been a leader for many quality improvement projects, including Enhanced Recovery After Surgery for the province of BC. He is an ardent advocate for co-creation as a driver of improved outcomes and improving the patient experience of care. Ron is also a student of the impact of culture on health care outcomes and believes that the purpose of the PQI initiative is a fundamental cultural shift in the relationship between health authorities and their physicians.



Dave Williams, MD, MSc, FRCP, MBA
Executive Medical Director of Clinical Quality and Patient Safety for Fraser Health

Previously Dr. Williams held positions as the Program Medical Director of the medicine program, the Medical Director of MSA Hospital, and Medical Director of Abbotsford Regional Hospital and Cancer Centre. He is a Clinical Assistant Professor in the Department of Family Medicine at the University of British Columbia. Dr. Williams holds a medical degree from the University of the West Indies, a Master of Experimental Medicine from the University of Alberta, and a Master of Business Administration from Queen's University, Canada. He has obtained fellowships in internal medicine and pulmonary medicine from Canada and is also board certified in all of these disciplines, including sleep medicine, in the United States. Dr. Williams is a very strong clinician with expertise in pulmonary medicine and sleep medicine. He also worked as an intensivist prior to assuming the role of Program Medical Director where he was responsible for the Medicine Program in Fraser Health. He enjoyed his role as the co-chair of the Medical Quality and Performance Committee of the Medicine program and is also an educator/faculty for "Disclosing Unanticipated Medical Outcomes." He was trained as a patient safety officer by the Institute for Healthcare Improvement and has continued to serve as a national and international surveyor with Accreditation Canada since 2010.



Dayan Muthayan, MD
Executive Medical Director, Physician Partnerships & Performance & Leadership Development

Dayan is an emergency physician at Abbotsford Regional Hospital and a senior leader at Fraser Health. He is the Fraser Health representative at the Specialist Services Committee and co-chairs the provincial Working Group on Physician Engagement. In the past Dayan served as Medical Staff President, Physician Education Coordinator and Hospital Medical Coordinator at Abbotsford Regional Hospital, and Program Medical Director for Patient Access and Care Transitions, Fraser Health. Currently, Dayan's work includes improving physician engagement at all levels, the development and socialization of performance and activity reports to the medical staff, and supporting leadership development among the medical staff.



Curtis A. Smecher, MD
Physician Lead, PQI, Fraser Health Authority

Dr. Smecher is a full-time clinician, strongly committed to improving the quality of patient care throughout the health care system. His improvement work covers multiple clinical areas, effective use of resources, operations management, and building capacity for improvement. Previously, Curt worked with multivariate statistics, queuing theory, computer performance improvement, and IT. Curt trained as an Improvement Advisor with IHI.



Dr. Vinay Dhingra, MD
Chair, PQI Steering Committee & Medical Director Quality Critical Care, Vancouver Acute

Vinay is a Clinical Professor of Medicine at the University of British Columbia. He graduated from medical school at the University of Saskatchewan in 1991 and completed Residency and Fellowship training in Internal Medicine and Critical Care Medicine at the University of British Columbia in 1996 and 1998 respectively, as well as a fellowship in transesophageal echocardiography at the University of Montreal. He has been involved in many facets of medicine including education, research, and administration, and he now leads a number of quality-related activities. He was one of the co-authors of the [*NEJM*](#) lead article on glycemic control in the critically ill, NICE-SUGAR. He is currently the Chair of the Provincial (BC) Critical Care Working Group as well as the Chair of the Physician Quality Improvement through the SSC at Vancouver Coastal and Providence Health. He is the medical director for quality in Vancouver Acute for Critical Care Medicine and medical director for the provincial (BC) ICU database. He works full time clinically in critical care at the Intensive Care Unit at Vancouver General Hospital, a quaternary academic referral centre in Vancouver BC. He is on the board of directors as lead of the Liaisons Committee at the Canadian Critical Care Society.

No Picture

Vivian Chan, MPP, PhD
Executive Lead, Physician led QI, Vancouver Coastal Health and Providence Health Care

Vivian leads the Physician Quality Assessment and Improvement program at Vancouver Coastal Health and Providence Health Care with the aim to facilitate and promote a continuous quality improvement culture in the physician community and to support medical staff in delivering quality medical care. The work is informed by theories and research from organizational behaviour, assessment and feedback, and physician engagement stemming from her training in interdisciplinary studies (PhD) at the University of British Columbia. Past experience includes: data analytics, program redesign, and health services planning and evaluation. Increasingly, Vivian is interested to work on the behavioural and the system-level challenges of delivering value-based health care.



Karen L. Dallas, MD
Physician PQI Advisor

Karen obtained a Post-Baccalaureate Research Fellowship at The National Institutes of Health. She was one of the small American cohort admitted to study Medicine at McGill (2002-6). Afterwards, she completed her residency in Hematopathology in Toronto (2006-10) and received fellowship training in Transfusion Medicine & Coagulation at the Blood Center of Wisconsin (2010-11). She had practiced Transfusion Medicine and Hematopathology in both Saskatoon and Edmonton before coming to Vancouver in 2015. She has worked for Provincial Government in the provincial direction of Transfusion Medicine and has been a member of the National Advisory Committee on Blood and Blood Products (NAC). She is also the Transfusion Medicine Program Director at UBC and, nationally, she is the Royal College Specialty Committee Co-Chair for Transfusion Medicine.

No Picture

Monty Martin, MD, FRCPC
PHSA Physician Quality Initiative Co-chair, PHSA

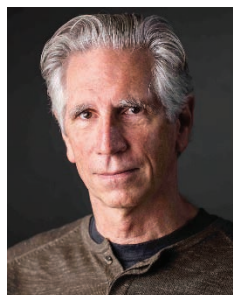
Dr. Martin is a full-time neuroradiologist/body imager at the B.C. Provincial Cancer Agency with an interest in quality improvement. He serves on the BC Specialist Services Regional Quality Committee working group and co-chairs the Provincial Health Services Committee Physician Quality Initiative steering committee with Ms. Georgene Miller. Dr. Martin has been fortunate to take a number of recent clinical quality courses, supported by the Provincial Health Services Authority and Medical Quality Initiative, including the Clinician Quality Academy.

Celine Kim, MD



Catherine Syms, MA, MHSA, JD
Corporate Director, Risk Management, Provincial Health Services Authority

Catherine is the Corporate Director of Risk Management at the Provincial Health Services Authority (PHSA). She has worked in health care for over 14 years in the areas of quality improvement and risk management. She is responsible for Integrated Risk Management, Compliance Management, Medical Assistance in Dying Care Coordination Office. She co-leads the PHSA Policy Management Office and works closely with PHSA Medical Affairs and medical staff on disciplinary and quality improvement matters. Catherine holds an MA, MHSA, JD and is a member of the Law Society of British Columbia.



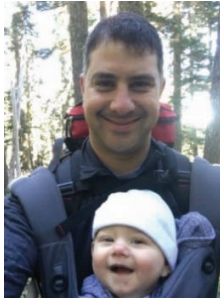
Rod McFadyen, MD, FRCPC, CCFP(EM), FCFP
Executive Sponsor and Interim Steering Committee Chair, PQI, Island Health

Rod is Island Health's Executive Medical Director of Medical Staff Engagement and Development and sits as Island Health's representative on the Specialist Services Committee. He has a strong interest in practice assessment and feedback in performance enhancement activity for individual and group clinician practices using a QI approach. He is the regional CPD Educator for BC, Alberta, NWT, and Yukon with the Royal College of Physicians and Surgeons of Canada with whom he is involved in a national steering group for the Competency Based CPD initiative. Rod is a Clinical Professor of Emergency Medicine at the University of British Columbia.



Adele Harrison MBChB MD MMEd
PQI Steering Committee Member, Island Health

Adele has worked with the Quality, Safety and Improvement portfolio at Island Health since 2012 where she is currently the Executive Medical Director. She is a surveyor with Accreditation Canada and a tutor with the University of Dundee, School of Medical Education. Adele completed her undergraduate medical degree and postgraduate training in Pediatrics and Neonatal Medicine in the UK before completing Neonatal-Perinatal fellowship training in Vancouver. She holds a Doctorate degree from University of Edinburgh, UK, and a Masters in Medical Education from University of Dundee, UK.



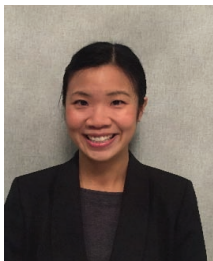
Samuel Kohen MD, FRCPC (GIM/ICU), MSc (QIPS)
PQI Advisor, Island Health

Sam has been practicing General Internal Medicine and Critical Care in the Comox Valley since 2014. In this time, he completed a Master's degree in quality improvement and patient safety at the University of Toronto and has been involved in several local and regional quality improvement efforts including ICU restructuring, critical care procedure optimization, and the development and implementation of an island-wide standard medical order for scope of treatment. Sam is also a contributing member of the Adult ICU and Health Authority Medical Quality Councils and one of VIHA's two current PQI advisors. Outside of work, Sam is a struggling outdoorsman, engaged husband, and rowdy father of one little monster that likes to wake up every day at 5 AM.



Daisy Dulay, MD
PQI Advisor, Island Health

Daisy is a board certified non-invasive cardiologist with an echo subspecialty and clinical assistant UBC professor. She is based at the Royal Jubilee Hospital in beautiful Victoria, BC. She is also one of the current PQI advisors for Island Health. Apart from helping other physician colleagues with their QI projects, she is working on a QI project to reduce wait times for echo by reducing the number of unnecessary ones being done currently and hoping the lessons learned there could extend to other areas of cardiology. Other professional interests include incorporating palliative care in cardiology earlier, and she has done cardio-oncology up until recently. She, along with a palliative care physician, is working towards a cardiology palliative model of care with input from various local stakeholders, which is funded by Shared Care. She is grateful to be at 0.7 FTE to be able to pursue these projects and be able spend time with her husband and two daughters.



Dr Kathy Lee, MD, FRCSC, MSc (MEd)
Doctors of BC Representative, Specialist Services Committee

Kathy is a general surgeon with a hospital and "patient neighbourhood" practice in Richmond, BC. She is committed to support improved delivery of quality of patient care with effective use of physician and health care resources. She serves on the PQI steering committee for Northern Health, Interior Health, and Fraser Health Authority. Here, she ensures that there is a balance between input from the ministry, health authorities and grassroots physicians.



Dr. Andrew Attwell, B.Sc, MD, CM, FRCPC
DoBC and PHSA PQI Specialist Services Committee Representative

Andrew is a medical oncologist at the British Columbia Cancer Agency and until recently was a member of the Specialist Services Committee as an alternate member. He is a Clinical Assistant Professor at UBC and is actively involved in a full-time practice, teaching, and research. He is involved in brain tumor outcomes research. He is involved in the facility Engagement Initiative and has advocated on behalf of specialist and alternately paid physicians in BC.



Francis L. Ervin, MD
DoBC Representative, Specialist Services Committee

Dr. Ervin is a respirologist with a hospital and office based practice in Maple Ridge, BC. He has experience in the practice of emergency medicine, internal medicine, critical care medicine and respiratory medicine, medical leadership, medical education, and more recently in quality improvement. He is a member of Cohort 2, Physician Quality Improvement, Fraser Health (FH). His current QI project targets wait times for spirometry within FH. He was a member of the Specialist Services Committee of the Doctors of BC and a member of the Diagnostic Accreditation Committee of the College of Physicians and Surgeons of British Columbia.



Gordon Hoag, MD, PhD, FRCPC
DoBC Representative, Specialist Services Committee

Gordon is Medical Director of the Department of Laboratory Medicine, Pathology and Medical Genetics for Island Health and Co-Chair of the Shared Care Committee, a joint committee of the BC Medical Association and Ministry of Health. Dr Hoag is also a clinical professor in the Faculty of Medicine, University of British Columbia, and a past president of the Canadian Association of Pathologists and the BC Association of Laboratory Physicians.



Aman Hundal, MBA, FMA
Liaison, Specialist Services Committee

Aman is an emerging health leader who is passionate about improving the public health care system. He has worked for the Northern Health Authority, Interior Health Authority and the Doctors of BC. He was recruited into a fast-track leadership program where he was exposed to the board, executive, and many departments within a health authority. Aman took on challenging assignments that had tight deadlines and high complexity and had the opportunity to work and learn from some of Canada's top health care leaders. Aman holds a BComm and MBA with a focus on management and finance.

APPENDIX D: LIST OF MAYO PRESENTERS

APPENDIX D - List of Mayo Presenters

PRESENTER	TITLE
Neera Agrwal, M.D.	Consultant, Division of Hospital Medicine, Mayo Clinic Arizona
Jolene Anderson-Rau	Operations Manager, Department of Education, Quality Academy, Mayo Clinic Rochester
Carol Benson	Senior Communications Specialist, Public Affairs, Mayo Clinic Arizona
David A. Etzioni, M.D.	Chair, Division of Colon and Rectal Surgery, Mayo Clinic Arizona
Ryan A. Fix	Operations Administrator, Provider Relations, Mayo Clinic Arizona
James (Jim) W. Frye	Unit Head, Department of Management Engineering & Internal Consulting, Mayo Clinic Arizona
Darin V. Goss	Hospital Administrator, Mayo Clinic Arizona
Bob C. Graber	Quality Improvement Advisor III, Quality Academy, Mayo Clinic Arizona
Beth E. Heinrich	Operations Administrator, Mayo Clinic Arizona
Shari Ochoa, MD	Patient Safety Officer
Eileen M. Oswald	Vice Chair, Mayo Clinic Quality Management Services, Mayo Clinic Arizona
Bella Panchmatia	Operations Manager, Mayo Clinic School of Health Sciences, Mayo Clinic Arizona
Kenneth G. Poole, Jr., M.D.	Medical Director, Patient Experience, Mayo Clinic Arizona
Steven W. Ressler, M.D.	Chair, Division of General Internal Medicine, Mayo Clinic Arizona
Cindy L. Stemper-Bartkus	Manager, Risk Management & Patient Safety, Mayo Clinic Arizona
Naomi L. Woychick	Coordinator, Center for Innovation, Mayo Clinic Arizona
Kelly S. Vorseth	Director of Patient Experience, Mayo Clinic Arizona
James A. Yiannias, M.D.	Consultant, Division of Dermatology, Mayo Clinic Arizona
Toni R. Yubeta	Manager, Quality Practice Administration, Mayo Clinic Arizona
Richard S. Zimmerman, M.D.	Professor of Neurosurgery, Mayo Clinic Arizona

APPENDIX E: MAYO PRESENTERS' BIOS



Neera Agrwal, M.D.

Consultant, Division of Hospital Medicine, Mayo Clinic Arizona



Neera Agrwal is a consultant in the Division of Hospital Medicine at Mayo Clinic Arizona. She is also the Transitional Year Residency Program Director, Director for the Internal Medicine Evidence Based Medicine Curriculum, co-chair of the High Value Care Domain in the Science of Health Care Delivery Curriculum for the Mayo Clinic School of Medicine and a member of the Quality Academy. Dr. Agrwal joined Mayo Clinic in 2005. Dr. Agrwal received her undergraduate degree as well as a PhD in biochemistry from Michigan State University. She received her MD

from the University of Nebraska, followed by an internship in Internal Medicine at the University of Nebraska, and her residency in Internal Medicine at Banner Good Samaritan Hospital in Phoenix Arizona. Prior to joining Mayo Clinic, she worked at the Phoenix Carl T Hayden VA Medical Center as a hospitalist.

Jolene M. Anderson-Rau, M.B.A.

Operations Manager, Department of Education, Quality Academy, Mayo Clinic Rochester



Jolene Anderson-Rau currently serves as the Department of Education's Quality Academy Operations Manager in Rochester, Minnesota.

Jolene's career at Mayo Clinic spans fifteen years. Prior to her career at Mayo Clinic, Jolene was a commercial underwriter for Federated Mutual Insurance Company in Owatonna, Minnesota. Previously, Jolene held various roles in Accounting, Finance, Supply Chain Management, and Public Affairs. A highlight for her was her role as Supplier Diversity

Program Manager where she was instrumental in developing Mayo Clinic's first Supplier Diversity Program that achieved regional and national award recognition.

Jolene's educational background includes a Bachelor of Science degree with an emphasis in Finance and a Minor in Spanish from the University of Wisconsin - La Crosse. In addition, Jolene has furthered her education by obtaining her Master's in Business Administration degree from Saint Mary's University in 2007.



Carol K. Benson**Senior Communications Specialist, Public Affairs, Mayo Clinic Arizona**

Carol Benson is a Senior Communication Specialist for Public Affairs at Mayo Clinic in Arizona. In this role she is responsible for providing communication support for the Arizona practice and, at an enterprise level, the Hospital Care Delivery Platform, which is the committee that develops and implements the overall institutional hospital practice operating plan at Mayo Clinic. She is also the managing editor of *The Scope*, an e-newsletter that delivers practice-related information to Mayo Clinic providers.

Ms. Benson joined the Public Affairs Department at Mayo Clinic in 2005. Prior to joining Mayo she worked for several years in the Marketing and Corporate Communications Department at UPMC Hamot Medical Center in Erie, Pennsylvania.

Ms. Benson holds a Bachelor of Science degree from Indiana University of Pennsylvania.

Chris K. Benson**Vice Chair S.W., Provider Relations, Mayo Clinic Arizona**

Christopher Benson is the Vice Chair for Provider Relations at Mayo Clinic in Arizona. In this role he is responsible for creating and sustaining external provider collaborations and partnerships. Mr. Benson joined Mayo Clinic in Rochester, Minnesota as an Administrative Fellow in 1998. After completion of the Fellowship, he served as an Administrator for Research Operations in Rochester, Minnesota, where he supported several Departments, in addition to holding an institutional leadership role related to industry sponsored research. In 2004 he relocated to Mayo Clinic in

Arizona and served as an Operations Administrator supporting several clinical areas, including several Divisions within the Department of Medicine, the Department of Psychiatry and Psychology, the Department of Anesthesiology, and the Department of Emergency Medicine.

Before joining Mayo Clinic, he completed an administrative internship with St. Jude Hospital in Vieux Fort, St. Lucia. He graduated with distinction from Iowa State University where he received his Bachelor of Business Administration in Operations Management and he received his Master of Health Administration from the University of Iowa.



Sandra M. Burrowes**Senior Communications Specialist, Public Affairs, Mayo Clinic Rochester**

Sandra Burrowes is senior communications specialist in charge of physician leadership communications at Mayo Clinic. In this role, she is responsible for increasing physician engagement by improving physician understanding of Mayo's direction and strategy and increasing the two-way communication between senior leaders and physicians/scientists. She also leads communication strategy for Mayo's 13,000-member Department of Nursing.

Her background is in strategic communications, marketing and publishing, including work with New York Times best-selling author Stephen Covey on his book, *The 7 Habits of Highly Effective People*. She earned a Bachelor of Business Administration with an emphasis in economics from Carroll University and graduated with distinction from Touro University Worldwide with a Master of Arts in Industrial and Organizational Psychology.

Justin D. Cox**Operations Manager, Provider Relations, Mayo Clinic Arizona**

Justin Cox is an Operations Manager for Mayo Clinic Care Network. He is responsible for client relationship management activities with a focus on facilitating and delivering health care consulting engagements in support of the Care Network.

Mr. Cox has over 12 years of experience in healthcare leadership and clinical practice operations. He has extensive training in consultative and procedural practice management, with an emphasis in process improvement, project and relationship management. Mr. Cox holds a Bachelor of Science in Psychology and recently complete a Master's in Healthcare Administration from Northern Arizona University. Mr. Cox has been with Mayo Clinic for nearly 10 years.



Wyatt W. Decker, M.D., M.B.A.

Vice President and Chief Executive Officer, Mayo Clinic Arizona



Wyatt W. Decker, M.D., is Mayo Clinic Vice President and Chief Executive Officer of Mayo Clinic in Arizona. As a Vice President of the largest not-for-profit integrated multi-specialty group practice in the nation, Dr. Decker helps direct Mayo Clinic's research, education, and clinical operations in Arizona, Florida, and Minnesota.

Dr. Decker is directly responsible for Mayo Clinic operations in Arizona which includes launching Mayo Clinic School of Medicine – Arizona Campus; constructing a state-of-the-art NCI designated Cancer Center with proton beam therapy; pioneering the use of digital technologies to provide healthcare expertise to affiliated practices nationwide; and, providing healthcare for over 105,000 patients each year at Mayo's five locations in greater Phoenix. Mayo Clinic Hospital in Arizona has been ranked by Consumer Reports as the nation's No. 1 safest teaching hospital, is ranked as the No. 1 hospital in Arizona, and a member of the Honor Roll (top 20 nationally) by US News & World Report.

Dr. Decker is a Professor of Emergency Medicine at the Mayo Clinic College of Medicine. He developed and subsequently directed the Emergency Medicine Residency training Program at Mayo Clinic, served as the inaugural Chair of the Department of Emergency Medicine in Minnesota, and Chair of Emergency Medicine at Mayo Clinic in Florida. Dr. Decker has held numerous leadership positions at Mayo Clinic in Rochester, including the oversight of hospital operations; public affairs; and the recruitment, retention and leadership development of staff physicians.

As an Emergency Physician, Dr. Decker chaired the Clinical Policy Committee of American College of Emergency Physicians, and served as the founding editor-in-chief of the International Journal of Emergency Medicine. He has published numerous peer-reviewed research articles and lectures internationally on topics including syncope and atrial fibrillation, hospital management, team building, change management and leadership. Dr. Decker has received many leadership and team-building awards from Mayo Clinic and the prestigious Heroes of Emergency Medicine award from the American College of Emergency Physicians for his work in Haiti following the 2009 earthquake. Prior to his medical career, Dr. Decker worked as a mountaineering guide in the western United States for the National Outdoor Leadership School.



Dr. Decker holds an M.D. from Mayo Clinic School of Medicine, MBA from Kellogg School of Management, Northwestern University, and a BS from the University of California-Santa Cruz. He completed internal medicine residency training at Mayo Clinic Graduate School of Medicine and Emergency Medicine training at Denver Health and Hospitals. He serves on the board of directors of the Arizona Commerce Authority, Greater Phoenix Economic Council and the Arizona Chamber of Commerce.

David A. Etzioni, M.D.

Chair, Division of Colon and Rectal Surgery, Mayo Clinic Arizona



David Etzioni, M.D., is the Chair of the Division of Colon and Rectal Surgery at the Mayo Clinic in Arizona, and an Associate Professor in the Mayo Clinic College of Medicine. He received formal training in health services research through the Robert Wood Johnson Clinical Scholars Program and completed a master's degree in Health Services at UCLA in 2003. Within the Mayo Clinic, he is involved in quality measurement and improvement both within the Arizona campus, as well as throughout the Mayo Enterprise. His research and administrative interests are focused on the appropriate analysis, interpretation, and reporting of surgical outcomes data.

Ryan A. Fix

Operations Administrator, Provider Relations, Mayo Clinic Arizona



Ryan Fix is an Operations Administrator for Provider Relations at Mayo Clinic. He is responsible for client relationship management activities in the Southwest region for a subset of members within the Mayo Clinic Care Network. Mr. Fix has been employed at Mayo Clinic since 2012. Prior to joining Provider Relations, Mr. Fix served as an Operations Manager for the Division of Gastroenterology and Hepatology, as well as the Division of Cardiology at Mayo Clinic Arizona. Mr. Fix began his career at Mayo Clinic as an Administrative Fellow, where he contributed to and led various projects within the Departments of Surgery, Medicine, Financial and Accounting Services, Revenue Cycle, Quality Management Services and Public Affairs, among other areas.



Before joining Mayo Clinic, Ryan completed an administrative residency with St. Clair Hospital in Pittsburgh, PA. He has held various positions at both the University of Pittsburgh Medical Center and University of Michigan Health System. Ryan received his bachelor's degree from Michigan State University and his Master of Health Administration from the University of Pittsburgh.

James (Jim) W. Frye
Unit Head, Department of Management Engineering & Internal Consulting,
Mayo Clinic Arizona



James (Jim) W. Frye is the Arizona Unit Head in the Department of Management Engineering and Internal Consulting (ME&IC) at Mayo Clinic. The strategic and management consulting resources in this unit are responsible for systems analysis, design and implementation, reengineering and enhancement of core processes, assisting with business strategy and design, project management, and supporting various business transformation initiatives. ME&IC provides business consulting and management engineering services to the Clinical Practice, Research,

Education, Administration and Business Development at Mayo Clinic.

Jim joined Mayo in 2002 as a Systems Engineer and has worked at both the Arizona and Florida sites. Prior to joining Mayo, Jim worked for The Sisters of Saint Francis Healthcare Services in Indiana.

Jim received a Masters in Business Administration from the University of Indianapolis and a Bachelors in Business Administration from Franklin College.



Darin V. Goss**Hospital Administrator, Mayo Clinic Arizona**

Darin V. Goss currently serves as the Hospital Administrator for Mayo Clinic in Arizona and, in collaboration with nursing leadership, is responsible for inpatient operations. Darin is an innovative, results-oriented executive with diverse expertise in a physician run setting with a variety of leadership stakeholders throughout a high-matrix organization. Darin joined Mayo Clinic in 2000 as an internal consultant working in the area of project management and process improvement for internal institutional projects. Previous administrative roles include serving as administrator for practice support operations, internal medicine, and surgical service lines during his 17-year career at Mayo Clinic. Darin received a Master's degree in Health Administration and Policy from the University of Arizona, College of Public Health. He is a Fellow in the American College of Healthcare Executives and an Instructor in Health Systems Engineering in the Mayo Clinic College of Medicine.

Bob C. Graber, M.B.A.**Quality Improvement Advisor III, Quality Academy, Mayo Clinic Arizona**

Robert Graber is the Vice Chair of the Quality Fellows Program Committee and the Quality Academy Leader in Arizona. In this role he is responsible for the Quality Improvement education of Arizona staff and employees. Mr. Graber joined Mayo Clinic in 2008 as a Quality Improvement Project Manager working in the Quality Management Services Division. Since joining Mayo Clinic, Mr. Graber has become an Assistant Professor of Healthcare Systems Engineering in the Mayo Clinic College of Medicine and an American Society for Quality (ASQ) Six Sigma Black Belt (CSSBB).

He has helped to develop the Quality Improvement curriculum, Lean and Quality Improvement workshops and serves as coach and mentor to many seeking to advance in the Mayo Quality Fellows Program.

Before joining Mayo Clinic, he was the Director of Cost of Quality for the Union Pacific Railroad, the Director of Quality Improvement for First Data Resources and the Administrative Partner for a regional Physical Therapy Clinic in Omaha, Nebraska. He graduated with



distinction from Brigham Young University where he received his Bachelor of Science degree in Business Administration and he received his Masters of Business Administration from the University of Utah.

Beth E. Heinrich, M.H.A., R.N.

Operations Administrator, Mayo Clinic Arizona



Beth Heinrich is the Operations Administrator with oversight over the Division of General Internal Medicine (GIM), Occupational Health Services, the Medallion Program and the International Patient Center. Ms. Heinrich joined Mayo Clinic Arizona in 1997. In addition to her current role, Ms. Heinrich has also served as the Operations Administrator for the Divisions of Asthma, Allergy and Clinical Immunology and Pulmonary Medicine. Her clinical expertise has extended to her support of the emergency management and safety programs. She was the Safety Officer at Mayo Clinic Arizona from 1997 through 2015.

Ms. Heinrich graduated from The College at Brockport, State University of New York, where she obtain her Bachelor's Degree in Nursing and she obtained her Master of Health Administration from Walden University.

Devyani Lal, M.D.

Consultant, Otolaryngology, Mayo Clinic Arizona



Devyani Lal, M.D. is a Consultant in Otolaryngology- Head & Neck Surgery at Mayo Clinic, Phoenix, Arizona, and Associate Professor of Otolaryngology – Head & Neck Surgery, Mayo Clinic College of Medicine and Consultant in Neurological Surgery. She is also Associate Dean, Mayo Clinic School of Continuous Professional Development. Dr. Lal leads the tertiary care Rhinology and Endoscopic Cranial Base Surgery program in her department, focusing on complex sinusitis, skull base and sinonasal malignancies, as well as orbital pathology.

Dr. Lal has published widely in the field of Rhinology and Endoscopic Cranial Base surgery,



with over 70 peer-reviewed articles and book chapters. She currently serves on the Board of the American Rhinologic Society, as well as Chairwoman of the Research Priorities Taskforce of the North American Skull Base Society. A passionate educator, she has been director of six courses held at Mayo Clinic course on complex sinonasal and endoscopic cranial base surgery. She also serves on the Rhinology and Allergy Education Committee of the American Academy of Otolaryngology-Head & Neck Surgery, the Education Committee of the American Rhinologic Society, and the Continuing Medical Education Committee of the American Rhinologic Society.

Dr. Lal completed Otolaryngology residency training at the University of Delhi, and Loyola University, Chicago. She trained in Rhinology and Endoscopic Cranial Base Surgery at Stanford University. She has also received additional fellowship training at the Royal National Throat, Nose and Ear Hospital, London, United Kingdom and the University of Chicago.

Paula E. Menkosky **Chief Administrative Officer, Mayo Clinic Arizona**



Paula E. Menkosky was appointed as Chief Administrative Officer for Mayo Clinic in Arizona in 2012. Ms. Menkosky is responsible for Mayo Clinic operations in Arizona in partnership with Dr. Wyatt Decker, Mayo Clinic Vice President and Chief Executive Officer of Mayo Clinic in Arizona. She serves as a member of the Mayo Clinic Board of Governors and Board of Trustees. In addition, Ms. Menkosky was appointed as a Vice Chair of Administration for Mayo Clinic responsible for External Relations. In this role, she oversees Mayo Clinic's Public Affairs and Development activities enterprise-wide.

Ms. Menkosky began her career in Managed Care at MetLife Insurance Company in Long Beach, California. She subsequently worked for Health Net in Torrance, California and later became the Executive Director of Fountain Valley Regional Hospital's Independent Physician Association (IPA) management company.

Ms. Menkosky began her work at Mayo Clinic in Rochester, Minnesota in 1996. She has held numerous leadership positions at Mayo Clinic including serving as Director of Operations, Chief Operating Officer and Executive Director of MMSI, A Mayo Health Company. In addition, Ms. Menkosky has served as the Vice Chair of Managed Care Operations and



Business Development and Operations for Mayo Clinic Health Solutions.

Prior to joining Mayo Clinic in Arizona, Ms. Menkosky served as the Chair of Education Administration overseeing Mayo Clinic's five schools and academic initiatives.

Ms. Menkosky holds a B.A. degree in Applied Psychology from California State University, Long Beach, an M.A. degree in Industrial – Organizational Psychology from California State University, San Bernardino, and a M.S. degree in Health Care Administration from California State University, Long Beach.

Gabi L. Nesengani

Operations Manager, Provider Relations, Mayo Clinic Rochester



Gabi Nesengani is an Operations Manager for the Mayo Clinic Care Network. She has a broad business and Human Resources background that spans nearly 20 years. Prior to joining Mayo Clinic's department of Human Resources, Gabi was a Global Human Resources Manager with Cummins Inc. a worldwide power generation solutions organization. Prior to that she was Human Resources Director for Cummins Africa and also worked as Human Resources Manager for Procter and Gamble in Johannesburg South Africa.

In her current capacity, Gabi is responsible for client relationship management activities. Her focus is on facilitating and delivering health care consulting engagements in support of the Mayo Clinic's Care Network.

Gabi holds a Bachelor of Science degree in Microbiology from the University of Pretoria and a Masters of Business Leadership with an emphasis on Leadership from the University of South Africa. She also holds certification as a Global Professional in Human Resources. She is an avid reader and enjoys working out.



Eileen M. Oswald, MPH

Vice Chair, Mayo Clinic Quality Management Services, Mayo Clinic Arizona



Eileen Marie Oswald, MPH, is the Vice Chair of Mayo Clinic Quality Management Services. On a Mayo Clinic Enterprise level, and for the Arizona campus, Ms. Oswald is accountable for the operations of clinical quality improvement, risk management, patient safety, process improvement, patient experience, accreditation and regulatory compliance, data management and performance analysis.

Prior to joining Mayo Clinic in the summer of 2002, Ms. Oswald was employed by a Chicago law firm that represented international and domestic excess insurers and reinsurers on healthcare risks. In this role, Ms. Oswald consulted to a number of healthcare organizations in the fields of quality improvement and risk mitigation.

Her career includes serving as the Director of Quality and Risk Management for the University of Chicago Medical Center, Risk Manager for Loyola University Medical Center in Illinois, and Public Health Advisor for The Centers for Disease Control and Prevention.

Ms. Oswald completed her Bachelor of Science degree at the State University of New York at Cortland with internships at London Polytechnic University and The Centers for Disease Control and Prevention. She obtained her Master of Public Health degree with an emphasis in Epidemiology and Biostatistics at the University of Illinois, Chicago. She is a graduate of the Institute of Healthcare Improvement's Patient Safety Officer Executive program in Cambridge, Massachusetts, and is an elected member of the Voting and Consulting Staff of Mayo Clinic.



Bella Panchmatia, M.S.N.

Operations Manager, Mayo Clinic School of Health Sciences, Mayo Clinic Arizona



Bella Panchmatia is the Operations Manager for Mayo Clinic School of Health Sciences, Arizona. In this role, Ms. Panchmatia provides leadership of allied health programming in Arizona in partnership with the Associate Dean of the School of Health Sciences. Allied health programming in Arizona includes clinical rotations, residencies, fellowships, and primary programs. Ms. Panchmatia joined Mayo Clinic in January 2006. She holds a dual role as Operations Manager for Education Enrichment and Innovation, whose charge is to identify and analyze to transform the practice at Mayo Clinic by caring for the future needs of the patient through programming that enriches education, prepares the workforce of the future, and elevates the Mayo clinic brand. Before joining Mayo Clinic, Ms. Panchmatia taught in the undergraduate nursing program at Arizona State University. She earned her Bachelor of Science in nursing from the University of Alberta, and her Master of Science in nursing from the University of Wisconsin-Madison.

Kenneth G. Poole, Jr., M.D., M.B.A.

Medical Director, Patient Experience, Mayo Clinic Arizona



Dr. Kenneth Poole is the Medical Director of Patient Experience at Mayo Clinic in Arizona and is a member of the division of community internal medicine. He also sits on the Arizona Space and Capital Committee and the Mayo Clinic Health Information Coordinating Subcommittee. Dr. Poole is a member of the Mayo Clinic School of Medicine Admissions Operations Committee and is an Assistant Professor of Medicine, teaching health policy, economics, and technology. He has authored on the topic of physician employment trends and health care delivery and has previously chaired diversity efforts across all Mayo Clinic School of Medicine sites nationally. .

Dr. Poole sits on the board of directors for the Maricopa County Medical Society, is president of the Arizona Society of Black Physicians, and is a fellow of the American College of Physicians. He is also a member of the National Medical Association; the American Association for Physician Leadership; the Arizona Medical Association; REAP; Kappa Alpha Psi Fraternity; and Sigma Pi Phi Fraternity, Gamma Mu Boule.



Dr. Poole was born and raised in St. Louis, MO. He earned his bachelor's degree from Tennessee State University, his M.D. from Northwestern University, and his MBA from Washington University in St. Louis. Dr. Poole completed his residency training in internal medicine at Mercy Hospital in St. Louis and went into solo medical practice thereafter prior to joining the Mayo Clinic in Arizona.

Steven W. Ressler, M.D.

Chair, Division of General Internal Medicine, Mayo Clinic Arizona



Dr. Steven W. Ressler, M.D. is Chair and a consultant in the Division of General Internal Medicine (GIM), Mayo Clinic - Arizona. GIM has oversight of the Executive, Development and International (EDI) section where the majority of international patients begin their journey at Mayo Clinic, as well as the sections of Consultative Medicine, Integrative Medicine and Health and Palliative Medicine. He is an Assistant Professor of Medicine, Mayo Clinic College of Medicine and Science.

Dr. Ressler is originally from Ann Arbor, Michigan and earned a BS in Biology from the University of Michigan and received his Medical Degree from Michigan State University, with induction into the Alpha Omega Alpha (AOA) National Honor Society. He completed combined residencies at Good Samaritan Regional Medical Center and Phoenix Children's Hospital in Phoenix, Arizona becoming boarded in both Internal Medicine and Pediatrics. He initially spent four years after residency practicing rural medicine in northern Arizona with Banner Health. He has been with Mayo Clinic Arizona since 2002, where his focus has been on Internal Medicine, with board certification through the American Board of Internal Medicine. He has received the Excellence in Teaching award. He serves in a number of other leadership roles including the physician lead for Canada on the International Committee, co-chair of the Arizona Plummer Coordinating Group (to facilitate adoption of Epic as the new electronic health record for the Mayo enterprise), and member of the enterprise Plummer Physician Advisory Group.



Cindy L. Stemper-Bartkus**Manager, Risk Management & Patient Safety, Mayo Clinic Arizona**

Cindy Stemper-Bartkus is the Manager for Risk Management and Patient Safety at Mayo Clinic Arizona. She provides leadership and oversight for her team and is actively involved in the daily operations. She is involved in the review of incident reports and completes case reviews to mitigate organizational risk. She also assists in conducting root cause analysis (RCA) reviews and co-facilitates departmental reviews for the Transplant Program. She oversees the development and implementation of patient safety programs. She provides a quarterly report to executive leadership

which summarizes the RCA reviews and identified patient safety related trends for the Arizona campus.

Ms. Stemper-Bartkus has been employed at Mayo Clinic Arizona for 15 years. Prior to joining Mayo Clinic, she worked in a variety of Emergency Departments across the country in both staff and administrative roles. She holds a Bachelor of Science Degree in Nursing from Boise State University and a Master's Degree in Nursing from the University of Texas in Houston.

Naomi L. Woychick**Coordinator, Center for Innovation, Mayo Clinic Arizona**

Naomi is the Innovation Coordinator for Center for Innovation, Mayo Clinic Arizona. She joined Mayo Clinic in 1982. Her work in Clinic Operations spanned Employee Community Health, Department of Medicine, and Medical Specialties. Naomi served as Coordinator of Clinic Operations providing leadership support for eight clinical practices prior to joining the Center for Innovation (CFI) in 2008. Woychick served as co-director of the program on Healthy Aging and Independent Living (HAIL), a partnership between CFI, the Robert and Arlene Kogod Center

on Aging and the Charter House. In 2013 Woychick relocated to Mayo Clinic AZ to help launch CFI in the SW and establish its presence as a shared service for the Enterprise. She helps to connect the work between Rochester and Arizona and coordinates alignment with strategic priorities for CFI in the SW.



Kelly S. Vorseth
Director of Patient Experience, Mayo Clinic Arizona



Kelly Vorseth is Director of Patient Experience at Mayo Clinic in Arizona. In this role she is responsible for advancing the Mayo mission by implementing, monitoring and continuously improving MCA's patient experience. This involves service consultation, service recovery, recognition & reward and education & training. Ms. Vorseth joined Mayo Clinic in Arizona in 1999. Kelly has held various positions within the organization including roles in Patient Accounts, Revenue Cycle and Patient Financial Services. Kelly has a B.A. in Communication from Arizona State University and a Master's in Business Administration from University of Phoenix.

James A. Yiannias, M.D.
Consultant, Division of Dermatology, Mayo Clinic Arizona



Dr. Yiannias (Pronounced YON-us) is a Board Certified Dermatologist and Associate Professor of Dermatology at the Mayo Clinic College of Medicine, Scottsdale, AZ. He is a general dermatologist with specialty and published research expertise in allergic contact dermatitis and oral diseases. In addition to his clinical duties, he currently serves as the Associate Medical Director for the Mayo Clinic Center for Innovation and the Medical Director of Connected Care for Mayo Clinic in Arizona.

Dr. Yiannias was born in Houston, Texas and attended Austin College in Sherman, Texas. He graduated from Baylor College of Medicine in 1988 and performed his Dermatology Residency at Mayo Clinic, Rochester, Minnesota. He was appointed to the staff of Mayo Clinic in 1992.

Dr. Yiannias served as the Dermatology Residency Program Director from 1999-2005 and the Chair of Dermatology at Mayo Clinic in Arizona from 2007 until 2013.

He has received the American Academy of Dermatology highest honor, Gold Triangle Award and the American Contact Dermatitis Society Presidential Citation for his creation of the skin allergy management program called SkinSafeProducts.com (formerly known as CARD, the Contact Allergen Replacement Database).



Toni R. Yubeta, M.S.N., R.N.

Manager, Quality Practice Administration, Mayo Clinic Arizona



Toni Yubeta, MSN, RN is the Manager of Quality Practice Administration at Mayo Clinic Arizona. On a daily basis, Ms. Yubeta is responsible for the clinical quality management activities with an emphasis on the inter-relationship between quality and all aspects of the practice. She supervises the Quality Management Specialist functions and oversees the quarterly quality sessions at local leadership committees and subcommittees in conjunction with the vice chair of Quality Management Services. She also serves as the administrative lead to the Mortality Review Subcommittee in

Arizona and at the Mayo Clinic Enterprise level as well as a member of both the Hospital Practice Subcommittee and the Clinical Practice Quality Oversight Subcommittee.

Toni received her Bachelor of Science in Nursing from Creighton University in Omaha, Nebraska and her Master of Science in Nursing Healthcare Administration from the University of Pennsylvania in Philadelphia. She has been a nurse for 17 years and has served in various roles in clinical nursing, nursing management, and quality.

Richard S. Zimmerman, M.D.

Professor of Neurosurgery, Mayo Clinic Arizona



Richard S. Zimmerman, M.D., is a consultant in the Department of Neurologic Surgery at Mayo Clinic in Arizona and staff neurosurgeon at Mayo Clinic Hospital in Phoenix. Dr. Zimmerman also serves as Dean of Education in Arizona. He joined the staff of Mayo Clinic in 1990 and holds the academic rank of professor of neurosurgery, Mayo Clinic College of Medicine and Science.

Dr. Zimmerman earned his B.A. with honors at Boston University and his M.D. at Boston University School of Medicine. He completed an internship in general surgery and residency in neurosurgery at Medical College of Virginia – Virginia Commonwealth University, followed by a fellowship in neurovascular surgery at Barrow Neurological Institute.

Dr. Zimmerman's clinical work focuses on trigeminal neuralgia, vascular and skull base neurosurgery, and epilepsy surgery, and he has served as principal investigator and co-investigator on industry-funded research protocols. He is frequently invited to give



presentations on his work both nationally and internationally and has authored numerous journal articles, book chapters, abstracts and other written publications. He also serves on the Editorial Advisory Board for *Clinical Neurology News* and holds reviewer responsibilities for several high-impact publications.

As dean of education in Arizona, Dr. Zimmerman is responsible for setting and directing the institution's education mission, representing education on the Arizona campus, chairing the Arizona Education Committee and serving as a distinguished member of the Mayo Clinic Education Committee. He has held several leadership positions, including his significant role as the inaugural medical director for Mayo Clinic Hospital for 10 years. He currently serves on the Mayo Clinic in Arizona Executive Operations Team and the Arizona Clinical Practice Committee, where he is chair of the Clinical Practice Quality Oversight Subcommittee.

Dr. Zimmerman is noted with integrating simulation learning with quality improvement across the Mayo Clinic enterprise and emphasizes inter-professional education, teamwork and enhancing a culture of safety. In 2007, Dr. Zimmerman received the Innovation in Patient Safety Award from the Arizona Partnership for Implementing Patient Safety. His effective leadership contributed to the 2013 ranking of Mayo Clinic Hospital as the safest teaching hospital in the country by Consumer Reports, and in 2014 Dr. Zimmerman received Mayo Clinic's Lifetime Achievement Award for Quality Improvement, achieving Diamond Quality Fellow status. Dr. Zimmerman initiated the annual Mayo Clinic Education and Technology Forum in 2013. With a format that is both informational and experiential, these conferences strive to help educators understand and use innovative methods to teach today's healthcare students and providers

Dr. Zimmerman has also served in many roles with professional organizations, including the American Association of Neurological Surgeons and the Arizona Hospital and Healthcare Association. He currently serves on the Professional Advisory Board of the Epilepsy Foundation, the Board of Directors of the Neuropathy Action Foundation, and is a long standing member of the Medical Advisory Board of the Trigeminal Neuralgia Association.

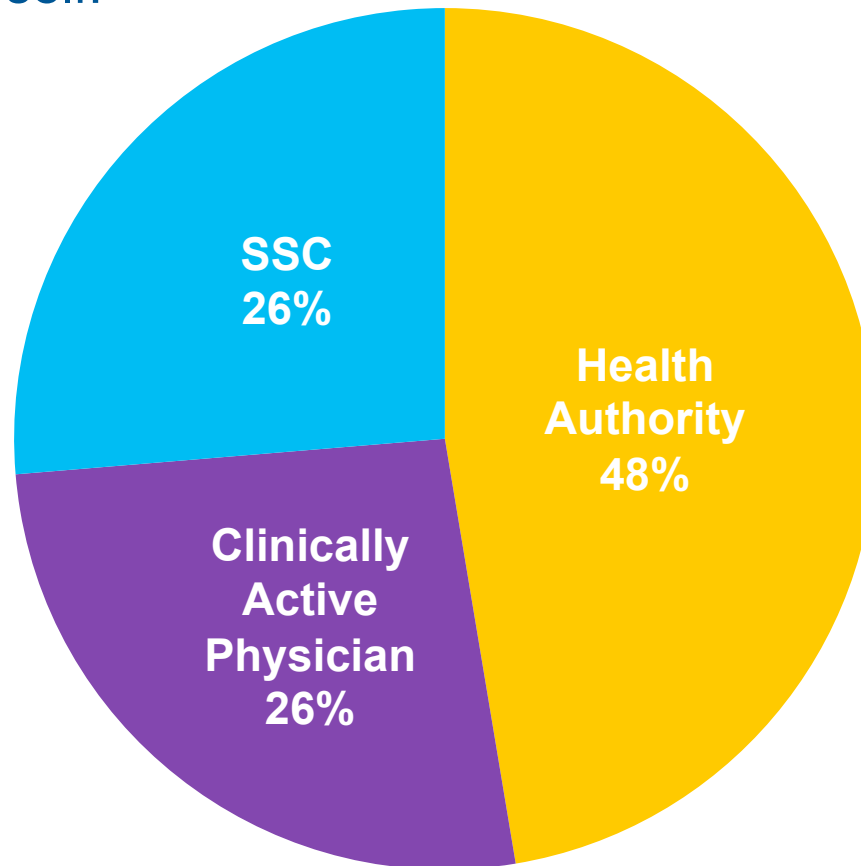
APPENDIX F:
EVALUATION SUMMARY OF BC ATTENDEES



Participant Feedback

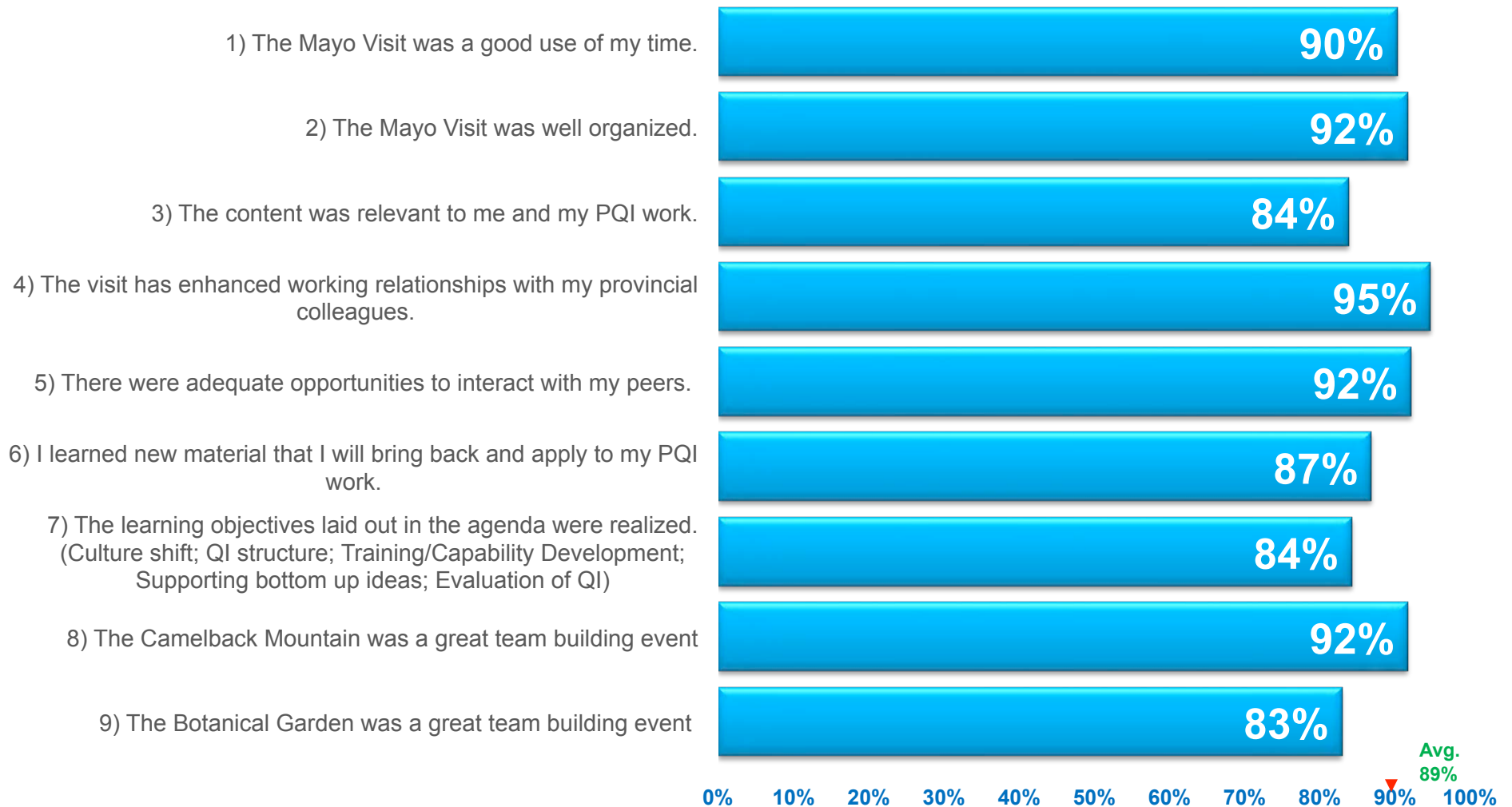
November 23, 2017

Please identify yourself:



Response Rate 91%

n = 20





With whom do you plan to share your learnings from this Mayo Visit once back in BC, and how will you do so?

- PQI Related
 - Steering Committees
 - PQI Staff & SSC Leaders
 - Provincial PQI Network
- HA Leadership & HA Committee Structures
 - Local hospital and regional administration;
 - Grand rounds, emails, newsletters
 - HAMAC, SET, Board
 - HA Quality & Safety team
 - Senior Medical Administrators, VP Quality, VP Medicine, Quality Execs
 - Executive Medical Director and Director of my own program (senior physician leaders)
- Local Medical Staff Associations and Divisions of Family Practice
- Medical Directors of BC network at an all-day quarterly meeting



The most/least relevant part of this learning session for me was?

“most”

- The culture of service, commitment, and quality that permeates all of levels of works including non-medical.
- To see how passionate Mayo was about QI.
- Their dyad structure functioning so well.
- Mayo Quality Academy structure and cultural issues. I
- Understanding clinical risk management, their approach to QI and their leadership model
- Communications strategies for engagement
- Interaction with staff at Mayo and their sharing of their activities in engagement, surveys, communication, and patient experience office
- Discussing what was presented with our provincial counterparts

“least”

- Facility tour (nuclear physics)
- Metrics related to surgical QI
- All was useful, cannot identify any



Additional comments or suggestions for improving this program

- More understanding of how "Mayo culture" is propagated across the organization specially with physicians
- More ward visits, entire hospital should have been included in tour
- Would have liked to meet with a different system that has similar challenges as BC healthcare (urban, semi-urban, and rural) and how they incorporate quality for all patients (not just the ones that can afford Mayo clinic care).
- More time discussing how they are measuring the impact of culture change. A map of the journey for culture change would also be advantageous.
- Would like to learn more about their EMR and how they are dealing with that transition.
- Would have loved a tour through ER department since ER is the face of the institution. Would have liked to meet more frontline physicians to interact with - only met senior leaders who painted a perfect picture! May be accurate but may be partial.
- The ability to assess physicians and their involvement in QI do intersect, we spend a lot of time with SSC work to ensure there is no QA involvement but ensuring physicians... there are some intersection and we need to have continued dialogue around what
- *Great opportunity to connect with my colleagues, feel very motivated and inspired to continue this work. Appreciate this opportunity and support from SSC to participate*

APPENDIX G:
LIST OF GEMS AND TAKEAWAYS

APPENDIX G - List of Gems & Takeaways



KEY GEMS AND TAKEAWAYS:

“The best interest of the patient is the only interest to be considered” - William Mayo

1. **Shared Leadership** model which is now shifting to a “Triad from Dyad” management model. The organization was founded by physicians and continued with physician involvement and leadership. It was great seeing the presentation from Wyatt and Paula; they complemented each other and a few times completed each other’s sentences. It was clear that there was real respect for the other’s perspective and experience and did not appear to be a “token” role for physicians. Later during the visit, we learned that even their Communications Department had a Medical Director. Many of the presentations that Mayo delivered to us were in this Dyad model — with two presenters. In BC, many of the administrators at the hospital or regional level are nurses who have moved up the system; thus, we may not necessarily need to move to a Triad leadership structure to the same extent as Mayo. Nonetheless, there are a number of takeaways to strengthen a Dyad leadership models in BC.
2. **Culture** of Mayo was very apparent. Throughout the two days in the learning room where leaders provided presentations, culture was mentioned at least 40 times. Touring the facility further reinforced the culture that Mayo has created. Wyatt and Paula clearly articulated the purpose and mission of Mayo and while not all staff can state the strategic priorities and objectives, they know why they are there. There are many signs and visible displays of their values and mission. In BC, at times we get too focused on the “delivery of health care” whereas at Mayo the focus was strictly on patient-centred care. Creating this culture at Mayo did not just happen by chance; they have worked very hard to create and maintain it. For example, with the onboarding of medical staff, it takes three years for a physician to go from an “associate” to “consultant.” For some specialties like surgeons, they undergo direct observation at their home facility by a Mayo surgeon, whereas for others, they have video recording in the operating room and new physicians are recorded and provided direct, specific feedback. To shift and mold physicians into this culture, physicians receive 360° evaluations from their administrative and physician peers. Mayo emphasized the need for new physicians to meet both the “clinical” requirements/competencies as well as the “behavior” cultural fit, thus resulting in a longer provisional status to assess cultural fit. Quality really permeates through all levels of the Mayo organization.
3. **Relentless Drive** at Mayo where they seek to identify and remove non-value-added steps, with focus on getting physicians and nurses “back to bedside.” Their culture is supported with safety but they follow the motto: “don’t be afraid to fail.” Quality is one of the hardest words to describe and is used extensively in health care; it was great to see at Mayo that they have clearly defined it to include outcomes, safety, and service.

“You don’t have quality at all if you don’t have quality improvement, and to have improvement, you need change” - Dr. Richard Zimmerman

4. **Clear Quality Framework** model that is easy to understand and share with others. Each of the components is well laid out and appeared to be well resourced. A lot of this information is important and similar to what we work towards in BC, but have not really fleshed out what it means here. For example, “Roles and Expectations Clarity.”

EXAMPLES:

- Quality = outcomes, safety, and service
 - 100-day discipline (from measure to control)
 - Safety culture builds on system competency and behavioral competency
-
5. **Ranking and External Comparison** was highlighted where Mayo receives timely feedback on where they stand relative to others. Annually at a national level, Mayo's three large sites place within the top five of all US hospitals; in fact, the sites compete against each other for ranking. Physicians tend to be very competitive, and creating a safe and healthy competition in BC for quality will allow it to come to the forefront.
 6. **Clear Direction** on areas of focus with top-down priority setting to support system competency in standardization and diffusion of best practice. “Bottom-up” improvement is supported through leadership rounding and local level data. In BC, physicians are encouraged to become involved in quality improvement but are provided very little discretionary time to do this.
 7. **Identification of Preventable Harm** is a focus for the approach to safety. Where identified, quality improvement methodology is applied, linking review process to QI such that a team-based approach to improvement is integral to safety.
 8. **Teamwork Focus** is strong and the foundation to their approach to patient safety; impressed with the “support each other” climate. A culture of patient safety is built on a climate of caregiver safety. A cascading level of reviews provides opportunity for physician involvement in identifying and enhancing patient safety, supported by a committee structure that provides oversight and promotes shared learning. Physician training in patient safety through IHI PSO courses is supported.
 9. **Incident Reporting** was done for physicians and they are not required to fill out the form. Most physicians just call Risk Management and they state, “we don't care how we get the data in, we just want it in.” They make reporting easy.
 10. **Smooth Transition** into the Mayo organization for medical students who learn about QI and participate in QI projects. For example, they use the same content and recognition levels from the Quality Academy.
 11. **Start Early** at Mayo with introducing QI and encouraging to students to get involved in this area. The students are welcomed and asked to be part of system improvement. They present this subject as a science of improvement. Mayo not only is working with their broader staff by having 100% complete bronze-level participation, but also with the future workforce by engaging them directly in school. This allows undergrads to get very purposeful exposure to QI.
 12. **Leadership Commitment** at Mayo is very apparent. They have developed and resourced the Quality Academy well with an annual \$2 million budget. Their focus is strictly on the education of QI and another department leads the project support. Even though 42,700 staff have at least one of the levels completed, they set a goal for 100% by the end of December 2019. This department has created a sustainable “distributed faculty” that includes 47 volunteer members.
 13. **Visibility and Recognition** at Mayo is a key component of their Quality Academy. In addition to certificates, staff receive “pins” to recognize the level of training they have completed. These pins are displayed proudly on their individual's name badge. All staff are encouraged to list this training on their CVs, and for some senior positions at Mayo, at least a Silver level of training is needed. Moreover, the hallways and walls of Mayo have signage and other references to staff training. When you go into a meeting at Mayo with a QI team, the level of experience and expertise is apparent as soon as you sit down.

14. **Methodology** does not matter at Mayo and they train and support it all. At times in BC, these methodologies compete for resources and attention, but at Mayo they include everyone in the “tent” and create a sense of community for those who work together as a team.
15. **Widespread QI Training** throughout the organization ensures there is support for all QI initiatives at the local level without the need for an extensive external team. There is a focus on just “having a go” without an emphasis on perfecting techniques. Minimal formal training and a coaching model using volunteer instructors is common. Working in teams is recommended and many physicians manage the time commitment by working in groups on a QI project. There seemed to be a clear and stated link between physician development and expanding roles, where additional training is linked to a leadership role. Physicians who engage in leadership training or QI training should be recognized with a role.
16. **Different Types of Training** are offered at Mayo, including workshops for teams who have already identified and want to come as a group and focus on their problem.
17. **Diversity and Synergy** are important ingredients for health care transformation. Many of the problems we face are complex and difficult. At Mayo, they have built up a team (MEIC) and seek diversity to ensure they can tackle these complex problems through new perspectives. The staff in the department are from a mixture of different professionals (nursing, finance, etc.) and have worked in other industries and countries. By hiring staff with different backgrounds and training them in QI, they are creating synergies by co-locating these individuals. In BC, many of these improvement teams reside in different portfolios and at times have little opportunity to inter-mix.
18. **Investment** into quality improvement at Mayo was apparent. Of their 63,000 staff, 180 individuals work in the MEIC department. This is a large investment in quality improvement that is in addition to the Quality Academy, with 13 staff who provide the educational training. In some BC health authorities with 20,000 staff, they only have a dozen staff who support quality where the focus primarily is on assurance and not improvement.

“THINK BIG start small MOVE FAST”

- Mayo Centre for Innovation

19. **Disciplined** approach has been created with respect to seeking ideas and supporting them. The Kern Centre is working on many diverse projects through their defined approach. It's through this discipline that they are able to work on a large health care organization with 63,000 staff. This clarity not only helps them define what they are, but what they are not.
20. **Annual Transform Conference** is held where the department has an opportunity to bring together internal and external partners to celebrate and share knowledge. Innovation is not easy, but bringing together the brightest minds and facilitating knowledge dissemination is key to supporting this environment and strengthening the culture.
21. **Signage** throughout the building showed that there was a visible display of Mayo's focus on patient care through recognition of their staff and pictures of their local leadership. For example, they promote the clear identity of the Mayo culture (i.e., Three Shields: education, research, patient care). When you enter the hospital, there is a large sign that thanks and recognized the staff. It states: “Thanks to the people of Mayo Clinic for leading the nation in patient-centric care.” It was these types of examples that validated what we heard in the boardroom by the Mayo leaders and what we saw. The whole campus was designed based on feedback from patients/family members who stated they did not want the facility to look or feel like a hospital.
22. **Free Parking** for visitors and patients at the Mayo Clinic. The campus is built on 260 acres and they have plenty of room for future expansion. The physical presence was very welcoming and easy to access. Many areas of the hospital have carpet to help create a homey atmosphere versus that of a large institution.

23. **Patient Communication** is enabled and simplified in patient rooms with one full wall available with a glass surface so that care providers and family members can place notes.
24. **Direct Observation** is heavily used at Mayo with the recording and direct viewing of care providers in the simulation rooms. This recording allows for experts to watch, make notes, and provide timely, accurate feedback to care providers.
25. **Improvement Boards** were visible on entry to the patient care areas, displaying local level data.
26. **Understanding** the makeup of reports and measurements (i.e., NSQIP) is important. As shown in this presentation and depending on how Mayo measures the same activity, they place differently on the ranking reports. The measurement or ranking is not as important as creating a safe culture that supports QI where the team understands the inputs and outputs.
27. **Engagement in Data** is more about recognizing the data for what it is rather than a relentless pursuit of “the perfect data element.”
28. **Effective Monitoring** of key indicators through the use of a Balanced Scorecard. Management receive similar reports with an accurate snapshot of their performance. This enables Mayo leaders to speak the same language and focus energy/resources on their agreed priority areas.
29. **Leaders are Challenged** to enhance patient care through the targets Mayo sets; this helps create a competitive environment, where highly skilled staff are working together and are professionally challenged. There is healthy competition between the three core campuses (i.e., Minnesota, Florida, and Arizona). Often rankings in health care magazines have these three sites in the top five and annually there is a challenge where each strives for first place.
30. **Benchmarking** of all key indicators with external organizations with a clear target for success.
31. **Resourced** well to achieve their strategic objectives. They have the medical and administrative personnel to effectively manage this file. Much of the high-level messaging is around patient-centric care and it's great to see that the organization goes well beyond the “catchy statements” to resourcing this department and integrating it throughout all of its campuses.
32. **Orientation** of new staff has a strong component of patient experience education including empathy training, tools, and a focus on service excellence. The hire for “fit” was key.
33. **Humble Leadership** within the Communications Department where they don't assume they know how to communicate or what to communicate to physicians. Every two years, they do a survey and simply ask. In alternate years, they hold physician focus groups. Communication does this also with all other staff.
34. **Simply Yet Effective Tools** such as the 59-second *Prime*, *The Scope* and slides that physician leaders receive to help them communicate to their team. Many tools are produced by physicians for physicians. One of their tools included a bi-weekly teleconference with their CEO, where not only information was shared but any caller had the opportunity to ask questions. This really signaled an open and accessible senior executive. In short, the tools that Mayo uses, we in BC do not use, and the tools we use they indicate are “less effective” and stay away from using.
35. **It's Working Well at Mayo**, where their recent staff engagement scores as measured through Workplace Pulse 46 questions, the overall physician satisfaction is 84% and engagement score is 97%. We were particularly struck by the response of the Mayo presenters to a question about how to achieve physician engagement. The mystified response was: “of course they are engaged, they are physicians!” This is a fresh perspective on the tiresome effort of health authorities to engage physicians.

APPENDIX H:
MAYO CLINIC PRESENTATION SLIDES