



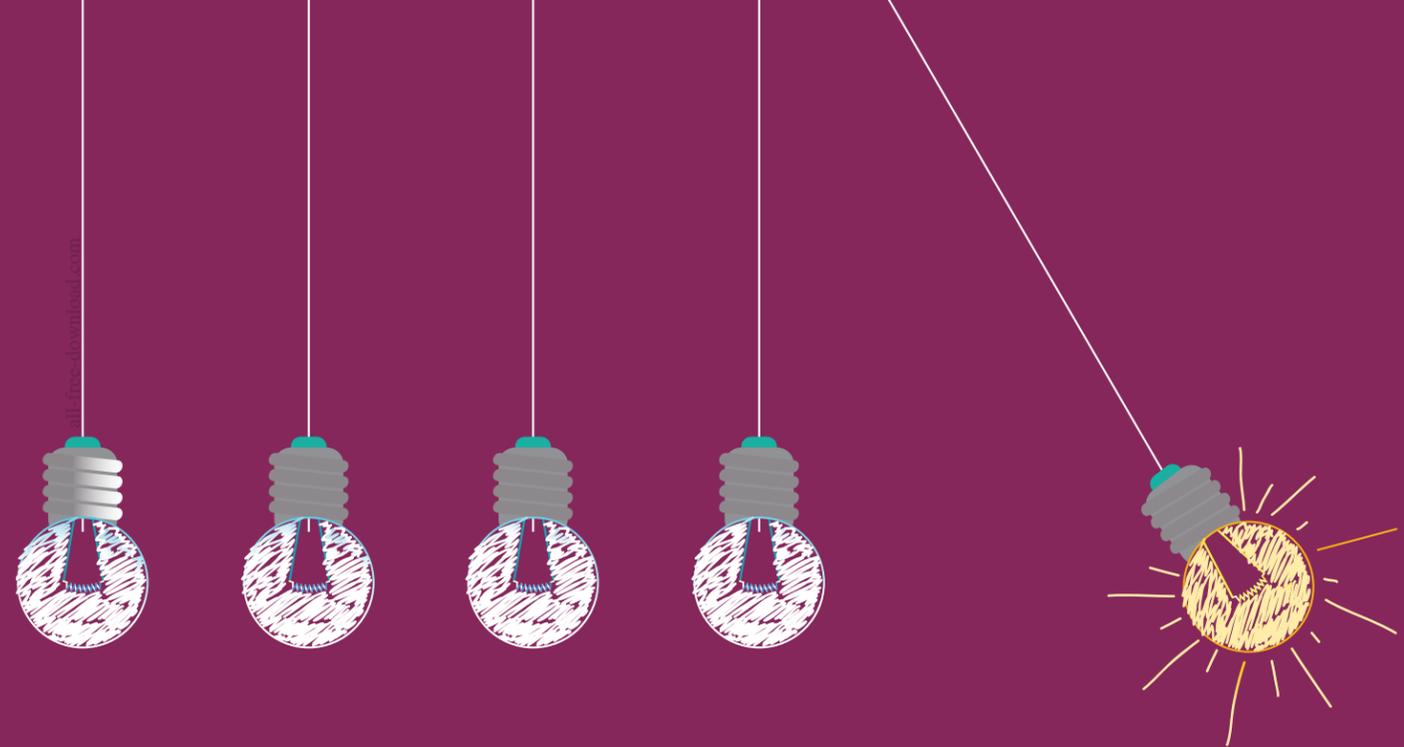
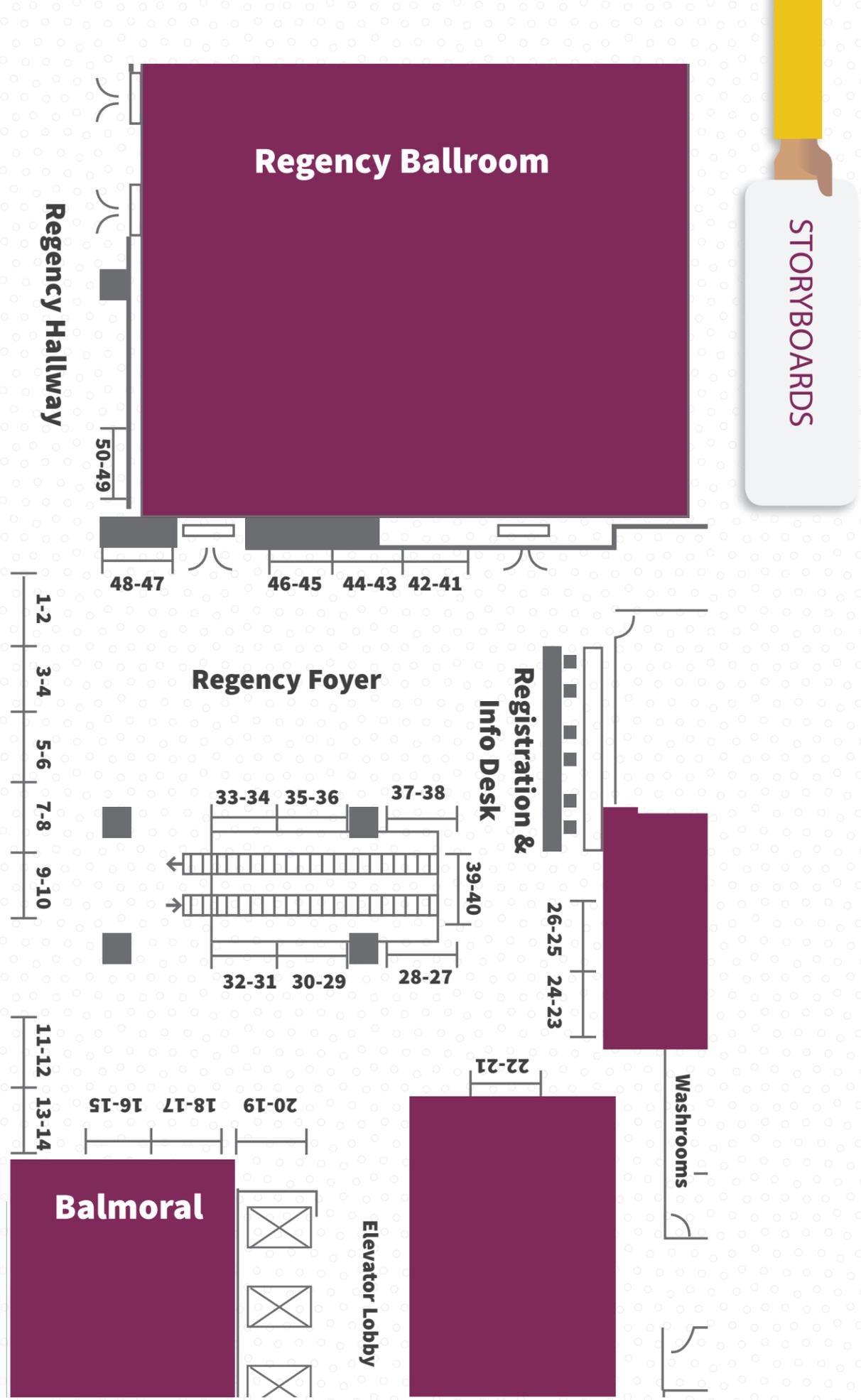
JOINT COLLABORATIVE COMMITTEES

# CHAMPIONS *of* CHANGE

**STORYBOARD + RAPID FIRE**  
**GUIDE**



BC PATIENT SAFETY  
& QUALITY COUNCIL  
Working Together. Accelerating Improvement.



## HOW TO USE THIS STORYBOARD AND RAPID-FIRE GUIDE

This brochure has been designed as a convenient guide for JCC Champions of Change participants to learn more about the work being featured at this event.

With 50 Storyboards on display, the guide provides you with the opportunity to preselect storyboards you most want to visit during the day. Additionally, the list of all rapid-fire presentations, with their abstract description, will give you a better idea of the work taking place that you may not have seen.

In the interest of spreading success and innovation, and to help inform your own quality improvement projects, a contact name and email will help you connect with colleagues to learn more about the successes and challenges they've experienced on their QI journey.

<b>1</b>	Implementation of novel cognitive aids for malignant hyperthermia at PHC .....	9
<b>2</b>	Real-Time Patient Experience Survey: Timely Feedback for Rapid Improvements .....	10
<b>3</b>	Reducing Wait Times for Spirometry: The Fraser Health Experience .....	11
<b>4</b>	Not For Comfort Anymore: A Peri-Operative Oral Care Trial to Reduce HAP .....	12
<b>5</b>	Crisis Response Protocol Development for CYMHSU Patients and their Families .....	13
<b>6</b>	Community care redesign- building a community-based system for health. ....	14
<b>7</b>	Using social robots to reduce loneliness in dementia care .....	15
<b>8</b>	Building Powerful Health Care Teams – Lessons from the Business World .....	16
<b>9</b>	How You Want to be Treated: A Providence Approach to Patient-Centred Design .....	17
<b>10</b>	Responsiveness and Adaptability of HealthLinkBC to the diverse needs of BC & Yukon .....	18
<b>11</b>	Introducing Patient Reported Outcomes (PROs) in NSQIP at Royal Inland Hospital .....	19
<b>12</b>	Design Thinking a Better Discharge Medication List .....	20
<b>13</b>	“Megamorphosizing” Residential Care: Shifting From An Institutional to a Social Model .....	21
<b>14</b>	DC’ed from the ED: Improving the Experience for Geriatric Patients .....	22
<b>15</b>	Influencing Change for Quality Serious Illness Conversations .....	23
<b>16</b>	Moving Evidence into Practice: Early results from a regional knowledge translation project .....	24
<b>17</b>	Rising Up After a Fall: Quality Improvement for patients at risk of impaired mobility .....	25
<b>18</b>	Nutrition screening for elective colorectal surgery patients at St. Paul’s Hospital .....	26
<b>19</b>	From Roles and Responsibilities to Performance: Clarifying Expectations .....	27
<b>20</b>	Trust and Culture Change- Primary Maternity Care .....	28
<b>21</b>	Understanding Discharge Needs from the Client’s Perspective: A Quality Improvement Project ..	29
<b>22</b>	To Pee or not to Pee: Medication Safety for Renal Patients .....	30
<b>23</b>	Equip Physicians to Lead QI Projects – a customized physician QI training program .....	31
<b>24</b>	Transforming Services for Young People: Foundry’s Stepped Care Model .....	32
<b>25</b>	Dementia Post Diagnostic Information - a co-design improvement project .....	33
<b>26</b>	Home Based Memory Rehabilitation in Dementia - A Scotland wide Improvement Journey .....	34
<b>27</b>	Hospital 2 Home: A collaborative approach to improving care for patients with COPD .....	35
<b>28</b>	Spreading a process for Ethical Oversight of QI and Evaluation Projects .....	36
<b>29</b>	Radiation/Oncology Supply Standardization: Minimizing Inventory Costs & Waste .....	37

<b>30</b>	Driving reproducible improvement with the Behaviour Change Wheel .....	38
<b>31</b>	Fragmentation to Integration: Triage Consulting Team .....	39
<b>32</b>	Novel neonatal complex care and transition (NCT) primary provider team model for improvement .....	40
<b>33</b>	Randomized Coffee Trials-Creating Connections at Island Health .....	41
<b>34</b>	Implementation of Patient’s View at BC Mental Health & Substance Use Services .....	42
<b>35</b>	Optimal timing for umbilical cord clamping:towards universal guidelines for newborns .....	43
<b>36</b>	Patient/family experience of QI initiatives at the point of care: an ethical analysis.....	44
<b>37</b>	How a resilient perspective shifted our view of performance measurement .....	45
<b>38</b>	Walking a mile in their shoes: Using design thinking to prepare children for surgery .....	46
<b>39</b>	Factors that Influence a Successful Care Conference in Residential Care .....	47
<b>40</b>	Adherence to ERAS Protocol and Impact on Elective Gyne Oncology Surgical Patients .....	48
<b>41</b>	A Case of Prevention: RDs Impacting Upstream Primary Care in Abbotsford .....	49
<b>42</b>	Improving family experience discussing risk in inpatient child-adolescent psychiatry .....	50
<b>43</b>	Improving Quality of Care Across the North .....	51
<b>44</b>	Using Personalized Music to Improve the Quality of Life of Residents in Long Term Care .....	52
<b>45</b>	“Health Innovation for All” – A Student Led Quality Improvement-based Conference .....	53
<b>46</b>	Critical Care Exchange: Enhancing clinical skills, teamwork and staffing versatility .....	54
<b>47</b>	Targeting the Campus Community: A Sexual Assault Awareness Campaign .....	55
<b>48</b>	Missed Care: Neuroscience Nurses Perspectives on Direct Care Activities .....	56
<b>49</b>	Developing a Model for Evaluating EHR Adoption and Use at Island Health .....	57
<b>50</b>	Collaboration between a Neurologist and Pharmacy Team Helps Headache Sufferers .....	58

**A1 CREATIVE THINKING AROUND ACCESS**

Text-Messaging in Primary Care: The Haida Gwaii Experiment..... 60  
 Emerging Models of Care with Virtual Technology ..... 61  
 Supporting Rural Maternity Services Through Telehealth: An Integrated System Perspective..... 62

**A2 IMPROVING SENIORS CARE**

Residential Care Initiative Generating Impressive Results ..... 63  
 Innovative Tool Leverages Observations of Health Care Assistants to reduce ED Transfers ..... 64  
 Every Voice Counts: Innovation and Persistence Results in First-of-a-Kind  
 Residential Care Client Survey ..... 65

**A3 FOCUSING ON THE PATIENT EXPERIENCE**

Taking Bereavement Support Online ..... 66  
 Community Care Teams: Co-Designing the Way We Care for Patients..... 67  
 Patients as Partners for Electronic Communications ..... 68

**A4 NEW APPROACHES IN PRIMARY CARE**

How One Nurse Changed a System ..... 69  
 Two Sides of Change in Organizational Culture ..... 70  
 Pharmacist Modifications to an Electronic Medical Record in Primary Care: Lessons Learned ..... 71

**A5 BUILDING SKILLS - CREATING CAPACITY**

Gamification in Dementia Training ..... 72  
 Cognitive Behavioural Therapy Skills and Group Medical Visits: Successes, Challenges,  
 and Lessons Learned..... 73  
 Introducing a Peer-to-Peer Mentorship Program in the Emergency Department..... 74

**B1 ADVANCING URGENT CARE**

Improving the Response to Children and Youth in Crisis in the Emergency Department..... 75  
 How Safety Bags are “Releasing Time to Care” (RT2C) in the Intensive Care Unit..... 76  
 How We’re Improving the Time to ECG in the Vancouver General Hospital Emergency Department..... 77

**B2 RESPONDING TO THE OPIOID CRISIS**

An Emergency Room Response to the Fentanyl Crisis ..... 78  
 An Indigenous Approach to Harm Reduction ..... 79  
 Safer Prescribing of Opioids with Interactive Learning Sessions..... 80

0900-1030

1100-1230

**B3 CULTURALLY SAFE CARE FOR INDIGENOUS PATIENTS**

Pharmacist Supported Medication Management in First Nations Communities..... 81  
 What’s the Harm? Examining the Stereotyping of Indigenous People in Health Systems ..... 82

**B4 PROTOTYPING AND SPREAD**

Imaging Wisely: A Collaborative Approach to Reducing Inappropriate MRI Exams ..... 83  
 Implementing Remote Consult Solutions: The Experience of a Pan-Canadian Collaborative ..... 84  
 Does Adding a Doctor to the 811 Nurseline Reduce Emergency Department Visits? ..... 85

**B5 BUILDING QUALITY IMPROVEMENT CAPACITY**

Measuring Change in Clinical Systems Transformation with Prosci’s Change Scorecard ..... 86  
 The Need for Speed: Building Proportionate Consults for Quality Improvement ..... 87  
 Quality Improvement in the Patient Medical Home/Primary Care Network..... 88

**C1 STREAMLINING CARE PATHWAYS**

The Future of Same-Day Total Joint Replacement ..... 89  
 An Improvement Initiative to Deliver High Quality Care to Patients with Pacemakers..... 90  
 Improving MRI Utilization through Clinical Decision Support and Centralization ..... 91

**C2 ADDRESSING UNIQUE PATIENT NEEDS**

Supporting Patients to Take a “Food First” Approach to Health..... 92  
 Improving Access to Cleft Palate & Craniofacial Services Across BC ..... 93  
 A Story of Collaboration – Campbell River Maternity Clinic..... 94

**C3 THE VALUE OF COMMUNITY PARTNERSHIPS**

It Takes a Village: Community-Led Health Improvement in Hope and the Fraser Canyon ..... 95  
 The Other Side of the Desk: Integrating Peer Services for Healthcare Teams  
 on the Downtown Eastside..... 96  
 Testing a “Wraparound” Model of Care in a Rural Setting for the Complex Child and Youth Mental  
 Health and Substance Use (CYMHSU) Community..... 97

**C4 EFFECTIVE TEAM-BASED CARE**

The Positive Impact of Multidisciplinary Nursing Care for Rheumatology in BC ..... 98  
 CHANGE BC – A Proactive Focus on the Primary Care Team Model ..... 99

**C5 BUILDING A QUALITY CULTURE**

How an Online Learning Series Builds Skills and Confidence in Child and Youth Mental Health ..... 100  
 A Patient Safety/Quality Culture Bundle for Senior Healthcare Leaders ..... 101  
 The Quality Improvement Think-Tank: Taking Patient-Centered Care to a New Level ..... 102

1100-1230

1415-1545

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STORYBOARD

ABSTRACTS

# 1

## Implementation of novel cognitive aids for malignant hyperthermia at PHC

Providence Health Care  
Contact: Trina Montemurro  
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### ISSUE:

Malignant hyperthermia (MH) is a rare, life-threatening reaction to volatile anesthetics. Treatment of MH is labour intensive and requires collaboration between all members of the Operating Room (OR) Team. With prompt coordinated treatment, MH resolves; without it, it is usually fatal. The current MH protocol for most ORs is a complicated management sheet that is difficult to follow – especially in a crisis situation.

### SOLUTION:

We set out to trial a new approach to MH management using a series of task-oriented cards outlining individually-tailored objectives (the goal being to improve the efficiency of MH treatment, to encourage teamwork and communication, and to ensure that no important steps in management are left out).

### ACTIONS:

The task cards were developed from an Australian MH Resource Kit and adapted to fit the needs of our OR. To assess their effectiveness, we ran two low-fidelity simulations with a teaching mannequin as our patient. We assembled two multidisciplinary teams to participate, including anesthesiologists, nurses, anesthesia assistants and ward aides. Evaluation forms were distributed to the 14 participants, allowing them to share their thoughts and provide constructive feedback. Common themes that were communicated to us: 1) the task cards represented a welcome change to the MH protocol; 2) the simulation allowed participants to practice responding to a rare event they were previously unprepared for; 3) the task cards foster excellent interdisciplinary collaboration; and 4) responses to a future MH crises will be more effective as a result of these simulations.

### RESULTS/OUTCOMES:

We now have new MH posters in every OR, and the finalized task cards are ready to replace the previous MH protocol. Our future directions are to disseminate this new protocol to all OR staff, to run regular multidisciplinary MH simulations, and to begin implementing these task cards at neighbouring hospitals. As well, we envision the task card concept being extended to other intra-operative emergencies.

## 2 Real-Time Patient Experience Survey: Timely Feedback for Rapid Improvements

Fraser Health  
Contact: Joshua Myers  
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### ISSUE:

Meaningful patient feedback is often hard to obtain in a manner that is reflective of care, responsive and accessible. Patient feedback also is an accreditation requirement that many health authorities struggle to meet.

### SOLUTION:

Fraser Health has joined a partnership with Creed Technologies to build, pilot and implement a standardized patient experience survey that is brief, responsive and provides feedback and data that is immediately accessible at the unit, team and facility levels.

### ACTIONS:

A shared work team reviewed several existing patient experience surveys, as well as data gathered through our care quality office, and created a brief questionnaire that can be applied across all care areas. The surveys are electronic and can be completed autonomously on a patient's personal device, by email, or through facilitated completion in partnership with staff/volunteers using hand held devices.

### RESULTS/OUTCOMES:

There are currently 35 units who are live with this survey and early results are showing strong response rates and are providing leaders and staff with important quality and patient experience data to help drive change at the unit level. The survey is also equipped to gather positive feedback and "kudos" which have been valuable for leaders to support staff recognition.

Next steps are to implement broadly beyond the early adopter group, open up the ability for units to add to a unit specific question bank and to include patient experience data with other quality metrics to help enrich our understanding of the links between patient experience, quality, safety, staff well-being and psychological safety.

## 3 Reducing Wait Times for Spirometry: The Fraser Health Experience

Fraser Health  
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### ISSUE:

Spirometry is a painless, rapid test of lung function that is considered essential to the investigation of patients with respiratory complaints. It is essential for the diagnosis of COPD and asthma and the follow up of patients with established respiratory diseases. Wait time data for spirometry testing at Fraser Health (FH) Pulmonary Function (PF) Laboratories varied widely from 2 days to 98 days (median 43 days).

### SOLUTION:

The costs of spirometry testing were covered by service based funding via technical fees paid by the Medical Services Plan of BC. Given that there was no financial reason not to meet the demand for testing, this seemed an ideal QI project for a FH PQI Cohort 2 project.

### ACTIONS:

An improvement team at Ridge Meadows Hospital (RMH) was formed consisting of a respirologist, the lead respiratory therapist, the booking clerk, a Simon Fraser University volunteer student and a patient representative. A number of PDSA cycles were performed on the wait time operational definition and on data collection. FH Meditech data was found to be unreliable and a simple Excel spreadsheet data entry form was developed for completion by the booking clerk twice weekly. It was discovered that requisitions were being placed in a holding queue resulting in an underestimation of actual wait times. Once reliable wait time data was available for presentation, a business plan was presented to operational management empowering the booking clerk and lead RT to balance the staffing of the PF facility with the workload. The PF staff were kept updated with run charts of wait times. A survey of FH wide wait times and unbooked spirometry requisitions confirmed long wait times at most other FH sites.

### RESULT/OUTCOMES::

The mean wait times for spirometry at RMH were reduced from 29 days to 14 days within three months and to 9 days within 9 months. A presentation of the QI project to senior FH administration has led to a FH wide QI project aiming to reduce wait times for spirometry region wide by Q1 2018.

# 4

## Not For Comfort Anymore: A Peri-Operative Oral Care Trial to Reduce HAP

Fraser Health  
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### ISSUE:

Hospital-acquired pneumonia (HAP) is a common complication in the surgical population with an associated 19% mortality rate (Abbas & Ahmed, 2016). New research demonstrating the efficacy of pre-operative oral care for thoracic and acute/trauma populations in reducing HAP (Abbas & Ahmed, 2016; Thompson et al., 2006) suggests standardization of peri-operative oral care protocols could benefit other surgical populations.

### SOLUTION:

Comprehensive oral care including chlorhexidine mouth rinse has been positively associated with reducing nosocomial respiratory infections and antibiotic use in cardiac surgery (Abbas & Mir Ahmed, 2016; DeRiso et al., 1996; Enware et al., 2016; Nicolosi et al., 2014).

### ACTIONS:

A three-month quality improvement (QI) trial tested the efficacy of a peri-operative oral care protocol in reducing risk for HAP for scheduled surgical patients. The oral care protocol begins in the pre-operative area and is completed following extubation in the post anesthetic recovery room (PACU). HAP rates of patients enrolled in the trial are compared to National Surgical Quality Improvement Program (NSQIP) and Canadian Institutes for Health Information (CIHI) HAP rates prior to the trial.

### RESULTS/OUTCOMES:

288 surgical patients received the peri-operative oral care protocol. Of all patients receiving the oral care protocol, only one HAP event was recorded. HAP rates for patients receiving the peri-operative oral care were less than the HAP rates prior to the trial. Numerous other post-operative complications were identified during the chart reviews suggests multi-modal, preventative and optimization approaches remain the hallmark of post-operative care.

Peri-operative oral care is a cost-efficient, quality care activity which contributes to the prevention of HAP.

# 5

## Crisis Response Protocol Development for CYMHSU Patients and their Families

Thompson Local Action Team for Child and Youth Mental Health and Substance Use (CYMHSU LAT)  
Contact: Raj Chahal  
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### THE CONTEXT AND RELEVANCE:

In 2010, there was a lack of a coordinated response to mental health challenges for children and youth in Kamloops. Patients and their families were sent to the ER for all severities of mental health crisis with misdirected use of ER and inpatient services and lengthy waits in ER. Subsequent follow up post ER presentation was not coordinated between agencies. There were additional gaps in wait times to access community and physician services as well. The opportunity arose to present these findings through a Patient Journey Mapping report to the Deputy Minister of Ministry of Children and Family Development (MCFD) and, as a result, a commitment to start the BC Child and Youth Mental Health and Substance Use (CYMHSU) Collaborative was made.

### INTERVENTION:

The members of the CYMHSU Collaborative Thompson Local Action Team, along with key mental health service providers, focused on collectively revising and building three protocols to ensure that children and youth have timely access to services when in crisis situations. The protocols developed are: 1) Kamloops Community Crisis Response Protocol, 2) School Suicide Protocol Agreement, and 3) RIH ER/Child Psychiatry Access and Flow Algorithm.

### MEASUREMENT:

The Interior Health Parkview Program tracked the efficacy of the acute crisis Protocols and funding of dedicated in-patient beds. The results demonstrated increased rapid access to psychiatric care and referrals to appropriate community mental health services. Acute care admissions and re-admissions were also being avoided.

### LESSONS LEARNED:

Collaborative relationships between leadership of the various agencies and grassroots staff are critical. Also, essential for sustainability is a commitment for regular protocol updating. Provincial oversight is needed over information-sharing; and public education and professional development is needed and should align with the development of local pathways to care. Clearly defined roles and responsibilities, and effective communications between all agencies is key to success.

## 6 Community care redesign- building a community-based system for health

Fraser Health  
Contact: Anne Jones  
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### ISSUE:

The Ministry of Health has mandated a new approach for primary and community care. The overall vision is to build a community-based system for health that supports wellness and people in the right place and at the right time.

### SOLUTION:

Ministry direction and the strong desire of the Chilliwack Health Services Leadership team to provide a community-based system for health and wellness, and high quality client centered care is the driving force of the Chilliwack/Hope/Agassiz community Home Health redesign.

### ACTIONS:

Action research has begun in partnership with the local Division of Family practice to redesign the service delivery method to provide holistic and proactive care to frail seniors in our community through a team based and proactive approach enabling our clients to remain at home successfully for longer, ensure their chronic diseases are well managed, and empower them to make informed health care decisions thus increasing their quality of life. A team based approach will also promote relationship based and consistent care, reduce duplication of efforts and transitions of care and communication, and improve accountability thus supporting the focused case management required of this vulnerable population.

### RESULTS/OUTCOMES:

Early analysis of the outcomes achieved to date include the ability to provide a rapid response to client needs, wounds that heal faster, reduced ER visits, increased Physician collaboration and seamless care and transition for our clients throughout the health care system to name a few. A community-based approach to wellness is also likely to improve health outcomes by avoiding hospital admissions, and the incidences of hospital acquired infections and deconditioning, thus increasing acute care capacity and promoting fiscal responsibility.

## 7 Using social robots to reduce loneliness in dementia care

Vancouver General Hospital  
Contact: Lillian Hung  
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### ISSUE:

Research shows that boredom and lack of meaningful engagement can be detrimental to people with dementia. They may negatively influence mood and increases loneliness, anxiety, agitation and psychological symptoms of dementia (BPSD). BPSD may lead to the inappropriate use of antipsychotics, which may consequently result in a decrease in cognitive, physical and social functions, as well as increase the risk of falls and mortality.

### SOLUTION:

Animal assisted therapy has demonstrated some success in caring for people with BPSD. However, access to appropriate animals and safety concerns makes this therapy challenging to implement. Recently, we have introduced social robots including a seal (PARO) and a therapy companion cat into dementia care in Vancouver General Hospital as an alternative. This pilot project is to explore the potential of using social robots in dementia care. New research published this month involved 450 people with dementia supports the efficacy of the social robot, PARO, in reducing BPSD and improving mood within 28 long-term care settings in Australia.

### ACTIONS:

Our study involves a qualitative video ethnographic approach nested within a three-year clinical research project examining the use of technology with people with dementia in Vancouver Coastal Health. Video recordings will be made of using social robots to engage patients in a Tertiary Older Adult Mental Health Unit, Willow5. We will conduct systematic video-analysis with the assistance of digital software, NVivo11 and Final Cut Pro. We will present our findings on the impact of using social robots in dementia care related to engagement, socialization, and mood as well as their feasibility in the hospital setting. We will engage conference attendees in dialogue about acceptability and challenges in sustaining this novel idea in practice.

### EXPECTED RESULTS/OUTCOMES:

We believe there is potential for the use of social robots in supporting the social and emotional needs of people with dementia in VGH and beyond.

## 8

### Building Powerful Health Care Teams – Lessons from the Business World

UBC Pharmacy Clinic  
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#### ISSUE:

The Pharmacists Clinic at the UBC Faculty of Pharmaceutical Sciences (the Clinic) is a patient care site and a living lab. At the start, we (the Clinic team) knew our vision, mission, job descriptions and roles, but this was only part of the picture.

#### SOLUTION:

We brought on an organizational coach from the finance world to help us know why we were doing this work and how to work effectively as a team. We learned the Lencioni model of cohesive teams, relationship awareness and the connection between motivation, values, beliefs, experiences and behaviour.

#### ACTIONS:

We learned the strengths and styles of individual team members, identified our values, and identified actions for team effectiveness. We defined team culture as how we want to work together based on the mutually agreed values of respect, trust, honesty, humility and positivity. We established four guiding principles: 1) we look up – and seek input from others since our work is inter-connected, 2) we are curious – and ask questions instead of making assumptions, 3) we are problem-solvers – since opportunities can be disguised as problems, and 4) our strength is in our diversity – and together we can accomplish pretty much anything. We established norms for communicating with each other. We use e-mail for FYI and Action Requested communication and include these terms in the subject line. For Action Requested, we state the action and timeline.

#### RESULTS/OUTCOMES:

This helps us manage and prioritize e-mail communication. We use in-person time purposefully with: weekly team meetings for day-to-day items, monthly strategic discussions for deeper understanding on an issue, working meetings to move projects forward, 1:1 check-in meetings, and corridor consultations as needed during the work day. Meetings have agendas and notes with action items tracked so they don't get lost. This team-focused approach has improved our creativity, resilience, nimbleness and success, all thanks to applying lessons from the business world.

## 9

### How You Want to be Treated: A Providence Approach to Patient-Centred Design

Providence Health Care  
Contact: Michele Trask  
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#### ISSUE:

A new health campus to replace the aging infrastructure of St. Paul's Hospital, built in 1894, will be constructed in downtown Vancouver.

#### SOLUTION:

The new St. Paul's is being designed with patients at the centre. It will be the most innovative approach to the delivery of integrated care in Canada, designed to appropriately address the future health needs of patients, families and our communities. From hospital to primary/community health solutions, the new St. Paul's will continue to lead innovations in care, research and teaching.

#### ACTIONS:

Our organization is a publicly funded tertiary-level provincial referral teaching centre with diverse specialties. The clinical planning team used multiple strategies to engage patients and families in all stages of the design. From the parking lot to the inside of the ICU, our clients have had a voice in all aspects of the plan. Populations such as our Indigenous clients that have been traditionally underserved required specific strategies to engage. When patients couldn't travel to our hospital, our team reached out to where they were located, in community health units or beyond. Reliance on the inter-professional teams providing care to patients allowed the planning team to connect specifically with people whose needs hadn't been met by the system. Leveraging these experiences provided a voice for those for whom many barriers exist to receiving care. The three main strategies utilized to glean patient feedback were: community forums, a patient advisory committee and patient partners.

#### RESULTS/OUTCOMES:

All of the techniques implemented by the team including outcomes and lessons learned will be shared with the audience. Frequent PDSA cycles allowed the group to capitalize on initiatives that were working well and strengthen those that weren't. Our approach allowed a greater audience of patients to be involved in the planning and provided them with options on how they wanted to engage.

# 10

## Responsiveness and Adaptability of HealthLinkBC to the diverse needs of BC & Yukon

HealthLinkBC  
 Contact: Laura Brotherston  
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### RELEVANCE:

HealthLinkBC is one source of primary care for residents of British Columbia (BC) and the Yukon requesting non-emergency health information and advice. Phone lines and a website are available anytime of the day or night, every day of the year.

This poster highlights the responsive role that HealthLinkBC provides to the residents of BC and the Yukon. It describes the steps taken to respond to the recent Fentanyl crisis, public health crises such as Zika and Ebola outbreaks, and improvement work for BC Wildfire support.

### INTERVENTIONS:

- Decision support and Client Record tool to include timely pertinent alerts in collaboration with BC Drug and Poison Information Centre
- Physician consultants and BC Emergency Health Service used by call takers as primary resource to support the standardized provincial guidelines
- Wiki pages: In collaboration with external physician consultants, and Quality Management Coordinators. One-stop shop for the public, professionals and call centre staff who access healthlinkbc.ca
- Wildfire Provider Registry (WPR): HLBC initiated and managed the registry of volunteer health care providers willing to provide support in areas of the province affected by wildfires; includes volunteer's names, contact information and availability

### MEASUREMENT:

PDSA cycle analysis and outcome data used to evaluate the work and determine next steps. Data includes frequency of alert tagging and usage, pre and post data, number of visitors and time spent

### RESULTS:

The poster demonstrates the adaptability of HealthLinkBC to the current health needs of BC and Yukon residents, and will demonstrate the effectiveness of our approach for future requests

### LESSONS LEARNED:

Moving forward, when a new health concern is identified, HealthLinkBC will continue to engage stakeholders, create

# 11

## Introducing Patient Reported Outcomes (PROs) in NSQIP at Royal Inland Hospital

Interior Health  
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### ISSUE:

NSQIP leads quality improvement in surgery because of its use of high quality, reliable data. These efforts have greatly improved the quality of care provided to patients. However, for many surgical patients, how certain are we that the operation improved their quality of life? We are not currently measuring outcomes that matter to patients. By recording our complications we are only measuring outcomes that matter to healthcare professionals.

### SOLUTION:

An opportunity exists to complement NSQIP clinical outcome data with PROs, thus heralding the beginning of a new era in surgical quality improvement where both clinical and patient-reported data are integrated to offer a more holistic evaluation of the care provided to patients. Reaching this new standard of surgical quality assessment will ultimately lead to substantial improvements in both surgical outcomes and patient quality of life.

### ACTIONS:

This project is currently in phase I of the initiative and has a number of objectives which include: characterizing data collection, assessing workflow, presenting PRO data in a meaningful and actionable way, and determining the benefits and challenges of incorporating PRO data into the existing NSQIP infrastructure.

### RESULTS/OUTCOMES:

This initiative is new and has not started, however the NSQIP team at RIH is putting into place the infrastructure to include PROs and determining ways to maximize the benefit of this program.

# 12

## Design Thinking a Better Discharge Medication List

Island Health  
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### ISSUE:

Historically the documentation done for discharging a patient from a hospital was largely administrative - 'Summarize the hospitalization'. Now, when the hospital physician is not the community physician, the discharge documents need to be transfers of care documents - 'Explain how to care for this patient in the community'. The document has a dual role.

There is limited time for those creating the discharge document and even less time for reading the document in the community. The document needs to be efficient in creation and consumption.

Additionally, medical information now needs to be in discrete elements to enable the benefits of Information Technology. So there is a move to self-authored documents, not dictated.

In spite of these new and non-trivial constraints, discharge documents have not changed much since they first were created.

### ACTION/SOLUTION

This poster looks at the results of a survey of 40 GP's about their needs as primary consumers of the discharge document and focuses on the medication list. It explains the design process of moving from product principles to design principles to design requirements to design options and then the final design. It then proposes that the D.A.C. (Description, Annotation and Categorization) should be the new standard for discharge medication lists.

# 13

## "Megamorphosing" Residential Care: Shifting From An Institutional to a Social Model

Providence Health Care  
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### ISSUE:

Providence Health Care (PHC) has provided compassionate residential care (RC) for decades; however, with aging infrastructure and increasingly complex residents, we have been unable to provide the vibrant home environment that brings quality to people's lives.

### SOLUTION:

To address this, PHC RC embarked on a human centred design initiative called Residential Care for Me.

### ACTIONS:

Following months of insight gathering, ideation, and testing, it became clear that something creative was needed to shake loose the institutional routines developed over the years. Megamorphosis (MM) is a term invented to describe the culture shift to a social model of care at our homes. It consists of: 4 weeks of pre-work activities to build compassion, team relationships and a shared vision, as well as 2 weeks of rapid-cycle testing during which staff, residents and families work together to enhance the physical environment and try new ideas that create time for emotional connections. Ideas are tested then evaluated daily with residents, families and staff, then adapted and re-tested based on feedback.

### RESULTS/OUTCOMES:

MM has started at 2 of PHC's 5 homes: Youville (YOU) and Brock Fahrni (BF). Successes at YOU were not all easily translatable to BF. Adjustments to the MM process were required to work with the different environment and staff culture at BF. Nonetheless, the impact of MM at both sites included deep engagement of residents and families. Daily huddles focused on uncovering the life stories of residents. Residents could be seen enjoying conversation and meals with staff, or helping with ironing and painting. Interactions between staff and residents are shifting to become more positive and social. Long-term success will be evaluated using the Provincial Quality of Life Survey. MM is the brainchild of leaders who have failed to create significant, lasting change using other quality improvement methods. MM is a nimble, easy-to-adopt, wildly creative approach focused first on people.

# 14

## DC'ed from the ED: Improving the Experience for Geriatric Patients

Fraser Health  
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### ISSUE:

In North America, the geriatric population is growing at a faster rate than the overall population. This results in an increased need for health care.

### SOLUTION:

The Emergency Department is positioned to play a role in improving care to the geriatric population.

### ACTIONS:

The Burnaby Hospital Emergency Department sees over 85,000 patients a year and 17% of patients are age 75 or older. By utilizing the Geriatric ED Guidelines published by ACEP in 2013, we hope to effectively improve the care of our geriatric population. One of the recommendations of the guidelines is to have discharge protocols in place that facilitate the communication of clinically relevant information to the patient/family and outpatient care providers, including nursing homes.

### EXPECTED RESULTS/OUTCOMES:

The aim of this project is to see improved outcomes for our geriatric population by reducing the Emergency Department unscheduled 7 day revisit rate by 20% by March of 2017.

# 15

## Influencing Change for Quality Serious Illness Conversations

BC Centre for Palliative Care  
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### ISSUE:

Early conversations matter and have been associated with better outcomes for patients and families in the face of a serious life limiting illness. However, clinicians are often underprepared and undertrained to conduct high-quality end of life conversations (Buss et al, 2011) and tend to avoid them (Block, 2002; Bernacki, 2015)

### SOLUTION:

To facilitate more, earlier, better conversations for seriously ill patients in British Columbia, the BC-Centre for Palliative Care (BCCPC) has adopted the work of the Serious Illness Care (SIC) Program of Ariadne Labs at Harvard Medical School.

### ACTIONS:

This multicomponent structured communication intervention was developed and tested to identify patients, train clinicians to use a structured guide for a conversation with patients, 'trigger' clinicians to have conversations, prepare patients and families using a standardized letter, and document outcomes in a structured format in the electronic medical record (or green sleeve) for easy access across settings.

The BCCPC provides leadership to support the SIC Initiative. The Centre is embedding this within a palliative approach to care framework with other provincial Advance Care Planning initiatives, and emphasizing a team-based approach. Educational materials and CME accredited workshops have been developed on how to use the structured guide and training for local Master Facilitators to move the initiative forward has begun.

### RESULTS/OUTCOMES:

Evaluations of the workshops show clinician agreement that confidence and knowledge significantly increased and further workshops are recommended. Further evaluation related to patient outcomes is under development. We have adapted the Implementation Journey Map developed by Ariadne Labs to reflect the feedback of key stakeholders in British Columbia. The role of the Centre is to influence, enable, facilitate and evaluate moving the Serious Illness Conversation initiative forward in BC.

# 16

## Moving Evidence into Practice: Early results from a regional knowledge translation project

Providence Health Care  
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**ISSUE:**

Research findings can take an average of 17 years to move into clinical practice. Recent studies have shown that with purposeful and directed knowledge translation (KT) strategies that gap can be shortened to 3 years, thereby reducing delays in patients receiving best care.

**SOLUTION:**

Providence Health Care and Vancouver Coastal Health developed a KT training program to support teams of clinicians to design and implement KT plans to integrate evidence into practice and policy.

**ACTIONS:**

Modeled after a successful research training program for clinicians, the KT Challenge program offers training, mentorship and funding for small teams to lead implementation projects in their practice settings. Eight teams were funded in the first year, including these projects: Implementation of a Screening Program for Psychological Distress in a Cardiac Setting; Addressing In-Hospital Malnutrition; and Implementation of the McGill Ingestive Skills Assessment in VCH Residential Care. Teams attended two in-person KT skills workshops, participated in an online community of learners, and, with support from a mentor, wrote proposals for funding. The eight selected teams are supported with funds and a mentor to conduct and evaluate their projects over a two-year period.

**RESULTS/OUTCOMES:**

The KT Challenge is a potentially cost-effective way to implement and evaluate practice improvements, improve the quality of care, and build capacity for point-of-care clinicians to implement best practices. Evaluations of the initial phases of the program have shown that participants' KT knowledge and confidence were improved significantly by workshop attendance. Each funded project will conduct a rigorous evaluation of their KT outcomes.

Health care leaders and clinicians seek innovative solutions for more efficient and effective implementation of compelling research findings into practice. The KT Challenge is a promising model for enhancing clinicians' KT skills and improving patient care.

# 17

## Rising Up After a Fall: Quality Improvement for patients at risk of impaired mobility

Island Health  
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**ISSUE:**

At Island Health, a rise in injuries related to falls and impaired mobility was recognized as an impact to quality care, therefore a need to collaborate and examine how to communicate patient mobility across the care continuum to ensure patient and staff safety was evident.

**SOLUTION:**

This led to developing a working group comprised of Clinical Informatics and Clinical Operations. The Cross Site Initiative group focus is topics that impact many, utilizing an interdisciplinary care model, and integrated practice technology.

**ACTIONS:**

We will discuss, how coming together on a common issue is leading towards improved standardized practice, quality based team care, and increased Electronic Health Record (EHR) adoption. Our unique and innovative Clinical Informatics team collaborated with Clinical Operations, taking the opportunity to leverage a newly implemented EHR and put forward a quality based approach utilizing process and technology. By leveraging a PDSA approach for implementation of a Patient Mobility Interdisciplinary Plan of Care (IPOC) we are using of the EHR to communicate the right information to the right people in the right way. We will discuss how the design, testing, and education process led to a successful implementation, but not necessarily a realized sustainable utilization of the tool moving forward.

**EXPECTED RESULTS/OUTCOMES:**

We have begun measuring the use of the IPOC, and if there is awareness for patients specific mobility recommendations. The long term goal is to evaluate that this tool will help meet strategic initiatives.

In closing, our discussion will highlight our many lessons learned which included large practice gaps in basic care planning, and lack of communication between disciplines providing care to the same patient. Next steps include further alignment of practice, with the use of standards plans of care, as well as integration with Quality Practice Councils, and site operations regionally, to find innovative ways to utilize technology to support practice and patient care

# 18

## Nutrition screening for elective colorectal surgery patients at St. Paul's Hospital

Providence Health Care  
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**ISSUE:**

Malnutrition is a risk factor for post-operative complications, including increased rates of infection and poor wound healing.

**SOLUTION:**

Nutrition screening pre-operatively can help identify patients at risk for malnutrition who would benefit from nutrition therapy to optimize surgical outcomes.

**ACTIONS:**

The simplicity of the nutrition screening tool, conducting the screen at an appropriate time pre-operatively for the patient, and the availability of a registered dietitian for individualized nutrition therapy were all considered when implementing nutrition screening in this population. The Malnutrition Screening Tool (MST) includes three simple questions pertaining to recent poor intake and weight loss. These questions were integrated into an existing health history questionnaire completed by patients during their first visit with the colorectal surgeon at St. Paul's Hospital (SPH). Patients identified as medium or high risk (MST score of  $\geq 2$ ) are referred to the outpatient dietitian at SPH prior to their surgery. Patients with a body mass index (BMI) of  $<19$  and  $>36$  are also referred as they may be at risk for surgical complications due to being low weight or obese. Referred patients are seen by the outpatient dietitian in-person or via telephone consultation to optimize their nutrition status pre-operatively. All elective colorectal surgery patients are seen by the inpatient dietitian post-operatively.

**RESULTS/OUTCOMES:**

Between July 2016 to December 2017, fifty-six patients were identified as at risk using MST and BMI cut-offs. Twenty-nine patients (52%) were seen by a dietitian before surgery, including three patients that were already being followed by a dietitian pre-operatively. Reasons for patients not being seen included patient refusal or appointment cancellation, being unable to contact the referred patient, and imminent surgery. Many colorectal cancer patients may only be seen by their surgeon a few weeks before their surgery date, which presents challenges in scheduling a dietitian appointment that will provide adequate time to make meaningful nutrition changes. Further work is underway to optimize the process and timing of nutrition screening and also to improve communication with patients around the importance of nutrition in the pre-operative period.

# 19

## From Roles and Responsibilities to Performance: Clarifying Expectations

Island Health  
 Contact: Wendy Norman  
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This poster will present the Island Health IPAC progress "Placemat": a graphical dashboard which shows at a glance, how successfully IPAC is delivering on its commitments, managing its work, and monitoring infections, hand hygiene rates, etc. The metrics can be used to drive quality improvements with unit staff, or to reset priorities and refocus resources. Island Health's team of 20 Infection Control

Practitioners dedicated time to produce a detailed clarification of their role. Using existing standards as benchmarks, the team detailed the components of their work in order to achieve consensus and shared understanding of their scope of responsibilities. Once the "what" of the role had been defined via the roles and responsibilities work, the IPAC Placemat was created to help the team manage the full scope of efforts. The Placemat tool is helpful in providing the team with an overview of progress and hot spots, as well as to identify opportunities to standardize work and create efficiencies and improvements.

# 20

## Trust and Culture Change- Primary Maternity Care

Divisions of Family Practice  
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### ISSUE:

Primary maternity care has become increasingly unattractive to family physicians. Nighttime and weekend call, high insurance costs, compensation challenges and competition from midwives has driven family physicians away from the practice. Decreased provider numbers result in increased call burdens which then exacerbates the problem. The South Okanagan Similkameen is like many other small communities that are struggling with how to maintain a family physician presence in primary maternity care.

### SOLUTION:

The answer in many communities is a move to a collaborative model between family physicians and midwives.

### ACTIONS:

Our community is on the cusp of embracing this shift to an inter-professional maternity clinic in 2018, but the transition has been lengthy and at times rocky, which begs the question "why?"

A big part of the answer is the need to develop personal and professional trust and its' influence on the speed of cultural change. Our group needed to spend time together to learn the reality of existing practices and preferences. Small incremental consensus then provided the base to start building a common knowledge base.

### RESULTS/OUTCOMES:

The emergence of provider champions was key to engaging the wider group. Deep enough relationships allowed uncomfortable conversations to take place, ultimately leading to true collaboration and community-based problem solving.

# 21

## Understanding Discharge Needs from the Client's Perspective: A Quality Improvement Project

Providence Health Care  
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### ISSUE:

Discharge materials provided to clients of the BC Home Parenteral Nutrition (HPN) Program at Providence Health Care (PHC) guide and support clients in their HPN therapy. In line with Accreditation Canada and PHC's drive to provide Client and Family-Centered Care (CFCC), existing discharge materials were reviewed by HPN staff. A need for revision was identified to align with CFCC principles. The materials' usefulness to clients had not been evaluated, nor had client's' feedback regarding their needs been sought.

### SOLUTION:

A multidisciplinary project team was established to develop an improvement plan that included client input.

### ACTIONS:

A survey was developed to better understand client needs on discharge. Eight recently discharged HPN clients were interviewed by telephone. Responses were collated into themes of useful, not useful, needs improvement or missing and needs to be added. Clients surveyed also provided alternative ideas about how information could be provided. Findings from the client interviews led to revision of the discharge material's content and format using a CFCC approach. Using client feedback, the materials were incorporated into training manual, electronic versions and tools were developed, and the HPN website was updated.

### RESULTS/OUTCOMES:

The new discharge materials have been "Patient Approved" at PHC and incorporated into HPN practice. Evaluation of the new materials by HPN clients will be undertaken and results will be shared. Lessons learned from this quality improvement project highlighted that client involvement was the most valuable aspect of the project. Challenges included identifying suitable clients, scheduling interviews and clarifying questions during interviews. The HPN team have since incorporated CFCC principles into the program and have established a Client Advisory Committee to help prioritize areas of quality improvement and future planning.

# 22

## To Pee or not to Pee: Medication Safety for Renal Patients

Interior Health  
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### ISSUE:

The problem was identified by Renal nurses whose patients were not receiving certain medications, receiving the wrong dosages, receiving too much fluid, or receiving medications at the wrong time. Medical unit staff did not always know what the medications were for or why they might be important.

### SOLUTION:

The "To Pee or Not to Pee" project is a quality improvement project at Royal Inland Hospital initiated by the Renal Program in October 2016. The project involved units that care for renal patients. The goal was to decrease adverse medication events for renal inpatients with a GFR <30 ml/min, by increasing nursing knowledge and awareness of renal specific medications.

### ACTIONS:

Short, on-the-fly education sessions were held on medical floors where it was convenient for unit staff, educators and charge nurses to attend. Lanyard cards and large posters were developed to remind staff to think critically about fluid and medications for their renal patients, among other safety issues. The follow up survey showed the posters were well received.

Short, stand-up sessions on units while staff are working were much more successful than longer sessions held elsewhere. Having a take-away, like the lanyard card, was helpful and having a poster with more details helped give staff a reference they could go to after the education session. Educating nursing educators was important for sustainability because they continue to support staff and add the information to orientation for new staff. Involving the renal educator helped keep the information up-to-date and ensured renal staff were aware of the education, too.

### RESULTS/OUTCOMES:

A staff survey showed an improvement in confidence when managing medications for renal patients. The percentage of those who did not feel confident dropped from 38% to 19%, those who felt somewhat confident increased from 59% to 69%, and those who felt confident increased from 0% to 12%. The baseline survey showed an overwhelming 98% interest in more education.

# 23

## Equip Physicians to Lead QI Projects – a customized physician QI training program

Vancouver Coastal Health  
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### BACKGROUND:

As part of a provincial initiative, Vancouver Coastal Health, Providence Health Care are partnering with the Specialist Service Committee to support a culture of continuous improvement across our physician community. The main goal is to build on existing quality structures within VCH and PHC and to increase the capacity and capability for physicians to lead continuous improvements that are aligned with the strategic priorities of the health organizations.

### APPROACH:

Three customized quality improvement sessions were offered in March 2017. The curriculum was grounded in the BCQPSC's Engaging People in Improving Quality (EPIQ) material to introduce physicians to fundamental quality improvement skills and concepts. Facilitators included staff, physicians, and patient advisors. Over 54 participants completed the 1-day training.

### MEASUREMENTS:

From the post-training survey, participants showed an overall 93% satisfaction's rate and 96% would recommend the training to their colleagues. Over half of the participants indicated they would be interested in developing a QI project as a next step. The next phase of our program is a problem-based advanced QI training where trainees will be working on a QI project on their own. Thirty three percent of the trainees from the 1-day training submitted applications.

### ORIGINALITY:

The training focused on supporting project around design, access to data and project management. We deliberately used our evaluation survey results to make adjustments to our curriculum and mode of delivery - after each session. Results were shared with facilitators so changes could be made for the next session. We aim to sustain the identified improvements in the next series of 1-day training, and to spread them into the advanced training. An in-house training program allows us to build relationships with physicians which are much needed to strengthen the quality improvement culture within our organizations.

# 24

## Transforming Services for Young People: Foundry's Stepped Care Model

Foundry  
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### ISSUE:

Mental health services for youth in Canada are fragmented and lack resources to meet needs.

### SOLUTION:

Integrated stepped care models (SCMs) can facilitate access to mental health and substance use treatment matched to client symptom severity while monitoring treatment effects regularly so that intervention intensity can be "stepped" up or down according to clients' needs and preferences. SCMs also offer earlier access to effective and low-intensity treatment for clients with mild to moderate symptoms.

### ACTIONS:

Foundry, a BC-based initiative to increase access to care for young people (YP) via a network of wellness centres, has developed a unique, first-in-Canada SCM to organize the delivery of services for YP with mood/anxiety, substance use, and early/first episode psychotic disorders. While increasingly popular in mental health service planning, there remain substantial gaps in knowledge surrounding the implementation and outcomes expected in SCMs. Evaluation of the development, implementation, and outcomes of Foundry's SCM using mixed-methods approaches will provide much needed evidence to guide mental health and substance use care for YP and their families. This focused, multidisciplinary, integrated research and knowledge translation takes full advantage of a province-wide "natural experiment", providing preliminary evidence on the potential impact of integrated stepped care on a broader set of critical, under-studied domains.

### EXPECTED RESULTS/OUTCOMES:

Furthermore, opportunity exists to embed youth-centered client reported outcomes in this evaluation, to ensure that the outcomes and experiences of care provided are measured in ways meaningful for YP, providing further evidence for how to implement and evaluate person-centered systems of mental health and substance use.

# 25

## Dementia Post Diagnostic Information - a co-design improvement project

NHS Dumfries & Galloway, Scotland  
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### ISSUE:

High quality post diagnostic support (PDS) in dementia remains a national priority area in Scotland. The diagnostic and PDS pathway was process mapped across Dumfries & Galloway. This revealed that people living with dementia (plwd) are not receiving equitable provision of PDS information at time of diagnosis. Additional anecdotal evidence is also in line with these findings which would appear to be reflective of the national picture.

### SOLUTION:

As part of the Scottish Quality and Safety Fellowship, a piece of Improvement work was commenced.

### ACTIONS:

Initially time was focused on trying to engage the multidisciplinary team in the locality with the longest waiting lists. A key learning point was that they were not in a position to buy in to the project. Utilising learning, successful engagement occurred with the team in another locality and the aim was established with the following progress to date:

- Shadowing (informal and 'Go Shadow') the plwd's experience of diagnosis and initial PDS information
- Scoping of current PDS resources both locally and nationally.
- Gathering of qualitative data from plwd in their preferred format including questionnaires, Emotional Touchpoints and storytelling, in order to enhance understanding of priorities.

Based on the key themes, PDS information is in the process of being co-designed with the project team and plwd (who have demonstrated a high commitment to improvement). This will be available at time of diagnosis in order to support the plwd towards a positive outcome.

The work is still in progress but it is envisaged that improvement in the person's experience at the first stage of their PDS pathway should have a positive impact on their dementia journey.

### RESULTS/OUTCOMES:

By the end of June 2017, everyone diagnosed with dementia via the Psychiatry Service in the Stewartry locality of Dumfries & Galloway will receive high quality person-centred post diagnostic information at time of diagnosis (in line with Promoting Excellence Best Practice)

# 26

## Home Based Memory Rehabilitation in Dementia - A Scotland wide Improvement Journey

Alzheimer Scotland  
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### ISSUE:

Scottish Government strategy commits us to providing personalised post-diagnostic support (PDS) so people living with dementia (plwd) can remain at home for longer with a good quality of life. However a national scoping exercise revealed that plwd were not receiving equitable access to OT within the PDS period.

### SOLUTION:

Occupational therapy (OT) for PDS is recognised as key to maintaining people's independence and valued roles.

### ACTIONS:

A strategic alliance was formed in order to build capacity for, and spread the OT Home Based Memory Rehabilitation Programme (HBMR), which had been tested and evaluated in one Board Area, with positive outcomes for plwd (including reduction in reported memory difficulties and maintenance of an increase in memory strategies).

Collaborative learning approaches have been utilised which involve clinicians, academic and policy-makers in national planning activities and small-scale local tests of feasibility. Key methods:

1. Sharing programme resources
2. Skill mixed clinical-strategic-academic project team
3. Collaborative decision making
4. Multiple communication strategies for problem-solving
5. Selecting and testing measures evaluating key outcomes
6. Developing efficient programme monitoring infrastructure

### RESULTS/OUTCOMES:

- Therapists in 12 of Scotland's 14 board areas now offer HBMR, improving consistency of access to OT
- There is an online forum to share practice-learning and solve implementation problems (56 members averaging 23 posts monthly)
- Selection of a range of measures to evaluate the impact of HBMR on ADL, cognition, and quality of life
- Development of a monitoring and evaluation capacity so teams can access relevant information
- Completed qualitative evaluations indicated benefits in various life areas

The success of the project to date has been due to a 'ground up' approach, with strong buy in from the clinician's involved. National leadership and alignment with policy has also been a key enabler.

# 27

## Hospital 2 Home: A collaborative approach to improving care for patients with COPD

Canadian Foundation for Healthcare Improvement  
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### SOLUTION:

Between 2014-15, the Canadian Foundation for Healthcare Improvement (CFHI) worked with 19 multi-disciplinary teams, in every province across Canada, to implement the INSPIRED (Implementing a Novel and Supportive Program of Individualized Care for Patients and Families Living with Respiratory Disease) COPD (chronic obstructive pulmonary disease) Outreach Program™.

### ACTIONS:

This year-long collaborative used an all teach, all learn adult-learning style to support teams in their change process. Based on the success of this collaborative, CFHI is now supporting an 18-month scale collaborative designed to enable teams to reach even more patients who stand to benefit from this program. Formally launching in October 2017, this initiative will include scaling at both regional and provincial levels.

### RESULTS/OUTCOMES:

The 2014-15 collaborative led to skills acquisition in quality improvement and evidence-based medicine. Teams reported a deeper knowledge of the complexities of COPD care and optimized patient care. 17 of the teams cited at least one example of organizational culture change. Improvements in quality of care included an 80% drop in hospitalizations (tapering to 40-50% in 6 – 12 months post-INSPIRED). Teams also reported reductions in ED visits and length of stay. Patients reported increased self-confidence, symptom management and return to daily activities. Families reported greater ease with hospital to home transitions. According to data from RiskAnalytica, every \$1 spent on INSPIRED, could save \$21 in costs through reductions in ED visits, hospitalizations, and length of stay.

This poster will present an overview of the findings from the 2016 collaborative summative evaluation and two peer-reviewed publications. The poster will report on improvements in quality of care, and provide insights into the barriers and enablers to quality improvement through a collaborative structure. The poster will conclude with an overview of preliminary work that has been undertaken in the scale collaborative.

# 28

## Spreading a process for Ethical Oversight of QI and Evaluation Projects

Interior Health  
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**ISSUE:**

As Quality Improvement (QI) and Evaluation projects become more complex, we are seeing a rise in the involvement of patients, families and front line staff in project design. Historically, these projects have been sent to a Research Ethics Board for ethical oversight, or simply left to the scrutiny of the project team. The overall goal of ethical screening is to support and protect people and their information when doing this work, requiring a systematic and reliable approach that is designed specifically for these types of projects.

**SOLUTION/ACTIONS:**

Ethical oversight of QI and Evaluation projects is crucial when we consider the complexity and volume of projects we undertake. Providing teams an efficient process within a health care setting can be challenging and spreading the process across various organizations can seem daunting.

Interior Health has developed a network of 175 people able to support the recognition of risks inherent to QI and Evaluation projects. We have a team of 15 reviewers trained to review and provide mitigation strategies, and have completed 72 reviews with 2 in progress. This work aligns and is embedded in the IH Ethics Framework.

**RESULTS/OUTCOMES:**

We have recently been engaging with, and training clinicians outside of Interior Health and are working to spread a standardized, reliable and tangible process to assist with the possible risks in QI and Evaluation Projects.

# 29

## Radiation/Oncology Supply Standardization: Minimizing Inventory Costs & Waste

University of Calgary  
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**ISSUE:**

Within the Radiation/Oncology department, supplies in the patient exam rooms were neither organized in a standardized manner nor at sufficient stock levels. Providers were required to locate and secure needed supplies; an insufficient use of provider time. The unit supply room was stocked on a “par-level” determined by the hospital's central supply; resulting in both out of stock and out of date items.

**SOLUTION:**

- Determine supply utilization in patient exam rooms.
- Identify and revise inventory levels to reflect true usage in both the patient exam rooms and the central supply closet.
- Reduce supply inventory and costs

**ACTIONS:**

Our interdisciplinary team began the project with value stream mapping to understand flow and use of treatment/patient supplies. Gemba visits provided team with end-user input on supplies, stocking, inventory flow, and patient care needs. Supply stock was inventoried and adjusted with supplier. A 5S approach was then utilized to complete stocking standardization project.

**RESULTS/OUTCOMES:**

1. Inventory levels were reduced as follows:
  - a. Items stocked in inventory reduced by 2,478 units or 52.82%
  - b. Carrying cost of inventory reduced by \$2,256 or 35.03%
2. Providers reported fewer out of stocks

Our outcomes identified the effectiveness of using value stream mapping, Gemba walks and 5S methodology to optimize inventory control in a key hospital outpatient department. Ensuring team member input and project planning resulted in an inventory adjustment that served to minimize out of stocks, thereby improving efficient use of provider time. Further successes were achieved in reducing waste and inventory carrying costs.

# 30

## Driving reproducible improvement with the Behaviour Change Wheel

Centre for Collaboration, Motivation & Innovation  
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### ISSUE:

It has been said that while all improvement requires change, not every change leads to improvement. Yet, as improvement practitioners seek changes leading to improvements, many may do so without clear and explicit theory. This challenges our ability to understand, reproduce, and spread changes that lead to improvement.

### SOLUTION/ACTIONS:

The Behaviour Change Wheel (BCW) is a new tool that aids in explicit theory development as well as intervention design and evaluation for behaviour change interventions (e.g., handwashing, smoking cessation, use of clinical guidelines, medication adherence, etc.). Developed by Michie and colleagues, the BCW is itself theory based, developed from a systematic review and consolidation of behaviour change frameworks described in literature. We aim to describe the importance of using explicit theory to advance reproducible improvement and describe the BCW as an example of a tool that, when combined with the science of improvement and notably small-scale iterative change testing and learning (i.e., PDSA cycles), may have great potential for improvers seeking to develop changes that lead to improvement as well as explicit theory for reproducible improvement.

# 31

## Fragmentation to Integration: Triage Consulting Team

White Rock/South Surrey Division of Family Practice  
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### ISSUE:

The White Rock-South Surrey (WRSS) Division of Family Practice is working in partnership with the Surrey School District to support schools when they have cases of children and youth facing complex mental health and substance use challenges.

### SOLUTION:

The Triage Consulting Team (TCT) was created to respond to this need. The TCT is composed of a child psychiatrist, GP, MCFD case manager and a School District Resource Counselor.

### ACTIONS:

The initiative is innovative due to the unique composition, timely access to the team and their commitment to work collaboratively.

A referral to the TCT is made through the school district and the team meets every two weeks for one hour to review two cases. An action plan is developed by the team which is communicated and implemented through the school counselor to the child/youth and parents. If consent is obtained, a copy of the action plan is sent to the patients' family physician, to promote continuity of care.

An evaluation has been developed to obtain information to improve the service and document its value. However, anecdotally, the impact has been significant with school counselors giving the following feedback: We feel grateful and excited to have benefited from this type of collaboration. We directly experienced the value of such a partnership, and celebrate the importance of such collaboration between schools, medical professionals and outside agencies as an invaluable piece of planning for students requiring interventions within and outside of the school. What was accomplish in 30 minutes would have taken weeks (if not months) through traditional channels.

### RESULTS/OUTCOMES:

This initiative provides timely access to expert consultations and facilitates the shift from fragmentation to integration. True collaboration with a clear goal and the right people at the table can provide solutions in 30 minutes and contribute to changing the landscape for child and youth mental health in our community.

# 32

## Novel neonatal complex care and transition (NCT) primary provider team model for improvement

PHSA

Contact: Sandesh Shivananda  
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### ISSUE:

Neonates with multiple medical problems (MMP) who previously would have died in early infancy are living longer and consequently the complexity of their care and social needs are increasing exponentially.

### SOLUTION:

Inconsistent, uncoordinated care, with inadequate focus on rehabilitation and parents acquisition of technical, system navigation and coping skills were identified as opportunities for improvement during a rapid process improvement workshop in 2013. The primary aim was to establish baseline clinical profile and outcomes of neonates cared by a dedicated and consistent NCT team.

### ACTIONS:

Intervention: An NCT team consisting of a nurse, respiratory therapist and a physician was established in January 2013, to provide care during all days of a week, for neonates with MMP. NCT team roles included (i) identifying appropriate patients for the NCT team (ii) coordinating multiple hospital and community-based services, (iii) facilitating parents acquiring essential caregiver skills, (iv) ensuring consistency of care.

Measurement: Length of initial hospital stay, readmission rates following discharge and hospital resource use was measured for neonates receiving care by NCT team during first three years (2013-2016).

### RESULTS/OUTCOMES:

NCT team cared for 147 infants. The survival to discharge was 98%; the median (IQR) length of stay was 63(40-123) days, and 69%, 67% and 90% of neonates received mechanical ventilation, parenteral nutrition, and antibiotics. The proportion of neonates discharged with a feeding tube, home Oxygen/ventilator, and home monitors were 84%, 21%, and 22% respectively. 12% and 43% of neonates had an emergency visit during the first month and the first year following discharge

Lessons learned: Neonates cared by NCT team are extremely premature or have a genetic diagnosis, and have significant morbidity and resource needs. There is a need for an educational curriculum to facilitate staff acquiring relevant complex care skills. Aligning neonatal-infant-pediatric-adolescent-adult care transition is crucial in improving care

# 33

## Randomized Coffee Trials-Creating Connections at Island Health

Island Health

Contact: Xela Rysstad  
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### ISSUE:

When the Island Health Quality & Patient Safety Consultant (QPSC) team first learned about Randomized Coffee Trials (RCTs) in 2015, they were both intrigued and energized to try a series of RCTs across Island Health with the aim of providing informal opportunities for staff, physicians, patients/families and volunteers to connect. The QPSC team believes that a connected organization leads to a positive workplace culture, which in turn is associated with improved patient outcomes.

### SOLUTION:

RCTs provide an innovative vehicle for connecting staff across the vast and diverse Island Health region and starts to breakdown silos by bringing people together in a casual setting. While deceptively simple, RCTs aim to increase overall engagement and get staff talking and learning from one another.

### ACTIONS:

The QPSC team offered 3 series of RCTs across Island Health between October 2015 and October 2016, for a total of 8 different hospital sites and approximately 300 participants (including 10 virtual RCT pairings). Each series of RCTs was planned to maximize engagement and feedback was requested from all participants for post-event review. Through thematic analysis, the resounding feedback was that Island Health staff appreciated the fun and informal opportunity to connect with each other and discuss what patient safety and continuous quality improvement meant to them. Participants indicated they also took away a new understanding and appreciation of the diversity of professions, backgrounds, and skills among the Island Health community.

### RESULTS/OUTCOMES:

A fourth RCT campaign was carried out through October-November 2017, which was aligned with the BCPSQC Change Day campaign (November 17th, 2017). This RCT series aimed to increase participation and attempted to move the previous format of in-person RCTs to solely virtual "coffee date" pairings. The change in format was proposed in hopes that participants would be more likely to connect with others outside of their own work site and engage more staff who are based in the community or have irregular schedules. The modifications were a huge success and the Change Day BC RCT pledge had over 380 participants join, with the majority of pairings happening virtually!

# 34

## Implementation of Patient's View at BC Mental Health & Substance Use Services

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Through a specially designed Patient Safety & Learning System interface called "The Patient's View", we solicited feedback from patients and families in order to gain valuable insight on actual and potential patient safety events. This initiative engaged patients to become partners in care and support their participation in creating a safer patient environment. This work was undertaken at Heartwood Centre for Women and Forensic Psychiatric Services (FPS) Regional Clinics within BC Mental Health and Substance Use Services, an agency of the Provincial Health Services Authority. It was a project that supported our philosophy where patients, families, and caregivers collaborate on improving health care, while also meeting a requirement of Accreditation Canada for involving patients and families on the use of electronic communications and technologies. The data collected assisted our healthcare professionals in identifying areas of improvement that promote patient safety and quality of care.

In partnership with the Langara College General Nursing program, students created the process for conducting patient interviews for each specific site. Through the use of the Plan-Do-Study-Act (PDSA) cycle, continuous enhancements to the questionnaire and process were implemented to help our patients with impaired cognitive abilities. An abbreviated survey was created for patients and families seen in the community. The data collected was analyzed to highlight key areas of interest and trends that could be potential precursors for future issues within this specific population, and address concerns based on identified gaps in the system. It was important to highlight the high number of positive feedback reported into the Patient's View regarding our staff and programs. The Patient's View was instrumental in enabling the patients and their families to voice their concerns, and work collaboratively with healthcare professionals in order to promote the safety of patients.

# 35

## Optimal timing for umbilical cord clamping: towards universal guidelines for newborns

Island Health  
Contact: Gustavo Pelligra  
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### ISSUE:

Delayed cord clamping provides many benefits for newborns. Research has shown that - for most newborns - delaying cord clamping increases blood volume, transfusion of stem cells and improves iron stores. However, despite the growing body of evidence supporting delayed cord clamping, widespread implementation of this clinical practice remains a challenge.

### SOLUTION:

This project aims to evaluate and standardize clinical practices for optimal timing of umbilical cord clamping for infants born at Victoria General Hospital (British Columbia), over a 6-month period, to achieve 100% compliance with current evidence-based guidelines.

### ACTIONS:

Using a multi-phase methodology, key quality improvement components were employed, as follows: PLAN: current evidence and guidelines were reviewed; DO: an electronic survey was conducted, including all perinatal practitioners, to gather information regarding their current practices. In addition, a baseline data collection on cord clamping time was completed; STUDY: data analysis showed that wide practice variations on delayed cord clamping between perinatal practitioners exist at Victoria General Hospital. One of the major challenges we faced was inconsistent data records on cord clamping time in patients' medical charts; ACT: Next steps are to develop and disseminate local guidelines and protocols through education, and ensure consistent data collection in patients' charts - to facilitate monitoring of sustainable practice changes overtime. We also plan to share our results and proposed clinical guidelines with all perinatal facilities at both the health authority and provincial levels.

### RESULTS/OUTCOMES:

This is the first study looking at practice variations in delayed core clamping in our Institution. Our findings support the need for a universal adoption of evidence-based guidelines for the benefits of all newborns in our region.

# 36

## Patient/family experience of QI initiatives at the point of care: an ethical analysis

UBC School of Population and Public Health  
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Engaging patients/families in QI is promoted as part of patient-and family-centred care. Doctoral research at UBC (in partnership with a tertiary care hospital) examined the assumption that QI is a beneficial extension of routine medical care. This study examined QI interventions where patients take on new responsibilities to improve the quality/safety of their own care.

QI is typically described in positive terms without considering how the context of its implementation may shape patients' experiences. Ethical scrutiny of QI has centred on whether a project is research and therefore a matter of REB attention. If the project is deemed QI, it is treated as ethically unproblematic.

Using value-based framing, the researcher studied 2 QI hand hygiene interventions involving patients. She observed hospital units, interviewed patients/family/staff, and analyzed documents. Findings revealed patients wanted to be "good patients" and personal hygiene was an important aspect of identity. Interventions studied were not necessarily implemented by staff nor experienced by patients as planned or reported. Implications centred on the value patients place on connections with their providers and health care settings.

When people have a sense of relational safety (relationships perceived as safe, secure, straightforward, nonthreatening), they move towards connections with others, fostering trust. Relational safety was particularly important when care processes or providers are new or fluctuating, such as when QI is integrated at the point of care.

Organizations and providers ought to emphasize the relational interaction accompanying a specific QI care process. Patients feel safer and valued when providers take the time to communicate, "just so you know, we're asking you to do this now and this is why." Integrating this values-added approach may improve the ethics and efficacy of QI.

# 37

## How a resilient perspective shifted our view of performance measurement

Vancouver Coastal Health  
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### ISSUE:

Accurate monitoring of quality is essential to improving patient care. There has been growth in the development of measures to track quality and the trend to tie performance with reimbursement is also growing. This raises a critical issue: Can end-users be confident that the chosen metrics are appropriate and accurately reflect performance? Administrative hospital data are routinely coded and are now used to identify potentially avoidable instances of hospital-acquired harm. This work evolved out of our interest to understand the development of the CIHI harm indicator (HI) criteria (to measure postoperative anemia/hemorrhage) and consider its use as a suitable metric in our health authority.

### SOLUTION:

Hospital coders use the CIHI HI criteria to identify instances of hospital harm. The HI process relies on the quality and completeness of information documented in the chart and captured in the administrative data. Using a clinical lens to discriminate between anticipated and unanticipated instances of patient harm (i.e. intra and postoperative hemorrhage and/or anemia) we conducted a retrospective review of a 12% random selection of cases (fiscal year 2016/2017), previously identified by coders as examples of potentially avoidable hospital-acquired harm.

### RESULTS/OUTCOMES:

We identified a 49% discrepancy in rates of hospital-acquired harm, consistent with our review of 2 other CIHI HI criteria applied to data. The review showed that the HI process over-reported hospital-acquired harm, and that patient and procedural complexity must be considered in any measurement of harm. The review also identified features of a resilient system that anticipates and responds to complexity to mitigate harm and support good outcomes. This highlights the added value of looking beyond what goes wrong to looking for what goes right, and understanding how the system creates success, in spite of competing demands, complex patients and settings. Resilience refers to how people cope with everyday high-risk complex work by adjusting their performance to the conditions. Anticipation and responding are two features of resilient systems.

### ACTIONS:

The work shows that the story behind data is powerful and central in driving quality improvement, and resilience is a key feature of work that needs to be identified and showcased. Shifting the way we use data and monitor performance to guide quality improvement deserves attention. Next steps will focus on how we identify and measure complexity and celebrate resilience.

# 38

## Walking a mile in their shoes: Using design thinking to prepare children for surgery

BC Children's Hospital – PHSA  
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### ISSUE:

Knowing you have to have surgery can be a terrifying prospect. Now imagine it's your child who needs it; what do you need? We run a pre-anesthetic clinic at BCCH to ensure children are medically fit for surgery, however only 9% of patients are referred by their surgeon.

### SOLUTION/ACTIONS:

We think about physical health readiness- getting lab work- yet we can neglect what really matters to families: being psychologically and emotionally prepared. We explored the concept of being 'ready' for surgery from a patient and family perspective using design thinking methodology; Empathize, Define, Ideate, Test, Prototype. We began with a patient journey mapping session. The stories families shared with us were humbling and shocking, we often added to their trauma. We defined our work: Nurse screening of 100% of dental surgery families to provide personalized preparation that meets their needs. Families and staff had no shortage of ideas for improvement: virtual communication, using play therapy, individualized care plans, debriefs, trauma informed practice for staff. Early results from our testing cycles are positive and encouraging!

### RESULTS/OUTCOMES:

When we compared pre and post intervention survey data, we saw an increase in satisfaction from 88% to 97%. One family told us "This was the smoothest experience she ever had going for a procedure in the OR. She woke up this morning and looked at me and said, 'I'm not even scared at all'. She has had such traumatic experiences before and today she was so happy and calm. I couldn't ask for anything more". Also the impact this has had on our team is amazing. One anesthesiologist told us that we have forever changed her practice. We would like the opportunity to showcase our families' story and share our experience of using design thinking methodology to demonstrate that it can be used effectively as a patient-centered improvement model. Most importantly, wish to thank and honour the families who trusted us to use their story to create a better experience for all.

# 39

## Factors that Influence a Successful Care Conference in Residential Care

Cheam Village  
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### ISSUE:

The development and delivery of new care models for older people living in residential care homes is necessary to ensure high quality professional care is delivered with dignity and compassion.

### SOLUTION/ACTIONS:

Cheam Village and Glenwood, located in Agassiz B.C., are two residential care homes that provide publically funded complex care to older people. Since 2011 we have focused on quality improvement as a strategic imperative in the delivery of all health, care and well-being services. A key initiative was a complete re-design of the resident and family conference which is held within six weeks of admission and at least on yearly basis afterwards. A collaborative team approach was developed and the physician and facility leadership team are now present at every care conference. We work in partnership with Residents and their families to discover "what's important to you." The focus of the care conference is on functional ability and quality of life; not disease and medical diagnoses. We have developed a clear format to guide discussions while still allowing significant flexibility in format depending on the individual resident and family circumstances. And we believe that a successful resident and family conference is a key requirement for any proposed quality improvement initiative in Residential Care.

### RESULTS/OUTCOMES:

At Cheam Village and Glenwood Care Centre this intervention has greatly contributed to sustained improvements in the areas of antipsychotic use from 25% to approximately 5%; reduction in polypharmacy to an average 5.1 medications per resident and reducing unscheduled emergency department transfers to an average of 4.5% per quarter. This presentation will look at how to effectively address the challenges of developing collaborative team based care; explore how to fully engage with families and residents; and examine the barriers and challenges to innovation in the Residential Care setting.

# 40

## Adherence to ERAS Protocol and Impact on Elective Gyne Oncology Surgical Patients

VGH

Contact: Christa Lepik  
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### SOLUTION:

Early recovery after surgery (ERAS) principles were designed to accelerate recovery, reduce morbidity and shorten length of stay (LOS). In November 2016 formal ERAS protocols were initiated for all patients at VGH undergoing elective gynecological oncology surgery.

### ACTIONS:

Compliance with ERAS elements and patient outcomes within 30 days of surgery were measured between Nov 2016- April 2017 (N=193). Chart reviews were conducted to audit compliance with pre-operative, intra-operative and post-operative ERAS components. Patient outcomes measured including LOS, readmission rates, and morbidity rates based on National Surgical Quality Improvement Program (NSQIP) definitions. These outcomes were compared to pre-implementation data from December 2011 to March 2016 (N=450). Data for open and minimally invasive (MIS) procedures were analyzed separately.

### RESULTS/OUTCOMES:

Results demonstrated compliance (defined as >80%) with the majority of ERAS components with the exception of: pre-operative completion of counseling and carbohydrate loading, intra-operative goal directed fluid therapy and post op provision of boost. Overall morbidity has not yet decreased with implementation; 5.3% vs 8.3% (p=0.0863) for open procedures and 2.1% vs 5.8% (p=0.1904) for MIS. In terms of LOS in days, the mean for open procedures post implementation was slightly lower at 2.91 vs 2.95 (p=0.8568) although not significant. LOS for laparoscopic (1.4 vs 1.31, p=0.6238) was not significantly decreased.

The introduction of ERAS for Gynecology oncology has not yet shown dramatic decreases in LOS or morbidity. This may reflect the need for further adherence to the ERAS components, higher co-morbidities in the post ERAS group and/or the need for a larger sample size to observe significant statistical differences as LOS and complication rates are already relatively low for gyne oncology procedures. We will continue to audit and collect data and work on increased adherence to all the ERAS components.

# 41

## A Case of Prevention: RDs Impacting Upstream Primary Care in Abbotsford

Abbotsford Division of Family Practice

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### CONTEXT AND RELEVANCE:

Dietitians in the Clinic pilot was identified during the GPSC A GP for Me Assessment and Planning Phase when a survey to Abbotsford GPs was circulated to assess their interest in team-based care. Registered Dietitians (RDs) were selected for their specialized nutrition knowledge to enhance patient health outcomes and support GP capacity. Abbotsford has a high instance of low chronic disease that can be managed and offset through preventative care. Prior to the pilot, RD services available to the community through their GP was limited to a 0.7 FTE outpatient RD with a long waitlist, or people could pay to see a private RD. In September 2015, collaboration between Abbotsford Division of Family Practice and Fraser Health Nutrition Services began on this 19-month pilot.

### INTERVENTION:

Funding was obtained for a 1.0 FTE position. Interested clinics completed an application form. 10 clinics participated. RDs were oriented to each clinic and trained to chart in the clinics' EMRs. Monthly project Steering Committee meetings were held and evaluation activities undertaken.

### MEASUREMENT:

793 patients were seen. Monthly statistics were collected and surveys and interviews with patients, MOAs, GPs, and RDs were conducted. Patient and provider satisfaction was high and no-show rates were low. Aggregate health outcome data was collected at 4 clinics that had the same RD throughout the project. The results are impressive: 66% of patients lost weight with an average of 5.3kg and 68% of 116 patients reduced Hemoglobin A1C by an average of 0.9%. These results align with Dietitians of Canada averages.

### LESSONS LEARNED:

Leveraging early adopters' enthusiasm is key. There was a high demand for RD services and having GPs review their patient panel to develop a triage system would support clinics in referring patients that would benefit the most. It was difficult to end the pilot as positive health outcomes were demonstrated and there was no transition program.

# 42

## Improving family experience discussing risk in inpatient child-adolescent psychiatry

BC Children's Hospital  
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### ISSUE:

Youth in child and adolescent inpatient psychiatry can be at high risks for unsafe behaviours. Feedback from post-discharge surveys conducted in our programs suggests that families would like more understanding of plans to manage risks, especially after discharge.

### SOLUTION/ACTIONS:

We are engaging families to understand how they would like to be involved in risk management discussions and planning. Participating families are currently attending or have attended Child and Adolescent inpatient programs at BC Children's Hospital in the past 2 years. Interviews focus on 4 main risk areas from the risk triaging form used in our programs: self-harm, violence, elopement, and self-neglect. Impact: Initial results reveal that families felt well-supported and comfortable discussing safety with staff. They felt their input was included in risk management discussions but often deferred to clinicians' expertise; all felt comfortable mitigating unsafe behavior at discharge. When discussing specific risks, family preference and perception of terminology varied. For example, families responded unfavorably to the word "violence," and preferred the term "aggression," which they feel is less stigmatizing. Instead using "self-neglect," families felt "self-care" was more appropriate and understandable. While "self-harm" is frequently used, some felt "self-injury" was more inclusive.

### EXPECTED RESULTS/OUTCOMES:

Understanding family experiences can lead to changes in language, timing, and format of safety discussions. It will guide how clinicians ask about safety and may precipitate change in how clinicians document risk discussions in discharge summaries and in patients' charts. Ultimately, changing language may improve family-clinician rapport, increase discussion of unsafe behavior, and help families feel more confident with risk management planning.

# 43

## Improving Quality of Care Across the North

Northern Health Authority  
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The acuity of the cohort of patients cared for by general internal medicine services in the University Hospital of Northern British Columbia is increasing year by year. This presented an opportunity to address capacity and improve the quality of outpatient and inpatient general internal medicine care. Collaboration between multiple stakeholders including, members of the Department of Internal Medicine, Northern Health Authority and other physicians / stakeholders was foundational to success but takes time – two years from inception. The plan comprised of three components: a seven-day inpatient general internal medicine service; outpatient care; and weekday general internal medicine consultation services. The inpatient service would be open for admissions seven days per week supported by a multidisciplinary team. Outpatient care would include clinics where there is little delay between referral and consultation. The consultation service is intended to support patients across the region through a broad range of distance services such as video consults. This plan is designed to establish a robust system of outpatient care to reduce Emergency Room visits and hospitalizations. It will double the capacity of inpatient care, supported by a multidisciplinary team. The plan is supported by a comprehensive evaluation plan developed collaboratively by the health authority with physicians. This is a plan which has grown out of the unique challenges faced by the University Hospital of Northern British Columbia. Working closely with the health authority administration was a key feature to finding possible solutions for the initiative. The three components of the model provide a more comprehensive solution to challenges faced in the north. It is designed to improve the quality of care, promote early diagnosis and to provide consultations across the region. It was and still is a very fruitful partnership and approach – one of the key factor for the success of this project.

# 44

## Using Personalized Music to Improve the Quality of Life of Residents in Long Term Care

BCPSQC and VantageLiving  
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### ISSUE:

The Alzheimer's Society of Canada estimates that 546,000 Canadians live with dementia. Behaviors associated with dementia including aggression and agitation can decrease quality of life (QOL) and are often treated with antipsychotics, which can have harmful effects.

### SOLUTION:

Studies show that introducing personalized music into the lives of dementia residents significantly reduces agitation. Music has profound effects as it evokes emotions associated from memories, strengthens emotional bonds, and improves mood.

### ACTIONS:

The aim of this project was to implement a personalized music program at two VantageLiving residential care sites. The goals of this project were to reduce agitation of dementia residents, reduce the use of inappropriate antipsychotics, and improve QOL for the residents.

The interdisciplinary team selected residents for the program by looking at prescribed antipsychotics, and at behaviors. Preference of music for selected residents was assessed by using the Assessment Of Personal Music Preference (APMP) tool. A music playlist for each resident was then made; music was downloaded, and then applied to iPods. Staff was educated to use the intervention when the resident exhibited early signs of agitation.

The following tools were used for monitoring progress: Cohen-Mansfield Agitation Inventory (CMAI), Agitation Quality Improvement Monitor (AQIM), Individualized Music Program: Behavior Monitoring Tool, and the Antipsychotic Tracking Form. The AQIM and APMP were retrieved from Gerdner's (2001) article. The CMAI is a validated tool used to assess for agitation. Staff satisfaction and understanding of the program was assessed through surveys that staff anonymously completed.

Results/Outcomes: Twelve residents were selected. 58% of the residents were on an antipsychotic at the start of the project. Data continues to be analyzed, however, preliminary trends indicate positive effects of the program, such as an overall decrease in agitation by 85% when music was implemented.

# 45

## "Health Innovation for All" – A Student Led Quality Improvement-based Conference

Institute for Healthcare Improvement Open School: UBC Chapter  
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The Health Innovation for All Conference in Vancouver June 9 - 11, 2017 was a student-led endeavour uniting over 400 students and professionals and serving as a catalyst to many beginning their journeys in health care quality improvement (QI). This was facilitated through IHI UBC, a local Chapter of the IHI Open School, as part of a global, interprofessional, educational community empowering students to become agents of change.

### SOLUTION/ACTIONS:

IHI UBC sought to unite national interests, strengthen their student quality leader network across 18 active Canadian Chapters, provide practical skills in QI and community organizing, and create opportunities for students interested in projects in health systems innovation.

Day 1. "Back to Basics Quick Course" hosted by IHI Head Office Staff engaged 140 students and professionals in activities and learning on the model for improvement.

Day 2. Conference brought together 170 healthcare students and professionals at the UBC Nest and 150 attendees at a satellite site in Toronto. UBC's event consisted of four professional and patient keynotes, a panel discussion on healthcare education, and 13 interactive workshops highlighting technological innovations, systems level thinking, health systems redesign and interprofessional collaboration. The day ended in a storyboard reception with 18 posters featuring student's local and national QI projects.

Day 3. The Chapter Leader Summit enhanced leadership capacity and relationships by uniting 22 IHI Open School Canadian Chapter Network Leaders. Students co-created a two-year national strategic plan for their Canadian Chapters, and even created a new IHI Chapter at UNBC in the process.

### RESULTS/OUTCOMES:

The events received >90% satisfaction rating and >95% recommendation to peers, and achieved our goal of strengthening the IHI Canadian Chapter Network. The main event coordinators subsequently wrote a blog post for the IHI Open School, sharing insight and resources for others looking to host future events.

# 46

## Critical Care Exchange: Enhancing clinical skills, teamwork and staffing versatility

Providence Health Care  
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### ISSUE:

Critical care is a specialty experiencing rapid technological progress, increased specialization, and a growing patient population. This is coupled with a shortage of critical care nurses in BC. Shortfalls in the workforce are tackled by increased workloads and strategies that either increase or redistribute staff. Floating a nurse from one critical care area to another is a strategy used to realign patient needs with available staff but it comes with risks to patient safety. In addition to providing care, nurses who are floated must deal with a cerebral load of unfamiliar things such as ascertaining where things are, documentation, different procedures and patient populations. The opportunity to miss something is exacerbated both by what is unknown (i.e., the unfamiliar procedure) as well as what is not known to be unknown (i.e., the rare complication with that unfamiliar procedure). Since floated nurses are working with an unfamiliar team, they have a limited social knowledge to help them understand how the team works together which compounds the safety risk.

### SOLUTION/ACTIONS:

The Critical Care Exchange (CCE) program was cost neutral strategy to offer professional development, enhance inter-unit collaboration and increase staffing versatility thus creating a safer clinical environment for patients. Nurse volunteers from one of our four critical care units, (i.e., the intensive care unit [ICU], cardiac ICU, cardiac surgery ICU and post anesthetic care unit) are paired to exchange units for eight consecutive shifts. In preparation, CCE nurses connect with clinical educators, review learning goals and resource nurses are identified to act as a mentor during their experience.

### RESULTS/OUTCOMES:

In the first four months, 12 nurses have participated in the CCE. Interim program evaluation is underway, but early findings indicate a number of positive changes (i.e., increased moral, engagement in professional development and sharing of ideas) despite initial logistic challenges.

# 47

## Targeting the Campus Community: A Sexual Assault Awareness Campaign

BC Women's Hospital + Health Centre  
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### RELEVANCE:

Rape culture myths perpetuate sexual assault therefore debunking myths is necessary to affect behaviour change.

### CONTEXT:

The BC Women's, Sexual Assault Service (SAS) offers medical care, forensic evaluation and services, 24/7 to anyone 13 years or older and has been sexually assaulted within the past 7 days. SAS has seen a 75% increase in the number of victims served in the past 8 years. Contemporaneously, student advocacy groups have reported an increase in the number of reported sexual assaults on post-secondary campuses. These factors indicate the need for an education campaign targeted to campuses.

### SOLUTION/ACTIONS

In partnership with the UBC AMS Sexual Assault Centre, SAS has developed a suite of video vignettes, each highlighting common misconceptions of sexual assault. Videos are under 5 minutes and use social media as the platform for discussion. The following video appears as a Facebook Messenger discussion. The theme is no one is entitled to sex and the message at the end of the video: you are not entitled to sex because you think someone "led you on" or because you "showed them a good time." Pressuring someone into having sex with you is sexual assault. Consent needs to be given willingly and enthusiastically.

### POTENTIAL OR ACTUAL IMPACT:

Tailored education and health promotion to the target population maybe more effective than generic messaging. An evaluation of the videos is being conducted to measure impact.

# 48

## Missed Care: Neuroscience Nurses Perspectives on Direct Care Activities

Fraser Health  
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### ISSUE:

Nurses report they believe direct care activities are an important element to nursing assessments and quality patient care, but are commonly missed. Nurses identified specific elements within the clinical practice environment which influence decision-making, prioritization and completion of direct care activities.

### SOLUTION/ACTIONS:

This study explored neuroscience nurses' perceptions of the level of importance direct care activities have to patient care and factors within acute care clinical practice environments which influence decision-making, prioritization, and completion of direct care activities. This descriptive, mix methods study involved 140 neuroscience nurses, at five acute care institutions in a large Canadian health authority. Data collection tools for this study included a validated MISSCARE tool, an anonymous survey and personal interviews.

### RESULTS/OUTCOMES:

Findings suggest that in acute care neurological practice settings, nurses remain committed to providing direct care activities for their patients, believing it essential to developing caring nurse-patient relationships and the provision of quality patient care. Several factors within clinical practice environments influence how nurses prioritize and assign direct patient care activities and whether direct care activities are completed or missed.

# 49

## Developing a Model for Evaluating EHR Adoption and Use at Island Health

Contact: Gurprit Randhawa  
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### BACKGROUND:

The Electronic Health Record (EHR) is central to BC's eHealth strategy to increase the quality and safety of patient care. To support the successful adoption, use, and optimization of EHRs, there is a need for a comprehensive framework to better understand the variables that contribute to EHR adoption and use. For this reason, Island Health embarked on the development of an EAU Model.

### METHODOLOGY:

A literature review of existing technology adoption and use and quality frameworks was conducted in May 2017. The variables/constructs and dimensions of each of these frameworks were extracted. Similar constructs and definitions were combined and an overarching framework and corresponding metrics were developed.

### RESULTS:

Ten technology adoption and use frameworks/models were included in the development of the EAU Model: (1) the Unified Theory of Acceptance and Use of Technology (UTAUT); (2) Canada Health Infoway's Benefits Evaluation Framework; (3) the UVic eHealth Observatory's Clinical Adoption Framework; (4) Island Health's Quality Framework; (5) the BC Health Quality Matrix; (6) The Clinical Systems Transformation Benefits Framework; (7) the Agency for Healthcare Research and Quality Domains of Health Care Quality; (8) Health Quality Ontario's Quality Attributes; (9) Accreditation Canada's Dimensions of Quality Care, and (10) the Clinical Adoption Meta-Model. In total, 42 constructs were included in the model and appropriate evaluation metrics and methods were identified. Model validation and testing is currently underway, which is a highly challenging process.

### IMPLICATIONS:

The EAU model combines evidence-based constructs of technology adoption and use with universal quality and experience benefits that can be measured for EHR benefits realization. The EAU model can be used by health care organizations to guide the planning, implementation, and continuous evaluation of EHRs at the local, provincial, national, and international levels.

# 50

## Collaboration between a Neurologist and Pharmacy Team Helps Headache Sufferers

Contact: Rosanne Khurana  
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Globally the prevalence of headache disorders in adults is about 50%. Over thirty percent have reported migraines. Headaches represent a significant burden on sufferers and can harm family life, social life and employment. In addition to prescription therapy, headache patients tend to self-medicate with non-prescription products. Pharmacists thus have an opportunity to provide meaningful interventions. A unique collaborative care relationship exists between pharmacists at the University of British Columbia (UBC) Pharmacists Clinic and a neurologist at the UBC Headache Clinic. Patients referred to the neurologist are scheduled for an appointment with the pharmacist first. During the initial consultation, the pharmacist obtains a thorough history, provides education, identifies drug therapy problems and develops a care plan for optimizing the patient's drug therapy. The care plan is communicated to the neurologist, and healthcare providers in the patient's circle of care. To monitor progress, follow up appointments are scheduled. Information-sharing continues until treatment is optimized. To date over 100 patients have received care through this collaborative process. Drug therapy problems were identified and included: under-use of prophylactic medication, inappropriate abortive medication and medication overuse headache. Addressing these problems prior to the neurologist appointment allowed the neurologist to use their time on other problems. Patient outcomes of reduced headache intensity, number of headache days and/or improved quality of life were achieved. This collaborative arrangement has enabled patients to see the neurologist in 3 months instead of the usual 12-month wait time. Collaborative care between a physician and pharmacist leads to timely and improved outcomes for patients with headaches. Pharmacists focus on resolving medication-related problems, thereby freeing up the neurologist to focus on all other aspects of treatment.

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# A1

## CREATIVE THINKING AROUND ACCESS

### Text-Messaging in Primary Care: The Haida Gwaii Experiment

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Primary care is centered on the face-to-face visit: provider and patient. Despite a digital revolution in methods of communicating, healthcare remains anchored to in-person visits, shackled by privacy concerns and antiquated billing policies. Though the quality of care is high and includes a physical exam, visits entail advance bookings, travel, sitting in a waiting room, and work absences. Many problems can be safely dealt with through alternatives when strong primary care relationships exist. In spring 2017, the providers at Haida Gwaii Hospital & Health Centre (HGH) launched a pilot, where care is offered via a web-based texting application called Weltel®. Patients have the ability to text our Primary Care Nursing team for health advice and assistance. Registered patients receive an automated, weekly text asking “How are you doing?” Responses are categorized by a web-based platform and a nurse or nurse practitioner triages during weekday clinic hours. Responses are tailored to need and may include a text message, phone call, or an appointment with a healthcare provider.

We seek to understand how this service impacts health-related quality of life, the patient-provider relationship, interoperability and use of emergency services. Patient X was experiencing numbness in their hand. Via text communication, the nurse was able to rule out symptoms requiring an emergency visit and refer to a specialist. Our implementation strategy is unique to a rural and remote clinic; its launch is the first emergence of two-way texting in primary care nationwide.

At present, 5% of our patients are enrolled and all have used it. Users include teens, mothers, and grandmothers. The addicted, depressed, marginalized. Hypertensives, diabetics, and asthmatics. Texting shares results, books appointments, monitors symptoms and treatment, adjusts dosages, and offers advice to the worried and blue. Texting is bringing the clinic out of the clinic to where and when people need it.

# A1

## CREATIVE THINKING AROUND ACCESS

### Emerging Models of Care with Virtual Technology

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In this workshop we explore emerging models of care enabled by virtual technology. In a world bursting with technology, patients are demanding not only prompt service, but also convenience of access for their health care. This includes the growing expectation that a patient's primary care provider has immediate access to the information they need to provide a continuum of care no matter where the patient is – in a rural setting or an urban location. Our perception of the traditional models of service for patients is being challenged constantly and will not be sustainable.

This discussion will review new evolving models of care enabled by technology in Providence Health Care and the BC Interior led by the Kootenay Boundary Division of Family Practice: eCase or eConsult, Rapid Access to Consultative Expertise by phone or app, secure messaging, notification and video conferencing in traditional and not-so-traditional settings (ICU, Mobile Maternity, PreSurgical).

These models are revolutionizing communications between specialists and family physicians – building relationships, providing clinical decision support, and opening access to different modalities of care – so patients have a continuum of care in their own community.

By exploring future models of care through technology we will:

- Present information from the patient and provider perspective on remote consultation services
- Delve into new models of care – eCase, RACE, secure messaging, Mobile Maternity, non-traditional telehealth
- Investigate the shifting value base related to virtual care – do our values match those of our patients?

# A1

## CREATIVE THINKING AROUND ACCESS

### Supporting Rural Maternity Services Through Telehealth: An Integrated System Perspective

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The attrition of rural maternity services in BC is well documented, as are the consequent maternal-newborn outcomes for mothers who have to travel to access care. It is a provincial and professional mandate to support maternity care “closer to home” for rural women and their families, although this is not without challenges in low-volume and isolated settings. The Mobile Maternity project, funded by the Specialist Services Committee, set out to use technology to bridge the distance between rural women needing specialist obstetrical care and their provider but has expanded to include creating a virtual support system for care providers in low-resource environments. This latter application can be seen as one part of a larger systems approach to sustaining and growing rural generalist maternity services.

This presentation, based on our experience with the MOM project, will look at the use of telehealth in supporting rural maternity care and discuss its importance in sustaining isolated rural practices within the context of other system supports. Through a rural lens, we will consider the role telehealth has in enhancing generalist – specialist relationships, in being a conduit for continued medical, midwifery and nursing education, allowing specialist oversight in high acuity transport situations and other applications that strengthen the confidence and competence of isolated providers. We will conclude the systems perspective on the use of telehealth by reviewing tensions caused by its introduction and the implications on other parts of rural health care.

# A2

## IMPROVING SENIORS CARE

### Residential Care Initiative Generating Impressive Results

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Physicians in the Kootenay Boundary Division provide care for 581 beds in 11 Residential Care facilities. The Kootenay Boundary Residential Care Initiative (RCI) MOU was among the first ones to be signed in BC in June 2015 and has transformed the manner in which we deliver residential care. Prior to the RCI, antipsychotics prescription rates in the Kootenay Boundary region were the highest in Canada, communication between physicians and facilities was challenging, and there was no formal forum available for GPs and facility staff to address issues. The KB RCI solution is based on collaboration and trust. We hold 14 regional and local-level in-person meetings every year. Through these meetings, which gather between 10 and 70 people, physicians, nurses, social workers, dieticians, pharmacists and facility managers have opportunities to connect, learn, discuss, and improve (QI loops). The meetings are safe and enjoyable, while focused on solutions. We compile data on 11 indicators from four different sources, including the GPSC Facility Survey, CIHI, and Interior Health. As a result of our work, we have achieved a 34% decrease in ED transfers, an 18% reduction in # of patients on 9 or more meds (with decreases in some facilities as high as 55%), and a 12% reduction in # of patients on antipsychotics without a diagnosis of psychosis. 83% of meeting attendees have indicated that they will change their practice as a result of the intervention. Our GPSC facility ratings have improved across the board, and are the highest within our health authority. In addition, we have created two resources on the Dementia Trajectory (now distributed widely across BC), and have shared our expertise (6 Divisions are currently using our data slide decks for 9 different areas in Interior Health). Next on our list is to individualize feedback for GPs. Our presentation will outline the strategies that we have utilized to bring physicians and facility staff together and improve our outcomes.

## A2 IMPROVING SENIORS CARE

### Innovative Tool Leverages Observations of Health Care Assistants to reduce ED Transfers

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Seniors living in Residential Care are at high risk of being transferred to an Emergency Department (ED). Some of these ED visits are avoidable if signs of health decline are identified early by staff and managed within the Residential Care home.

PREVIEW-ED© is an innovative tool designed specifically for Health Care Assistants (HCAs) working in Residential Care. Many tools used to identify the decline of residents in Residential Care focus on assessment by nurses. PREVIEW-ED© is an innovative tool designed specifically for Health Care Assistants (HCAs). Completed daily, it uses simple language, and an accessible format to leverage the observational skills and familiarity of direct care staff with the residents for whom they provide care. These observations may reveal subtle changes in resident health status which may indicate decline and provide an “early warning”. PREVIEW-ED© focuses on four of the main reasons why residents are transferred to the ED: Urinary Tract Infection, Dehydration, Congestive Heart Failure and Pneumonia.

Taking less than a minute to complete, the tool’s simple scale quantifies the change in health status, and provides a common language for team communication. The tool has been instrumental in improving communication and team functioning among care team members, and highlights the important role that HCAs have in Residential Care.

In 2016, a Fraser Health (FH) pilot in four care homes, demonstrated a reduction of ED transfers from Residential Care by 71% (n= 176). These results motivated Fraser Health to implement PREVIEW-ED© in all their 79 long term care homes. Results from this spread collaborative will be available in the fall, 2017 and will focus on ED transfers and other improvements. Preliminary results have shown improvements in team communication, and engagement of HCAs in resident’s care.

Care Assistants to Reduce Emergency Department Transfers.

## A2 IMPROVING SENIORS CARE

### Every Voice Counts: Innovation and Persistence Results in First-of-a-Kind Residential Care Client Survey

Client Survey  
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The Office of the Seniors Advocate is an independent office of the B.C. Ministry of Health. The Office monitors and analyzes seniors’ services and issues in B.C., and makes recommendations to government and service providers to address systemic issues. Isobel Mackenzie, appointed in 2014, is Canada’s first Seniors Advocate. In 2016, the Office partnered with Providence Health Care to conduct a first-of-its-kind survey of residential care clients.

This in-person survey, through the efforts of over 800 volunteers over a nine month period, reached out to over 20,000 residential care clients across BC’s publicly-funded facilities. Survey collection wrapped up in April 2017, with high-level provincial and health authority-level results being released by the Office in September 2017. Detailed facility-level results will follow. Although a majority of residents have cognitive impairments, survey personnel made multiple attempts to complete the survey with each client, resulting in a 42% response rate. A parallel survey mailed to a client’s most frequent visitor has yielded over 9,000 responses.

Survey implementation and question design were informed by a consultation group comprising experts in gerontology and survey design, along with Ministry and health authority staff. Results will be analyzed in conjunction with clinical data from InterRAI assessments from B.C.’s publicly-funded residential care facilities. Survey results will dovetail with the Office’s annual Residential Care Quick Facts Directory to provide the public and policy makers with important data and findings. The Advocate will use the survey results as a road map to make recommendations for improvements in care quality.

## A3 FOCUSING ON THE PATIENT EXPERIENCE

### Taking Bereavement Support Online

Contact: Shelly Cory | Executive Director  
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Research, experiences of health providers and families, and information Canadians requested on the Canadian Virtual Hospice (CVH)'s Ask a Professional tool informed the need to develop an online grief support tool. MyGrief.ca is the world's first evidence-based, psycho-educational tool to provide online loss and grief supports. The tools respond to a critical gap in bereavement services. It complements existing services and provides an accessible option for people who cannot easily access in-person grief support. A literature review and International development team of researchers, clinicians, and bereft family members developed MyGrief.ca. The modules cover topics from anticipatory loss, the nature of relationships between survivors and the ill/deceased, and challenges to navigating everyday life. Given the scope of the subject matter it was a challenge identifying where to draw the line for module content. KidsGrief.ca expands off of MyGrief.ca. It helps adults to recognize children grief, and provides them with well-informed grief support. It's also a tool for educators, and health providers who are in a position to support young grievers or provide guidance to parents. Topics include: teachable moments, such as the death of a pet; preparing kids to be at the bedside of someone who is dying; informing kids about a death; and explaining Medical Assistance in Dying, and suicide. Both tools include text-based content and videos from actual grievers representing diverse age, cultural, and gender. The University of Victoria and First Nations University evaluation indicated that MyGrief.ca exceeded user expectations. Users indicated that it's easy to navigate; includes high-quality information, easily supports existing university and volunteer education programs, and provides a sense of shared experience. Hosting and updating of the tools have been built into the CVH operating budget. Users accessing MyGrief.ca from outside of Canada are levied \$25 USD for use.

## A3 FOCUSING ON THE PATIENT EXPERIENCE

### Community Care Teams: Co-Designing the Way We Care for Patients

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Patients, GPs, and healthcare providers struggle to navigate the complexity of the current healthcare system. Patients are unable to receive proactive, responsive, and timely care, resulting in uncoordinated and fragmented services. GPs don't know what services are available to support their patients, resulting in feelings of frustration. Staff feel unable to provide the best care possible because of workload concerns, budget constraints, and lack of clarity regarding roles and responsibilities. These circumstances discourage communication and trust, subsequently fostering a system of blame and disconnection. Fraser Health and the Chilliwack Division of Family Practice are co-designing a system of care that addresses these issues and moves to a patient centred, wellness focused model. The biggest changes will be how we work together, share information, and plan care together. Starting with our frail elderly and Home Health and Home Support, we will simplify their healthcare journey by assigning a community care team to a group of GPs. The team, currently an RN and LPN, closely monitors the GPs' elderly patients with chronic diseases and uses a proactive approach to provide the right care in the right place. The first team launched in Jan 2017, second in Aug 2017, and more teams are on the horizon. By working with a small group of GPs and their patients, teams can identify opportunities to improve collaboration, e.g. charting directly in the GPs EMR. Benefits in the first 8 months: Improved communication; Rapid response to client needs; Reduced number of providers entering clients' homes; Closer monitoring of conditions that leads to improved health (wounds heal faster & reduced ER visits); and Avoidance of hospital admissions. Our biggest challenge is how the leadership team can support staff to transition to a necessary change. We're working closely with staff and Unions to ensure that staffs' professional skills are supported and enhanced education provided.

## A3 FOCUSING ON THE PATIENT EXPERIENCE

### Patients as Partners for Electronic Communications

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Many patients at the Forensic Psychiatric Services Regional Clinics present with complex mental health and substance use needs, are transient and have difficulty maintaining housing, which increases their likelihood to be non-compliant with treatment. Patients who are non-compliant with treatment can potentially pose a greater risk of safety to themselves and/or others in the community. This project aimed to identify challenges and opportunities for electronic communications between patients/families and health care providers, to promote timely crisis management. Current policies advise against texting and emailing confidential information to patients unless the information has been encrypted and authenticated using encryption software. Patients, families and staff at the Forensic Regional Clinics were requesting the use of electronic communication because it is timelier, efficient, and supports those without a regular mailing address or home phone.

The project involved patients, families, the Forensic Regional Clinics, the Ministry of Health, and the Patient Voices Network. The initiative met a key requirement of Accreditation Canada that policies on the use of electronic communications and technologies be developed and followed with input from patients and families.

A baseline assessment of patients and families obtained a starting point to demonstrate how this project could deliver a tangible improvement. A Value Stream Mapping Session identified the pros/cons, barriers and constraints, and necessary policy recommendations. Patients were then surveyed about their preference for appointment reminders. In total, 31% of those surveyed preferred the use of electronic communication as their primary method for being reminded of upcoming appointments. The project results have informed the policy development and technology requirements at the agency and provincial levels to further support the usage of electronic communications.

## A4 NEW APPROACHES IN PRIMARY CARE

### How One Nurse Changed a System

Contact: Lisa Zetes-Zanatta | Executive Director, Health Care Operations  
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A nurse can make a difference. In fact one nurse can change a system. At a time when the population is aging and home care needs are increasing beyond the ability of the health care system to manage them, we needed to make a change in how we work together between our GP providers and the HA specialized services.

The Fraser North West division of family practice began a revolution by hiring one nurse. Her name was Debbie. She in partnership with the family practitioners selected the most frail and at risk seniors to have proactive home visits to find out how they were functioning in the community and if there were any proactive supports needed. This extended the reach of the family physician to give a lens into the happenings and needs in the home and gave the patient one point of contact if there were concerns that they had. This nurse provided both case management and clinical supports to this group of over 500 patients.

All of this was ongoing the health authority specialized team had just completed a review of the home health service to determine what was not working and the list was long. When they worked with the FNW division on how to improve the system they were oriented to the Nurse Debbie project and decided to look at those clients and determine if there was an effect on system utilization. The results were astounding. Over 500 ED visits averted and over 17000 patient days saved in the same cohort of clients within a 1 year period of introduction to this change in Nursing from a reactive to a proactive approach.

This started the redesign of the HH system for our region. We are now at a stage where positions have been changed to create an additional 16 Primary Care Nurses (Nurse Debbies) and 2 social workers. It is important to note that new dollars were not required for this change but a willingness to look at the system from a different perspective is. There will be many more steps along the way, but this will change our system.

## A4 NEW APPROACHES IN PRIMARY CARE

### Two Sides of Change in Organizational Culture

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Northern Health (NH) is one of the pioneering health authorities in BC to integrate Primary Care and Community Care services and implement team based primary care model. IPCC Resource Team is formed to support the Integrations work by 1) Developing and Implementing new processes for Primary Care Teams 2) Offering process related coaching to Primary Care Team members. The Team have approached the integration work from two angles: the technical side and the human side. The team employs QI and project management principles and tools to manage the technical side of the change to ensure that process changes result in improvements and avoid changing for the sake of changing. However, technical change is easier to design but will fail in implementation if people are not motivated to change or not supported adequately for change; i.e. the human side of change. The biggest challenge we face is changing the culture of the organization, "we have always done this way" and motivate and challenge front line leaders and clinicians to work differently and provide care in a team based environment. Instead of pushing down the technical changes to stakeholders, the team works with stakeholders to understand the sources of their resistance. Some resist the change because they do not believe the team based model will yield the result the health authority is looking for, while others believe in the model but lack confidence in the organization's ability to manage the transformation process. Some resist the change because they are fatigued to constantly balance between change activities, new learning and day to day cares to clients. The team works closely with stakeholders to understand source of resistance and employ different strategies to manage the human side of change. Strategies include, phased approach to implement changes, involve stakeholders into solutions development to create engagement, provide communications regarding change, elbow to elbow coaching supports, etc.

## A4 NEW APPROACHES IN PRIMARY CARE

### Pharmacist Modifications to an Electronic Medical Record in Primary Care: Lessons Learned

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Pharmacists in Primary Care increasingly rely on Electronic Medical Records (EMRs) to support quality patient care, reduce healthcare errors, and enhance appropriateness of care. Commercially available EMRs are not aligned with pharmacist logic or documentation needs for clinical and collaborative practice.

The Pharmacists Clinic (PC) at the University of British Columbia Faculty of Pharmaceutical Sciences has pharmacists working collaboratively with other health professionals to optimize patient outcomes. The PC invested in the design, modification, creation, and testing of 4 modules in the OSCAR EMR to enhance pharmacist contributions to health care teams: Medication, Disease/Indication, Healthcare Team, and Drug Therapy Problem tracker.

These modules were identified and prioritized from an analysis of pharmacist-best practices, patient needs in primary care and expanding scope of pharmacist practice; feedback from collaborating physicians, OSCAR EMR user groups and patients; and an environmental scan of other primary care practices across North America. An iterative 3-step process was implemented with final EMR changes published to OSCAR Canada.

The PC team has now used the new modules in the care of over 3800 patients for enhanced monitoring of patient clinical status, electronic documentation, patient-friendly documents, and standardized tracking of clinical metrics. New features include indication-based prescribing, patient-friendly disease synonyms, tracking of the patient care team for interprofessional collaboration and a drug therapy problem tracker to standardize monitoring of patient health outcomes and pharmacist workload.

The lessons learned to integrate pharmacist logic into a traditional EMR can also be applied to other health care professionals, laboratory services and specialist medical services.

## A5 BUILDING SKILLS – CREATING CAPACITY

### Gamification in Dementia Training

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The literature shows most hospital staff do not receive dementia education despite they care for patients with dementia in daily practice. Research tells us the gaps in success for dementia education include a lack of staff engagement, experiential learning, and sustainability. Workshops have limited effectiveness as staff often find the classroom content boring, not practical and difficult to retain. Many are unable to attend due to busy work schedules and staffing shortage. The goal of this project is to increase engagement, motivation, knowledge, and effectiveness of dementia education among hospital staff. This project involves a student in the BCPSQC summer internship program working with the clinical team and learning technology team in Vancouver General Hospital to develop an online learning module for a specific topic: Communication – The ART & SCIENCE of Person-Centred Care. The three phases of the 10-week project include: (1) literature review and needs assessment with users (hospital staff), (2) co-design of the content with 70 interdisciplinary staff (e.g., nurses, physicians, occupational therapist, physiotherapist, unit clerk) in medical and mental health programs, (3) testing the games in the learning module by using multiple PDSA cycles. The online course resides in the Learning Hub (previously called CCRS) where staff in all health authorities across BC have unlimited access to use. Staff not only gain communication skills in caring for patients with dementia individually but also can have fun and healthy competition as a social experience to stimulate ongoing engagement and active learning. In this presentation, we will demonstrate what we have learned about the impact of applying Gamification in Dementia Training (GDT). Findings related to improvements in knowledge and engagement will be discussed. We will engage conference attendees in dialogues about the acceptability and challenges in sustainability.

## A5 BUILDING SKILLS – CREATING CAPACITY

### Cognitive Behavioural Therapy Skills and Group Medical Visits: Successes, Challenges, and Lessons Learned

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In October 2015, the Shared Care Committee and the Victoria Division of Family Practice (VD FP) began an innovative pilot program providing Cognitive Behavioural Therapy (CBT) Skills group medical visits as a new MSP-funded service. Primary care providers had identified access to non-pharmaceutical mental health treatments as their top priority. The program responded by designing and implementing a self-management skills training program for groups of 15 patients. Family physicians facilitate 8-week series of 90-minute groups after being trained through co-facilitation and mentorship by psychiatrists. It has been a win-win-win story for patients, providers and local mental health services. Patients are referred to a central intake hosted by the VD FP, and choose a preferred group as offered by one of the 12 providers. To date, over 2600 patients have been referred from almost 400 Victoria family physicians and waitlists are minimal. Completers report 94% satisfaction, and nearly all participants would recommend the program to others. Self-efficacy is markedly improved, with 93% of completers reporting confidence in their ability to manage their mental health symptoms. Quantitative measurements of symptom severity have demonstrated statistically and clinically significant improvements, with large to very large effect sizes. Referring family physicians ranked the value of the program at 4.7/5, indicating that the program has had a positive impact on their patients' mental health, increased access to mental health care, and has somewhat reduced the need to refer to specialist services. Providers of the groups, both psychiatrists and family physicians, report high levels of satisfaction and acceptability. Lessons were learned throughout the development, implementation, sustainability, and spread of the program with some recent learnings when spreading the program to new communities (i.e., Vancouver, Duncan) and patient populations (e.g., youth, women, cancer patients).

## A5 BUILDING SKILLS – CREATING CAPACITY

### Introducing a Peer-to-Peer Mentorship Program in the Emergency Department

Contact: Beata Chami | Student Practitioner  
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Vancouver General Hospital introduced a Peer-to-Peer Mentorship Program in March 2016 among the staff members of the ED. This project evaluated the effectiveness of the Peer-to-Peer Mentorship program in the ED since its introduction. Currently in the evaluation stage, close focus has been on the team dynamic, leadership engagement and overall culture of the nursing, physician, and allied-health team working in this busy, fast-paced ED.

This mentorship program was designed to introduce and reinforce leadership-based skills among ED staff. This involved providing focused educational and professional development opportunities regarding effective staff communication and teamwork both at the ED unit level and off-site. This level of involvement not only impacts staff satisfaction at work, but it also impacts the patients that they are responsible to care for, by influencing the quality of care that they are provided.

As our Canadian healthcare system strives to work towards improving quality of care for patients, it is therefore important to consider initiatives that address the interpersonal and leadership skills of the staff providing this care. This mentorship program has the potential to improve quality of care in the ED. Previous studies demonstrate that heightened communication and teamwork in the ED mainly impacts improving patient and staff satisfaction, reducing clinical errors and improving patient safety.

The objectives of the project are measured via semi-structured qualitative interviews with 11 nurses, 2 physicians and 1 champion (head of the initiative) who are all staff members of the ED and part of the Peer-to-Peer mentorship program. Afterwards, the transcripts are analyzed through identifying common and unique themes across the data. This information assists the researcher in further understanding the team dynamic, level of leadership engagement, and the overall influence of the initiative in the ED with recommendations for future development.

## B1 ADVANCING URGENT CARE

### Improving the Response to Children and Youth in Crisis in the Emergency Department

Contact: Dr. Quynh Doan | Clinician Scientist  
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The Emergency Department (ED) protocol and accompanying tool, HEARTSMAP, were developed in response to growing concerns with the number of children and youth presenting in the ED in mental health and/or substance use crisis, and challenges faced with long waits, consistent assessment, and referral to appropriate support after discharge.

Addressing these challenges was the impetus for creating the ER Protocol Working Group of the CYMHSU Collaborative (a Shared Care initiative of Doctors of BC and the BC government).

The ED protocol consists of five clear steps and tools. Each step aims to inform a consistent, supportive approach in the ED for children, youth and their families in MHSU crisis, and to equip staff, many with limited mental health training, with the skills and confidence to support them. Communication and safety plans are also included to ensure information sharing among community service providers – including GPs – and to equip families to cope at home.

HEARTSMAP, developed by BC Children's Hospital, is one of the key steps of the ED protocol, and was designed to address the need for a faster, and more accurate, consistent assessment of pediatric mental health issues in the ED.

The tool provides questions to allow practitioners to quickly assess a patient and make customized treatment recommendations, such as “consult psychiatry” and “refer to CYMH”, based on the outcomes of the test. Recommendations are personalized for each patient, so they are equipped with the information and community resources they need. The HEARTSMAP report is also used to develop the ER Protocol Communication Plan and Safety Plan at discharge.

The provincial implementation of the ED Protocol, and HEARTSMAP, are currently taking place at 30+ hospitals, and will be evaluated on its successful integration into clinical practice and effectiveness in providing more timely care, and referral to appropriate community resources.

# B1

## ADVANCING URGENT CARE

### How Safety Bags are “Releasing Time to Care” (RT2C) in the Intensive Care Unit

Contact: Anna Anderson | Vancouver Coastal Health  
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In February 2017, we became the first ICU in BC to implement Releasing Time to Care – a front-line staff led quality improvement program. Lack of consistency in the storage of safety equipment was identified as a problem for the unit. The aim of the project was to improve patient safety and staff satisfaction by having new, unused safety equipment consistently at each patient bedside, while also reducing the costs and infection control concerns associated with having unneeded and possibly contaminated supplies at the bedside. This project is significant because it demonstrates how vital interdisciplinary collaboration is to developing and sustaining quality improvement initiatives. In consult with our nursing colleagues, as well as respiratory therapy, infection control, and housekeeping, we came up with a plan to modify how our safety supplies are stored in patient rooms. Two safety bags were created – one with respiratory safety equipment, and one with emergency medications. At patient transfer or discharge, the bags were kept intact, and wiped down by housekeeping. We measured time savings, cost savings, and compliance (i.e. presence of all safety equipment in the designated spot with no extra equipment) before and after our intervention.

Our data shows that the time to check the safety equipment decreased by 69%, the estimated cost savings are \$13,087 for 6 months (cost of discarding all items with each discharge), and that compliance over time has remained steady.

One lesson we learned was how important interdisciplinary collaboration is to making any changes successful, especially in a critical care environment. Further, we found that establishing what we were going to be measuring before starting any interventions made it much easier to explain the value of, and progress of our project to our colleagues as we went along.

# B1

## ADVANCING URGENT CARE

### How We’re Improving the Time to ECG in the Vancouver General Hospital Emergency Department

Contact: Dr. Heather Lindsay | Associate Head and Associate Medical Director, Emergency Medicine  
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#### CONTEXT:

For patients with chest pain, the target time from first medical contact to obtaining an electrocardiogram (ECG) is 10 minutes, as reperfusion within 120 minutes can reduce the risk of adverse outcomes in patients with ST elevation myocardial infarction (STEMI). In 2007, Vancouver Coastal Health (VCH) began tracking key indicators including time to first ECG. The Vancouver General Hospital (VGH) Emergency Department (ED) has had the longest door to ECG times in the region since 2014. In 2016, the VGH ED Quality Council developed a strategy to address this issue, with an aim of obtaining ECGs on VGH ED patients with active chest pain within 10 minutes of presentation.

#### INTERVENTION:

The VGH ED Quality Council brought together frontline clinicians, ECG technicians, and other stakeholders. Process mapping and root cause analysis determined two main barriers: access to designated space to obtain ECGs, and the need for patients to be registered in the computer system before an ECG could be ordered. The team identified strategies to eliminate these barriers, identifying a dedicated space and changing the workflow to stream patients to this space before registration.

#### RESULTS:

Our median times in patients with STEMI have gone from 33 minutes to 8 minutes as of June 2017. In all patients presenting with chest pain, we improved from 36 to 17 minutes. As of April 2017 we are obtaining an ECG within 10 minutes in 27% of our patients, compared to 3% in 2016.

#### LESSONS:

By involving frontline staff, and having champions providing real time support, we were able to make significant changes to the culture at triage. We cultivated sustainability by changing the workflow and physical space, and not relying on education. Implementing small changes and incorporating feedback has allowed us to identify new challenges early. While we have improved the times for our walk-in patients, we have not perfected the process when a patient moves directly to a bed or presents via ambulance.

## B2 RESPONDING TO THE OPIOID CRISIS

### An Emergency Room Response to the Fentanyl Crisis

Contact: Dr. Jason Wale | Medical Director of Emergency Medicine  
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The current fentanyl drug overdose death epidemic is the largest healthcare crisis in Canada today.

There were 956 overdose deaths in BC in 2016 representing more than 3X the total number of automobile deaths annually. The crisis is rapidly worsening with 1400+ deaths projected for 2017. More than 80% of patients who died in 2016 had prior medical encounters leading up to their death with the majority being in the ER.

Emergency Departments have an opportunity and obligation to think outside of the box of traditional ER care to proactively take steps to help these most vulnerable patients avoid overdose deaths. Opioid addiction is a chronic, frequently fatal disease presenting to emergency department acute care. Most opioid addicted patients need to use several times per day. Most previous attempts at intervention have failed as referrals to addiction services from community emergency departments do not show for appointment. The traditional ER focus has therefore been on treating complications of opioid use such as overdose, infectious, social and mental health complications. In July 2016 the BCCPS made changes to allow all physicians to use the opioid substitution medication Suboxone (bupropion and naloxone in a sublingual tablet). This partial agonist is a safer treatment for withdrawal and ongoing substitution and has the best evidence behind it to help opioid use disorder patients recover from their disease. We aim to provide 100% of opioid use disorder patients presenting to Island Health emergency departments rapid access to addiction treatment and the option to use Suboxone to help them to achieve this. Piloted at RJH we partnered with community addiction clinics to standardize streamlined referral and Suboxone starts from the ER. Early learnings included the utility of nurse initiated referral, engagement of peer support organizations for patients and the potential for home Suboxone initiation... Culture shift in the ER is hard but necessary.

## B2 RESPONDING TO THE OPIOID CRISIS

### An Indigenous Approach to Harm Reduction

Contact: Andrea Medley | Indigenous Wellness Educator  
First Nations Health Authority  
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#### BACKGROUND:

As British Columbia enters its second year into a public health opioid overdose emergency, recent data show that BC First Nations communities are disproportionately represented in rates of overdose and overdose deaths.

#### OBJECTIVES OF THE RESEARCH PROJECT:

The Indigenous Wellness Team (IWT) at the First Nations Health Authority has created workshops to host conversations with BC First Nations communities that support culturally safe and culturally relevant conversations around harm reduction and addictions through an Indigenous lens.

#### METHODS:

Culturally relevant workshops were designed including "Indigenizing Harm Reduction", "Decolonizing Addiction", "Take Home Naloxone" and "Indigenous Perspectives on Healthy Sexuality". New learning models were also developed: "Indigenizing Harm Reduction Learning Model" and the "Sexual Wellbeing Model". These incorporate traditional Indigenous knowledge systems that are rooted in teachings around intergenerational strengths and resiliency.

#### RESULTS:

From May 2016 to July 2017, the IWT hosted 52 workshops throughout B.C. There are now 84 Naloxone dispensing sites and 126 First Nations communities have been trained in Naloxone and rescue breathing.

#### CONCLUSIONS:

Indigenizing harm reduction and creating new learning models focusing on culture and intergenerational strengths, are effective ways of sharing and exploring teachings around harm reduction with BC First Nations communities.

## B2

### RESPONDING TO THE OPIOID CRISIS

#### Safer Prescribing of Opioids with Interactive Learning Sessions

Contact: Dr. Lawrence Yang | Family Doctor  
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From 2015 to 2017, The BC Practice Support Program has delivered learning sessions surrounding Pain Management to hundreds of GPs in the province. Evaluations methods have confirmed benefits in increasing physician confidence in their pain management techniques, including opioid prescribing.

Our storyboard will display some of the survey results from GPs surveyed after the learning sessions.

Dedicated paid time enabled very busy GPs to build more capacity and efficiency and clinical certainty in their management of chronic non cancer pain. In consideration of how many opioids in our community are prescribed by GPs in BC, the potential benefits of this program should be highlighted and expanded upon.

As BC was a world leader in guideline development for prescribing of controlled substances, the PSP program in its iterations can be seen as a world leader in adult education in this very topical area of medicine.

## B3

### CULTURALLY SAFE CARE FOR INDIGENOUS PATIENTS

#### Pharmacist Supported Medication Management in First Nations Communities

Contact: Larry Leung | Lecturer, Pharmacist  
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The "Healthy Medication Use Initiative – Medication Management in First Nations Communities," is a collaborative project established in 2016 between the First Nations Health Authority, University of British Columbia Pharmacists Clinic, First Nations communities, and community pharmacists. This is a community-driven initiative with the objective of supporting the design and delivery of pharmacist-led clinical services in First Nations communities in British Columbia (BC). To date, 40 of the 205 BC First Nations communities have received funding to participate in this initiative, with 22 community partners and pharmacists actively engaged with the UBC Pharmacists Clinic in service delivery. As a community-driven initiative, First Nations communities are responsible for determining the pharmacist(s) who will be participating. Pharmacist-led clinical services include one-on-one appointments for medication management, educational presentations and patient workshops. Implementing this initiative highlights the need for a scalable community-driven approach to identifying needs and priorities for pharmacist-led clinical services. In addition, common enablers and barriers have been identified for pharmacists in providing care in First Nations communities. These lessons have the potential to inform not only the future of this initiative, but other projects across Canada involving First Nations peoples, pharmacists and other health care professionals. Despite ongoing efforts, health disparities between Indigenous and non-Indigenous populations in Canada remain. Pharmacists contribute a unique drug-therapy perspective and can play a key role in improving the health and wellness of Indigenous patients. To our knowledge, current literature is lacking in its' exploration of the role of a pharmacist in Indigenous health.

## B3 CULTURALLY SAFE CARE FOR INDIGENOUS PATIENTS

### What's the Harm? Examining the Stereotyping of Indigenous People in Health Systems

Contact: Laurie Harding | Integration Lead, San'yas Indigenous Cultural Safety Program  
Provincial Health Services Authority  
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Colonization is recognized as a root cause of health inequities experienced by Indigenous people in Canada. The health gaps between Indigenous and non-Indigenous/Settler Canadians is further exacerbated by ongoing institutional racism and discrimination towards Indigenous people, as well as colonial ideologies that are deeply embedded in our healthcare system today. As a result, when Indigenous people access health services they often ironically experience harms in the form of prejudice, stereotyping and bias, which contribute to further access barriers.

The PHSA San'yas Indigenous Cultural Safety training program was created as an intervention to promote culturally safe practices among healthcare employees. In the San'yas training, participants are asked to discuss examples of Indigenous-specific stereotyping and discrimination. Through this intervention, San'yas participants have collectively provided thousands of examples of Indigenous people being stereotyped and harmed in the healthcare system. This narrative data provides a glimpse into the harms that Indigenous people experience on a daily basis when trying to access health services.

With the aim of deepening an understanding of stereotyping harm and how racism plays out in health care, a mixed methods study was designed to analyze this data and provide insight into ways of promoting culturally safe organizational practices and improving quality of care for Indigenous people. A Qualitative Inquiry approach was used to undertake a thematic analysis of the narrative data and measure frequencies of recurring themes.

Results from this analysis will be presented, including preliminary findings on the where harm tends to occur within the health system. Insights will be shared on how Indigenous cultural safety training can play a key role in an organizational framework to address Indigenous-specific racism, contribute to transforming workplace culture and improving quality of services.

## B4 PROTOTYPING AND SPREAD

### Imaging Wisely: A Collaborative Approach to Reducing Inappropriate MRI Exams

Contact: Vivian Chan | Director, Physician Quality  
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In the absence of red flag symptoms, there is no evidence of utility of advanced imaging in patients with significant osteoarthritis (OA). A new protocol was introduced at two acute hospitals in Vancouver Coastal Health where patients were assessed for advanced OA before proceeding to advanced imaging (MRI and CT arthrograms). In 2014 the study sites completed 836 MRI for the shoulder, hip, or knee for outpatients over 55 years of age; this population is at increased risk of co-existent OA.

The new protocol, introduced in October 2016, required recent radiographic images (acquired within 1 year) to be appended with the advanced imaging order for hip, knee or shoulder for patients over 55 years of age. The radiologists reviewed the images and graded the degree of OA using a validated tool, the Kellgren-Lawrence (KL) scale. In patients where the KL score >2, significant OA is present and advanced imaging was not approved. Significant workflow changes from community-based referring physicians, radiologists, and clerical staff were required to successfully implement the protocol.

We applied the Model for Improvement to the project. The first PDSA cycle highlighted workflow issues for clerks and radiologists. Value stream mapping helped identify value added and non-value times in the process. After several PDSA cycles on the workflow, processing time decreased from 57 to 15 days for the new protocol, as compared with a regular MRI booking process that would take 3 days. Nevertheless, the rejection rate was 38% as a result of avoiding unnecessary exams.

The two takeaways to share are: how continued involvement from clerks and radiologists is needed to collect data and generate ideas to eliminate non-value added delays; and the robust measurement process required to assess effectiveness of the implementation and the impact on referring orders. Such lessons are likely to be pertinent to other outpatient quality interventions, especially in lab and medical imaging.

## B4 PROTOTYPING AND SPREAD

### Implementing Remote Consult Solutions: The Experience of a Pan-Canadian Collaborative

Contact: Sarah Olver  
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In June 2017, the Canadian Foundation for Healthcare Improvement in partnership with the College of Family Physicians of Canada, Canada Health Infoway and the Royal College of Physicians and Surgeons of Canada launched the 15-month Connected Medicine Collaborative. This work supports 11 Canadian teams to focus on designing, implementing and evaluating a remote consult service to enhance primary care provider communication with specialists with the long-term goal of improving access to specialty care for patients. The collaborative focuses on spreading two leading Canadian innovations that have demonstrably improved primary healthcare access to specialist consultation: 1) Rapid Access to Consultative Expertise (RACETM) – a telephone consult service from BC and 2) Champlain BASE eConsult Service (BASETM) a web-based eConsult service from Ontario.

Many programs fail to realize their potential in “real world” settings as the evidence supporting their effectiveness often does not account for local contexts, which can be crucial to successful replication. This is especially true of eHealth solutions. Neglecting this can result in costly failures, which have been demonstrated in many health systems. Having a focused learning collaborative can facilitate successful adoption, while building improvement capacity within the system.

Now at the half-way point of the collaborative, this session will highlight the featured remote consult innovations being led by the 11 teams. It will showcase implementation approaches, lessons learned and early results on the journey towards improving the quality and experience of care for patients and providers while building organizational proficiency and capacity in quality improvement and change management. The session will also shed light on some of the challenges teams have encountered and strategies used to overcome them, while ensuring sustainability and scale-up of their innovations post-collaborative.

## B4 PROTOTYPING AND SPREAD

### Does Adding a Doctor to the 811 Nurseline Reduce Emergency Department Visits?

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In 2008 BC created a nurse (RN) staffed telephone triage service (TTS) to provide timely advice to 811 callers. A perception exists that some callers are needlessly directed to emergency departments (EDs). We sought to determine whether supplementary emergency physician (EP) triage would decrease ED visits while preserving caller safety and satisfaction. TTS RNs use computer algorithms and judgment to triage callers. Potentially sick callers are directed to “seek care now” (red calls). Often this is to an ED depending on acuity and time of day. In VCH from April – September 2016 between 8:00 – 24:00 hours, a co-located EP also spoke with “red” callers to provide further guidance. Callers were followed up within 1 week and satisfaction was evaluated on a 5-point Likert scale. The TTS data was linked to the VCH ED database to assess ED attendance within 7 days, and the provincial vital statistics database for 30-day mortality. Our primary outcome was the proportion of unique “red” callers who did not attend the ED compared with a historical cohort one year earlier without EP triage in place. In the study period there were 5105 “red” calls of which 3440 were transferred to the EP (67.4%), 2958 of EP assessed callers (86.0%) had a family doctor, but only one-quarter of such patients could contact their family doctor. Overall, 2301/3440 “red” callers did not attend an ED (67.0%) compared to 2508/4770 in the control period (52.6%), for an absolute reduction of 14.4% (95% CI 12.2 to 16.4%,  $p < 0.0001$ ). In callers for those < 17 years old there was a 20.3% (95% CI 16.5 to 24.1%) reduction in ED visits compared to the control group: 771/1520 (50.7%) vs 364/1067 (30.4%). There was no difference in 30-day mortality between groups. Age and acuity were also similar between the two groups. Mean caller satisfaction was excellent (4.7/5.0). EP supplementation of a RN advice service has the potential to reduce ED visits by almost 15% while providing excellent safety and satisfaction.

## B5 BUILDING QUALITY IMPROVEMENT CAPACITY

### Measuring Change in Clinical Systems Transformation with Prosci's Change Scorecard

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The objective of Fraser Health's Integrated Plan of Care is to have a single, accessible electronic health record using the MEDITECH Patient Care System (PCS) module to document an individualized and integrated plan of care for all professionals involved in a patient's care. The objective of Fraser Health's Integrated Plan of Care is to have a single, accessible electronic health record using the MEDITECH Patient Care System (PCS) module to document an individualized and integrated plan of care for all professionals involved in a patient's care.

Abbotsford Regional Hospital was the first site in Fraser Health to implement the PCS module successfully on November 1st, 2016. The PCS module allows the clinician (nurse, allied health, and support personnel) to complete point of care electronic documentation and creates a unique person-centered view of the patient's health information across the continuum of care. This system was designed to provide an integrated approach to improve the flow and sharing of information between care providers by allowing for timely data capture, improved data quality, consistent documentation, embeds clinical decision-making tools, reduces redundancy in documentation, and supports timely clinical decisions, thereby enhancing the quality of patient care. Due to the transformational nature of this change, we need a different approach than the typical way we implement technology-related projects.

This rapid fire presentation will share:

1. An overview of the project
2. The secret to our transformation success: Changing the way clinical, technical, organization readiness and functional readiness teams worked together with clarity and alignment regarding change delivery to enable more effective management to outcomes.
3. Our measurement approach: How we defined, monitored and measured the people side of change using Prosci's Change Scorecard, a powerful combination of outcome and activity measures in three dimensions and timeframes.
4. Our results.

Most importantly, take away practical insights for measuring complex change in any organization.

## B5 BUILDING QUALITY IMPROVEMENT CAPACITY

### The Need for Speed: Building Proportionate Consults for Quality Improvement

Ethical Review  
Contact: Crystal White | [Consultant in Quality, Patient Safety & Improvement](mailto:Crystal.White@viha.ca)  
Island Health  
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Island Health does not have administrative oversight or a structured process for approval of Quality Improvement (QI) projects. QI is largely conducted within program areas and there is no requirement to obtain administrative or ethical approval. Consistent with ethical conduct of the Tri-Council Policy Statement, best practice suggests that QI does not require the same level of review as a Research Ethics Board, but should receive supervision similar to that required by clinical practice (Morris & Dracup, 2007). There is an increase in physicians/staff pursuing QI work. With no structured process, Island Health is at risk if QI projects result in harm to patients or staff. In particular, QI activities involving vulnerable populations should require higher level consideration of risks and impacts. Some teams may not be comfortable or experienced in applying an ethical lens to their QI work, potentially limiting their ability to mitigate associated risks. Through a multi-phased approach, Island Health is trialing a rapid response ethical consult process. This began with the adoption of the Alberta Innovates ARECCI tool to assess project risk and differentiate QI from research (Phase1-ARECCI). Based on the ARECCI score, Research & Quality collaborated to provide proportionate consults, ranging from brief phone calls to interdisciplinary meetings that identified risk mitigation strategies (Phase2-CONSULT PROCESS). The ultimate goals are to: 1) marry this consult process with a formal registry to track QI projects in the organization for the purposes of learning and 2) implement a policy on QI ethics and oversight which aligns with the developing organizational ethics framework (Phase3-INTEGRATION & LEARNING). We want to share our learning and facilitate a provincial dialogue about applying ethics to QI. Many health authorities are experiencing the same dilemmas, and although the trial will be in progress, we expect to have preliminary evaluative data to share at QF2018.

## B5 BUILDING QUALITY IMPROVEMENT CAPACITY

### Quality Improvement in the Patient Medical Home/Primary Care Network

Contact: Andrew Earnshaw | Executive Director  
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As communities in the province implement the Patient Medical Home / Primary Care Network, evidence from review of success literature in other jurisdictions emphasizes the critical importance of quality improvement (QI) with respect to actually achieving triple aim goals. Without robust QI, we believe the PMH/PCN transformation in BC will fail to achieve its promise of contributing to a sustainable health system. If we are not actively measuring the results of our efforts and engaging in routine discussion regarding outcomes, changes we make may not be improvements.

Accordingly, in the Kootenay Boundary CSC's PMH/PCN proof of concept in the Boundary Region of BC, extensive work has gone into designing and implementing a robust QI framework. Rooted in five system-level key outcomes relating to acute care utilization, and tracking nine PMH-level indicators, including sub-sets for patient experience, time to third next available appointment and team functioning, the Boundary QI process will regularly involve every member of the GP and Health Authority Team in meetings to discuss data and review outcomes. Kootenay Boundary is placing a "big bet" on the ability of data and indicators to motivate clinicians and administrators alike to change behaviours for the benefit of patient care.

Join us for an overview of our QI plan, "battlefield" stories of the first few months of proof of concept implementation, and discussion regarding how our earliest data points are influencing care.

## C1 STREAMLINING CARE PATHWAYS

### The Future of Same-Day Total Joint Replacement

Contact: Dr. Arno Smit | Physician and Owner  
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#### CONTEXT AND RELEVANCE:

Expanding upon the already well functioning and well established unilateral knee replacement procedure at White Rock Orthopaedic Surgery Centre (WROSC), an outpatient facility, we aim to have same-day-discharge for Total Knee Replacement (TKR) at our clinic in order to reduce hospital stay, patient complications, costs, and give the patient faster and more personal care. We emphasize our specialty and great success in TKR patients with the importance of continuity of care, pre-and post-surgery, with a designated nurse for care and Case management, available 24/7. Our success has not only been on the operating table, but at home too.

#### INTERVENTION:

Dr. Arno Smit is committed to the program and would be a champion of this progress. Patient selection is the first and most critical clinical consideration. We emphasize taking a highly individualized approach to anesthesia, pre-operative evaluation, multimodal, non-narcotic anesthesia, and highly motivated patients that are relatively healthy. Between November 2016 and February 2017, 10 candidates out of 24 have been enrolled for TKR.

The process includes pre-operative preparation: surgeon, clinic nurse, home care nurse (2 hours), Physiotherapist (2 hours), Pharmacist. Dr. Smit on average does his total joint replacement between 45-60 minutes.

#### MEASUREMENT:

Qualifying criteria is based on individual pre-op assessment, patient's current health, ASA score, BMI, and home environment. We have very clear pre-op and post-op written instruction. The clinic nurse will be responsible for a thorough discussion and teaching of each patient undergoing the day surgery in WROSC. Patients will know what to expect and are given a pain score/comment card to fill out for their entire experience. Results: 0/10 pain score for all 10 TKR patients.

#### EXPERIENCE:

outpatient total joint program reduces pain, costs, and speedier recoveries.

# C1

## STREAMLINING CARE PATHWAYS

### An Improvement Initiative to Deliver High Quality Care to Patients with Pacemakers

Contact: Kelly Mackay | Project Lead with Provincial P6 Pacemaker Quality Improvement Project  
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Pacemakers (PM) are life-saving devices used to care for patients with symptomatic bradycardia. In British Columbia (BC), regional variability exists with implant rates, device types used, and quality of care delivered. As such, Cardiac Services BC (CSBC) and physician leaders have embarked on a 3-year quality initiative to improve care for PM patients in BC. Process mapping, review of protocols and patient materials and identification of the intraoperative team skills, roles and comfort level was completed for 13 different implanting sites. A provincial outcomes review was completed in 2016 and included the assessment of 27,556 adult PM procedures (2008-2014). Reported at the provincial, site and operator levels, outcome indicators included: 30-day, 1 and 2-year repeat procedure rate, 30-day all-cause hospital readmission, 30-day and 1-year mortality, and 30-day device-related complications. Variability existed among all sites with respect to: referral management, intraoperative team composition and training, use of protocols and checklists, OR availability and patient discharge education. The 30-day repeat procedure rate was 2.5% (0.7-6.6) and increased to 4.6% (1.8-10.4) at 1-year. Kaplan-Meier analyses (4-year follow-up) revealed that the majority of repeat procedures occurred within the first 60-days following a new implant and were predominantly lead related. After-hour procedures (18.2% of BC procedures) were associated with a 30% increased risk of requiring a repeat procedure. Variability is expected in a decentralized system that serves different geographical regions. Findings exemplified the need for a provincial quality improvement initiative designed to: promote evidence-based patient and device selection, strengthen the clinical network, standardize implant techniques, establish OR team training requirements for PMs, improve operational logistics, and standardize patient resources and data collection methods, including patient reported complications.

# C1

## STREAMLINING CARE PATHWAYS

### Improving MRI Utilization through Clinical Decision Support and Centralization

Contact: Vivian Chan | Director, Physician Quality  
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The Minister of Health committed to increasing MRI volumes to address wait lists, and asked BC health authorities to implement Choosing Wisely (CW) guidelines for medical imaging. While helpful in defining appropriate use there remain inherent inefficiencies through siloed booking processes and limited opportunities for decision support. Historical decentralized booking also contributed to inappropriate and even redundant imaging orders that burdened the healthcare system.

In partnership with PATHWAYS and Lower Mainland Medical Imaging, educational decision support tools will continue to be developed and made available for referring physicians. PATHWAYS is an online resource that allows GPs and their office staff to quickly access current and accurate referral information, including wait times and areas of expertise, for specialists and specialty clinics. It has launched with 25 Divisions of Family Practice covering approximately 4000 GP members. To help motivate referring physicians to review these resources, we will trial providing imaging test wait times on the PATHWAYS site allowing referring physicians to understand regional disparities and to make informed decisions around test ordering and the site they will choose to refer to.

While we believe that this will meaningfully improve test selection and somewhat homogenize regional waitlists, we will concurrently seek imaging protocol homogenization to enable centralized booking for certain core tests. This is something that has been sought by referring general practitioners for some time but has not been available owing to the heterogeneous scanning protocols across sites.

Through this multipronged approach of increased process and waitlist transparency coupled with increased educational outreach and streamlined MRI booking, we aim to significantly improve the experience of the patient and referring physician while eliminating duplicate requisitions and enhancing appropriateness.

## C2 ADDRESSING UNIQUE PATIENT NEEDS

### Supporting Patients to Take a “Food First” Approach to Health

Contact: Sean McKelvey  
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Metabolic syndrome, including diabetes, is an enormous problem for Canada. A recent Alberta study forecast that anyone born after 1997 will have a 50% chance of developing type 2 diabetes in their lifetime. For indigenous peoples, the rate was 80%. ‘Personalized therapeutic nutrition’ is an individually tailored nutritional intervention designed to reduce or reverse patient specific metabolic dysfunctions, medical conditions or associated symptoms. Evidence-based clinical applications for therapeutic nutrition are extensive: metabolic disorders, inflammatory conditions, neurodegenerative diseases, psychological conditions, and cancer. The more we learn about what genetic and metabolic factors determine why some people respond to a certain type of diet and lifestyle intervention, while others do not, the more powerful a tool personalized therapeutic nutrition will become. The public is way ahead of our health care system in choosing a ‘food first’ approach, but many need help discerning the scientific quality of nutritional information they access. They also face safety issues if medications are not adjusted to reflect improved metabolic function. Health professionals are challenged to keep up with new research and practices on therapeutic nutrition, and most haven’t learned how to effectively support this approach. The Institute for Personalized Therapeutic Nutrition (IPTN) is closing the research-practice gap by translating evidence into educational programs for healthcare professionals to support practice change and advocating for therapeutic nutrition as a fundamental and required aspect of patient care. The IPTN is also conducting a proof-of-concept clinical trial with 200 subjects, seeking to demonstrate the clinical impact of food-based therapies. During this session, we will describe the genesis of the IPTN, present interim outcomes from our projects, and propose a future vision for personalized therapeutic nutrition and a ‘food first’ approach to health.

## C2 ADDRESSING UNIQUE PATIENT NEEDS

### Improving Access to Cleft Palate & Craniofacial Services Across BC

Contact: Dr. Douglas Courtemanche | Plastic Surgeon  
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For years, BC Children’s Hospital has been facing increasing demands for ambulatory clinic services with limited resource increases. The Cleft Palate & Craniofacial program is no exception to this challenge. Specific issues heightened the need for a detailed review and quality improvement project. These issues included: excessive number of patients who had exceeded the recommended timeframe for follow up visits, challenges in meeting standards of care, staff workload issues and patient complaints and feedback.

Over 600 chart were reviewed assessing actual clinic care provided against published standards and specific patient recommendations. The existing referral, triage and waitlist management process was conducted to review current practice and develop a new model of care. A demand vs capacity analysis indicated that demand was exceeding supply by two thirds. In addition, to the demand/capacity gap other challenges included clinic flow optimization, desire for a formal transition pathway, the need to empower families to be Partners in Care and better liaison with community care givers as partners . Quality recommendations and improvements have been outlined which are anticipated to support 1/2 of the demand with a business case created to support the remaining 1/2 of demand. The next phase of work will rely on an implementation team to work on the redesign of the clinic. One of the greatest benefits from this work was the strong relationship and trust that was formed between the clinical team and management team. The project plan and processes used for this clinic review will serve as a model across all of the BC Children’s Hospital ambulatory clinics with the continued goals of improving patient access, improved management of resources and improving the quality of care.

This project highlights engagement, demand/capacity analysis, project management and process improvement.

### C2 ADDRESSING UNIQUE PATIENT NEEDS

#### A Story of Collaboration – Campbell River Maternity Clinic

Contact: Dr. Jennifer Kask | North Island Hospital Medical Lead – Cross Campus, Obstetrics, Maternity Care and Pediatrics  
Island Health  
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##### CONTEXT AND RELEVANCE:

The Campbell River Hospital (CRH) has been a referral centre from surrounding communities for years. A woman in labour might arrive in Campbell River having driven 2-3 hours, or having taken a ferry, or having taken a boat... or all 3!

A group of family physicians recognized significant barriers to antenatal care; particularly geographical considerations for women from remote and First Nations communities and high numbers of local “unattached” patients.

##### INTERVENTION:

In 2014 the CR Maternity Clinic began antenatal visits in Port Hardy, to reduce the travel for women intending to deliver in Campbell River. In late 2015, Island Health and First Nations Health Authority joined forces with the physicians to open a clinic at CRH, providing ready access to maternity, radiology and laboratory services.

##### WE USED:

- multiple small PDSA cycles to try things without specific funding –a hospital based clinic one half-day per week led to funding for a 10 week special project, identifying a need and sustainment through Island Health.
- process mapping to solve some problems ensuring results in the EMR .
- existing resources in new ways, including the booking of follow-up appointments, reducing the number of “no shows.”
- patient interviews and exit surveys to determine how our processes are being received.

The clinic has grown to 4 half days/week. Visits to Port Hardy continue once/month. A telehealth project “MOMS 2” has been initiated in 2017.

##### MEASUREMENT:

Since Nov 2015: over 3000 patient visits; women and families from 25 communities. First Nations women and babies: 25% of visits in the CRH clinic; 60% in Port Hardy. Cultural safety and humility have been a focus since day one. Feedback surveys report patient satisfaction with accessibility and care provided.

##### LESSONS LEARNED:

The funding! Numerous parties including the CRH Foundation, Division of Family Practice, IH and FNHA have collaborated to achieve a “grass roots, local solution.”

### C3 THE VALUE OF COMMUNITY PARTNERSHIPS

#### It Takes a Village: Community-Led Health Improvement in Hope and the Fraser Canyon

Contact: Petra Pardy | Executive Director  
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In the eastern, rural area of Fraser Health (FH), Hope and communities of the Fraser Canyon have a strong sense of community belonging and many attractions to live, work, and play. However the geography poses challenges of rural service provision, access, and isolation. My Health My Community survey and other data confirmed what the local community knew: people here are experiencing decreased health status, including higher rates of chronic disease and smoking, shorter life expectancy, and lower socioeconomic status.

In 2016 FH launched a novel approach to address these issues by asking “What do YOU see as the priorities to improve health and well-being?” The entire community was engaged via forums and online, and their priorities were met with a \$500,000 annual FH investment. This Hope Health and Well-being initiative includes funding 6 new Coordinators for Healthy Living, Youth, MHSU, Volunteers, Health Services, and Transportation. Micro and Macro Health Grants offer seed funding and propel ideas with broader community impact. So far these small investments have had a big return- AdvantageHope completed an active transportation plan and acquired a \$500,000 grant; District of Hope secured new transit service; and Micro grants funded a parental wellness circle, playground, exercise space, food security, and community theatre to name a few.

Though in early implementation and evaluation, we know from people like Wayne that this community-based approach is already making a difference. Wayne lives in Hope and after reconstructive shoulder surgery, he often drove 110km roundtrip to Chilliwack for rehabilitation. After a Micro Health Grant funded rehab services, Wayne was able to see the same physiotherapist in Hope, which was “great advantage as far as travel time and expense as well as convenience”.

We know it takes a village to raise a child, and we have learned it takes a community to promote wellness and establish a truly community-based system of health.

## C3 THE VALUE OF COMMUNITY PARTNERSHIPS

### The Other Side of the Desk: Integrating Peer Services for Healthcare Teams on the Downtown Eastside

Contact: Isaac Malmgren | Manager, Peer Services and Community Development  
RainCity Housing  
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In December 2016 RainCity Housing (RCH) was invited to partner with Vancouver Coastal Health (VCH) in order to provide unionised Peer Specialist (Peer) services on 6 multi-disciplinary DTES teams. This role was one of a number of service improvements that were identified as part of VCH's 2nd Generation Strategy, which is aiming to improve the system of care in Vancouver's Downtown Eastside neighbourhood. The integration of Peers onto our care teams aims to increase social inclusion and attachment to care for clients, many of whom have significant histories of trauma and negative perceptions of clinical healthcare interactions, as well as to provide valuable insight to DTES healthcare providers regarding better practices of approaching clients in a collaborative and community-minded way. RCH has background in the grassroots of the DTES and a long history of Human Resource practices which value voices of lived experience, including the development and implementation of multiple Peer and Indigenous Cultural Liaison positions on internal staff teams. Evaluation is ongoing, and a 1 year report compiled of surveys and qualitative interviews with VCH clinical staff, RCH peer specialists and clients of DTES teams is expected for Spring 2018. Many learnings have already become apparent, including the value of the health authority/non-profit partnership to provide adequate support to both Peers and VCH teams, the need for well-defined job descriptions and roles/responsibilities of Peer Specialists on Clinical teams, the difficulty of culture shift between a non-profit support work focused workplace and a clinical setting, and the need for culturally appropriate supports and job-descriptions for Indigenous Peer Specialists. We hope to present on these learnings in a narrative style, and invite two of our Peer Specialists to co-present in their own voice.

## C3 THE VALUE OF COMMUNITY PARTNERSHIPS

### Testing a "Wraparound" Model of Care in a Rural Setting for the Complex Child and Youth Mental Health and Substance Use (CYMHSU) Community

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More than ever, mental health and substance use concerns touch our communities, friends and families. Perhaps, we are a more aware society with better diagnostic tools and a greater desire to deal with these challenges. Whatever it is, we are seeing more children and youth in the West Kootenay region struggle with mental health and substance use challenges. Parents are faced with the stress of dealing with a complex support system while trying their best to create and maintain a loving supportive environment for their children. Like many small communities, the barriers to receiving timely and integrated mental health and substance use services in our region include wait lists for services, lack of coordination of services, and communication issues between service agencies. In order to address part of this problem the Child & Youth Mental Health and Substance Use (CYMHSU) – West Kootenay Local Action Team (WK LAT) conducted an eight month Wraparound Prototype across the region.

This presentation will share the activities undertaken by the WK LAT to test a Wraparound Model of Care which engaged over 45 service providers and two school districts, and utilized two wraparound coaches to coordinate wraparound teams for ten families with children/youth with complex CYMHSU needs. The prototype was evaluated at both an individual-level intervention (creating a collaborative team and support plan for a youth and family) and a systems-level intervention (developing relationships and patterns of collaboration among communities and agencies). Measurements indicate better outcomes for children, youth and their families like increased coordination and information sharing between all of the health, education, and social services involved in the life of the youth/family. These outcomes along with key lessons, challenges and system recommendations will be shared. Supported by Shared Care and the CYMHSU Collaborative, a partnership between Doctors of BC and the government of BC.

## C4 EFFECTIVE TEAM-BASED CARE

### The Positive Impact of Multidisciplinary Nursing Care for Rheumatology in BC

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#### CONTEXT:

Nursing support and intervention for patients with chronic disease is of paramount importance. This is well established in a number of fields including diabetic, cardiac, and psychiatric care. Studies in other countries and jurisdictions have shown that nursing involvement improves delivery of care in patients with inflammatory diseases such as rheumatoid arthritis. However, incorporating nurses in a private practice model of rheumatology in BC has traditionally had many barriers.

#### INTERVENTION:

Rheumatologists in BC funded a multidisciplinary care code, to be used in conjunction with nursing staff in patient consultation. This care code is designed for patients with inflammatory arthritis and chronic inflammatory conditions. It has allowed rheumatologists to hire nurses to assist in the management and education of patients with chronic inflammatory conditions.

#### IMPACT:

Since the introduction of the code in BC, there has been a surge of nursing involvement in private practice rheumatology. Prior to 2011, there was just one nurse working in collaborative private practice rheumatology. As of 2017, 55 rheumatologists in BC have utilized the multidisciplinary nursing care code, which in turn has led to a fundamental change in our model of care.

The integration of nurses has resulted in the creation of the Western Canada Rheumatology Nursing Society to foster academic and educational exchange among nurses.

In addition, the interventions commonly supported by our private practice nurses have been studied in BC. These interventions have included vaccinations, injection teaching, and disease counselling. These services have the potential to improve comprehensive patient care, increase rheumatologist clinic efficiency, and reduce visits to other health care professionals.

## C4 EFFECTIVE TEAM-BASED CARE

### CHANGE BC – A Proactive Focus on the Primary Care Team Model

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In looking at optimal Patient Medical Home team models, the Pacific Northwest Division of Family Practice Board of Directors reviewed a growing body of medical evidence that shows the progression of metabolic syndrome is the best predictor of pervasive, chronic conditions, including diabetes, cardiovascular disease and hypertension. Six PNW family physicians leads:

- Dr. Wouter Morkel, Smithers
- Dr. Onuora Odoh, Houston
- Dr. Matthew Menard, Masset, Haida Gwaii
- Dr. Jocelyn Black, Masset, Haida Gwaii
- Dr. Brenda Huff, Pacific Northwest
- Dr. Greg Linton

have formed CHANGE (Canadian Health Advanced by Nutrition and Graded Exercise) BC, to help to form a model, the first of it's kind in BC that includes a Dietitian (RD) and Kinesiologist (KIN) to work closely with family physicians to provide customized, made in BC, evidence based lifestyle supports for patients. The physician leaders have partnered with Metabolic Syndrome Canada a nationally recognized, evidence based organization linked with top academic leads from 6 Canadian universities to bring the best science forward in the development of an optimal model to support GPs in addressing metabolic syndrome.

UBC has recently developed an innovative, cross faculty training site to help train inter-professional teams of GPs, KINs, and RDs, and has expressed an interest to work collaboratively in the development of CHANGE BC.

CHANGE BC is an emerging initiative that is too young to have results, however a March 2017 in CMAJ Open article that looked at CHANGE in 3 other provinces saw, after 12 months, 19 % of patients with complete reversal of Metabolic Syndrome, while 42% saw of a decrease in the number of Metabolic criteria, and the 10-year risk of heart attack was reduced for patients, on average, by 17%.

Presenters will discuss planed measures of Quality of Life perspectives from patients, cost effectiveness; the potential impact of CHANGE BC is significant in terms of both health systems savings, and improving quality of life and longevity for patients.

## C5 BUILDING A QUALITY CULTURE

### How an Online Learning Series Builds Skills and Confidence in Child and Youth Mental Health

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The Child and Youth Mental Health & Substance Use Collaborative was formed in 2013 with support by the Shared Care Committee, to improve timely access to integrated mental health and substance use services and supports for children, youth and families. Membership included 2600+ youth, families, and multi-sector service providers, including physicians.

In 2016 there were an estimated 1,065,104 children and youth aged 5-24 in BC (BC Stats, 2017); of which an estimated 181,067 to 213,020 will experience mild to moderate mental health issues (WHO, 2014). Access to child and adolescent psychiatrists in BC is limited, particularly in rural and remote areas. As a result, GPs, pediatricians and general psychiatrists are increasingly relied upon. In 2013/14, 91% of those 0-25 years old who accessed mental health services through health, did so through a physician. However, many physicians feel they lack sufficient training and experience to be able to assess, treat and manage the needs of this population.

In response, the Collaborative supported the development of Learning Links: Enhanced Learning Series in Child and Youth Mental Health. Learning Links is a free evidence-informed, 15-module interactive online learning tool that aims to improve access to medical specialists with expertise in child and adolescent psychiatry throughout BC. The modules track progress and physicians are eligible for self-directed learning credits.

Learning Links underwent pilot testing "by 28 pediatricians, general psychiatrists, and general practitioners from all regions of BC. The physicians who tested the modules reported gains in understanding children and youth with mental health disorders (85%), ability to identify (89%), ability to treat (82%), and confidence in treating (85%). A six month follow up, along with post-module surveys, corroborates these findings.

Use of the modules has expanded to nurses, social workers and clinicians in hospital and community settings.

## C5 BUILDING A QUALITY CULTURE

### A Patient Safety/Quality Culture Bundle for Senior Healthcare Leaders

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Despite substantive efforts over the last decade to improve patient safety in Canada, patient harm remains a significant public health problem that must be resolved. The National Patient Safety Consortium, established by the Canadian Patient Safety Institute, has identified of critical importance the role that senior leadership and trustees must play in ensuring patient safety is an organizational priority.

A working group of national and provincial partners was convened to develop an educational plan for leadership and conduct an environmental scan. The report "Free from Harm" from the National Patient Safety Foundation (2015) was pivotal in this work. A key finding was the importance senior leadership and governance plays for being visible champions of patient safety and setting clear expectations for patient safety performance within the organization.

The working group has drafted a senior leadership bundle for patient safety/quality culture. It blends the key roles the CEO, senior leadership and governance play, with how the organizational culture engages and works to improve patient safety. The unique approach incorporates all elements for achieving a patient safety/quality culture. The bundle has a safety checklist of thirteen elements under three headings: enabling, enacting, and learning. Examples of elements include: CEO/senior leadership behaviours; patient and family engagement/co-production of care; situational awareness/resilience; and safety reporting/management/analysis.

In designing the bundle, methods included conducting an environmental scan of resources, leadership frameworks, and educational opportunities senior healthcare leaders are using to improve patient safety; and interviewing thought leaders for their impressions on the draft bundle. It is expected that healthcare organizations will use the bundle to assess their patient safety/quality culture and identify action plans for improvement.

# C5

## BUILDING A QUALITY CULTURE

### The Quality Improvement Think-Tank: Taking Patient-Centered Care to a New Level

Contact: Dr. John Hwang | Physician  
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Quality improvement (QI) initiatives are often designed to address areas of concern that are identified through the evaluation of patient morbidity data. While decreasing rates of patient morbidity will improve overall patient outcomes, this does not necessarily translate to an improved patient experience.

We designed a forum (QI Think Tank) with the goal of centering QI initiatives on Patient Experience.

1. We engaged multidisciplinary teams of “QI champions” including frontline nurses and nurse practitioners, physicians, and allied health professionals. Selection of team members was assisted by unit managers. Several unit-based teams were assembled including orthopedics, general surgery, vascular surgery, gynecology, cardiac surgery, the operating room, pre-admission clinic, and post-anesthetic recovery room.
2. Former patients were invited to share their perioperative patient experience. Patients were asked to emphasize:
  - A) experiences which were positive which could be replicated
  - B) experiences which could be improved.
3. Teams participated in facilitated discussion to generate ideas for QI projects based on the presented patient experiences. Presenting patients were active participants in this discussion and were also asked to provide feedback on the QI-Think Tank process.

#### RESULTS:

Multiple patient-centered QI projects were proposed based on the shared patient experiences. An additional benefit was an enhanced level of engagement in the QI process based on the “connection” between patients and their frontline health care providers. There was also a synergistic benefit of having several multidisciplinary teams (from different surgical subspecialties) in the same room sharing ideas for projects.

#### DISCUSSION:

Patient-centered care is a popular catchphrase in health care circles, but how often do we go to the patient for input on how to improve care? We have designed a forum to center QI initiatives on actual patient experience.

