SCALING UP

A PRINCIPLED APPROACH FOR PRIMARY CARE TRANSFORMATION IN ALBERTA

INSIGHTS FROM COGNITIVE SCIENCE STUDIES

ALBERTA INNOVATES

EnACt Enhancing Alberta Primary Care Research Networks

ALBERTA MEDICAL ASSOCIATION | ACTT Accelerating Change Transformation Team

UNIVERSITY OF ALBERTA

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SCALING UP

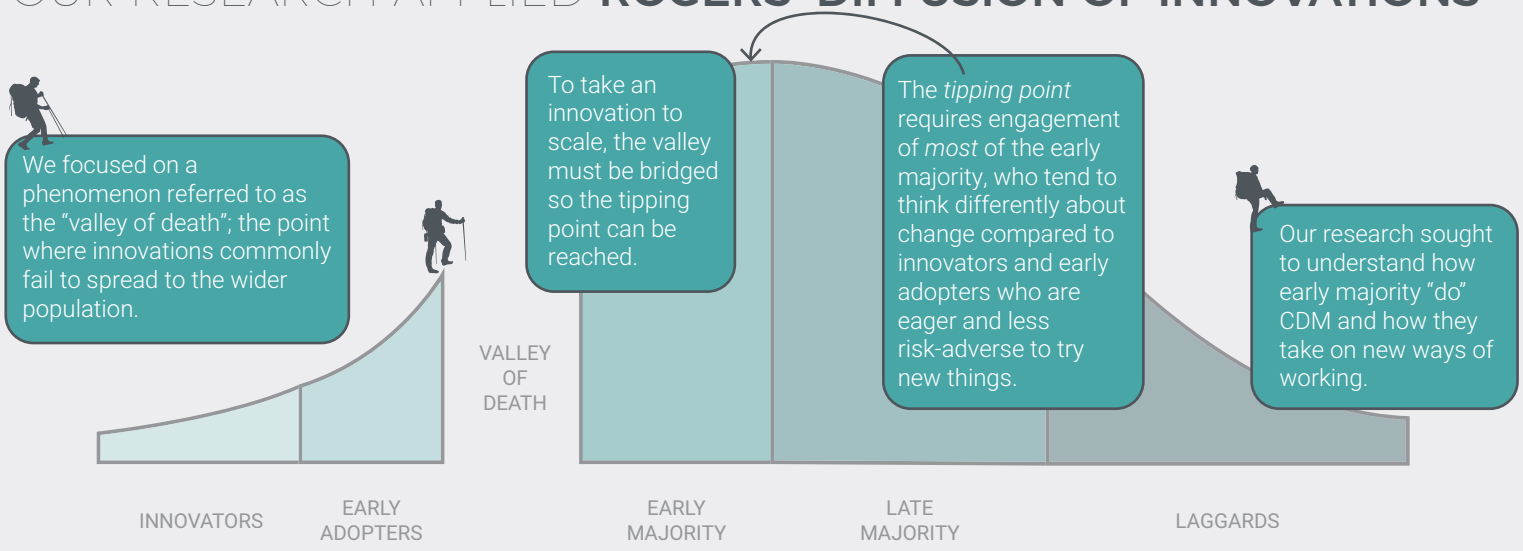
PRIMARY CARE TRANSFORMATION

PRINCIPLES SUMMARY

OBJECTIVE

The Patient's Medical Home (PMH) is integral to Alberta's primary health care transformation strategy. Despite progress, Alberta remains challenged with widespread adoption. This research sought to understand how we can continue to move past successful demonstrations to widespread adoption of the PMH, focusing on an existing bright spot in Alberta: chronic disease management (CDM).

OUR RESEARCH APPLIED **ROGERS' DIFFUSION OF INNOVATIONS**



SO WHAT?

Transformation to the PMH in Alberta will require a shift in thinking at all levels, not just amongst physicians and team members delivering care on the ground. Policymakers, decision-makers and front-line change agents in our health system must be driven by how the early majority conceptualize change, which is different compared to innovators and early adopters.

A "mass customization" approach is needed and will require a greater investment into a workforce equipped to facilitate early majority efforts in their local contexts.

Applying the lens of how the early majority conceptualize change to our already existing successes with CDM make it the best place to focus our efforts to drive transformation of our health system forward.

5 PRINCIPLES TO SCALE UP PRIMARY CARE TRANSFORMATION IN ALBERTA

The following principles summarize the findings of this research and provide practical considerations to support widespread adoption of innovations that will transform primary health care in Alberta.

1. **Address the early majority in terms that make sense to them**
2. **Help teams learn to distribute knowledge work activities and shift their mental models**
3. **Practice facilitation is essential**
4. **Focus incentive changes on removing barriers and obstructive incentives**
5. **Focus on team-based, systems-based CDM as the initial target**

To learn more continue reading...

THE CHALLENGE

The Patient's Medical Home (PMH) is an integral part of Alberta's primary health care strategy to foster transformation of our health system.

It is recognized as a proven means to improve patient access and outcomes, and to slow the rise of healthcare expenditures.[1] Successful demonstrations of PMH elements (largely by innovators and early adopters) indicate implementation is possible in our province. Further, significant uptake of panel identification and proactive screening demonstrates spread and scale is also possible. Despite progress, Alberta remains challenged with widespread adoption and we are not alone. A 2015 national report commonly known as "the Naylor Report" identified scaling up from demonstration projects to systemic practice as one of the central problems that Canadian health care faces today.[2]

Our research sought to understand how we can move past successful demonstrations to change how the majority of practices organize and deliver care for Albertans, focusing on an already-existing bright spot in our province: chronic disease management (CDM).

This report presents our local findings, in the context of the broader literatures in health care delivery, organizational studies, and behavioural economics, that we believe can help achieve spread and scale of the PMH.

DIFFUSION OF INNOVATIONS

Diffusion of Innovations theory (Figure 1), a long-standing body of literature[3] across many industries, including healthcare, was foundational in this research. We focused particularly on a phenomenon referred to as the "valley of death"; the point innovations commonly fail to spread to the wider population. To take an innovation to scale, the valley must be bridged so the tipping point can be reached. This transition requires engagement of most of the early majority, who tend to think differently about change compared to innovators and early adopters who successfully demonstrate the innovation.

Applying a structured set of tools from the cognitive science and systems engineering literature called Cognitive Task Analysis (CTA), this study focused on the early majority physicians and the teams they work with. We studied in depth how they organize and deliver CDM and how they take on new ways of working. To learn more about the method and sample, please refer to Appendix B.

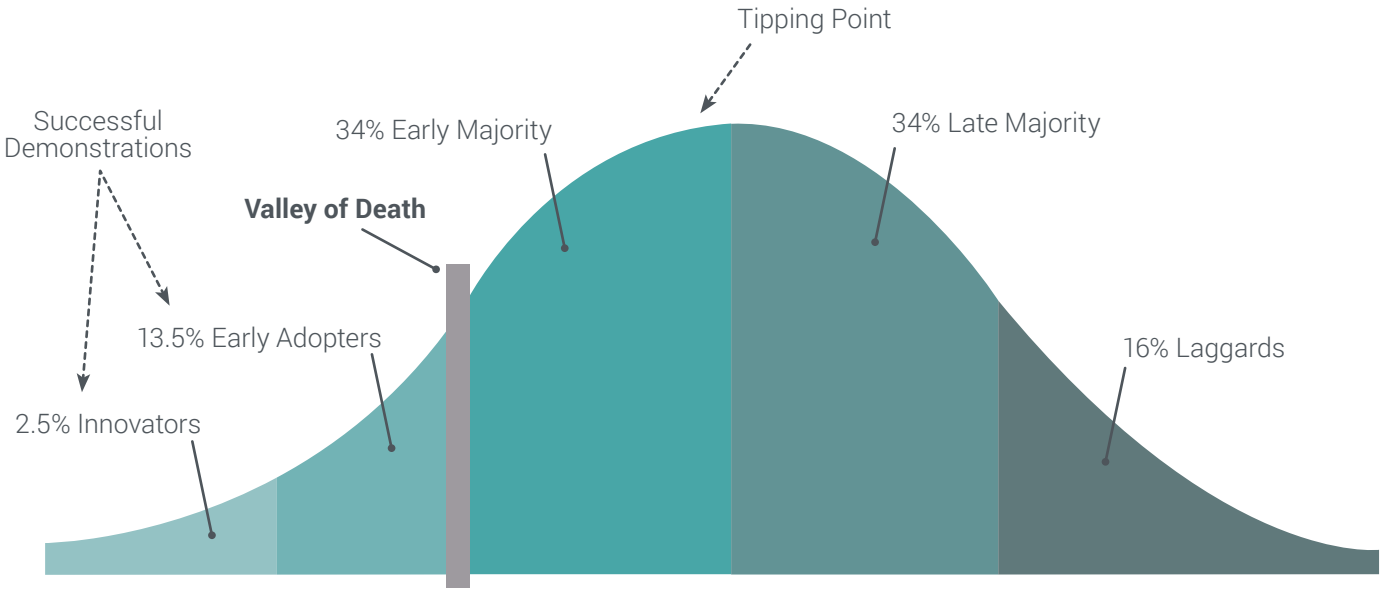


FIGURE 1. ROGERS' DIFFUSION OF INNOVATIONS

KEY FINDINGS

- NON-DISTRIBUTED **KNOWLEDGE WORK ACTIVITIES**
- SPECTRUM OF **MENTAL MODELS**
- WORKING ALONE TOGETHER **CLINIC CULTURES**

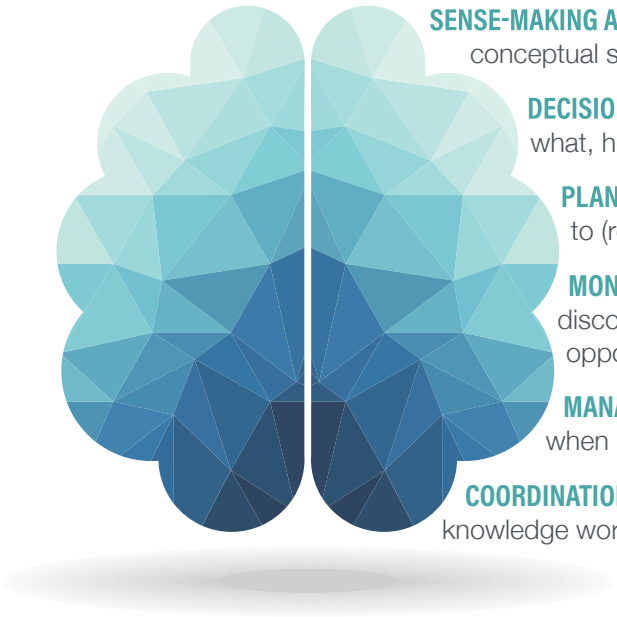
NON-DISTRIBUTED
KNOWLEDGE WORK ACTIVITIES

While advanced teams distributed the daily knowledge work activities, more precisely termed "macrocognitive functions"[4] (Figure 2), to successfully organize and deliver patient care, less advanced teams tended to hold them more closely amongst a few individuals, e.g., a physician or others in leadership.[5]

This distinction offers a tangible means of understanding where teams are at, and what help they need to move toward a more team-based approach to care.

A large body of literature from other knowledge work industries (e.g., air traffic control, engineering, military command, surgery, intensive care) demonstrate that a class of methods called Cognitive Task Analysis (CTA) can successfully improve team functioning, and particularly transfer lessons from higher-performing teams to others.[6] Some of our team have pioneered the use of CTA in primary care[7] and we have developed an internationally- recognized training program[8] in the method.

As our next step, we propose to explore whether some key tools from CTA can be taught to local practice facilitators to help teams improve how they do their work in primary care.



SENSE-MAKING AND LEARNING: deliberate and systematic attempt to find coherent, conceptual situational understanding

DECISION-MAKING: decision in the clinical/administrative process - who, what, how, when, where and why

PLANNING AND RE-PLANNING: activity involving the process of intending to (re-)shape another process (e.g., decision about a clinical process)

MONITORING AND DETECTION: tracking implementation progress or discovering a situation that is a novel or a potential opportunity/problem; deliberate or accidental

MANAGING THE UNKNOWN: how uncertainty, risk, ambiguity or times when processes go awry are dealt with

COORDINATION: activity that help to synchronize two or more people involved in knowledge work

FIGURE 2. MACROCOGNITIVE FUNCTIONS

THE COGNITIVE ACTIVITIES INDIVIDUALS AND TEAMS MUST PERFORM TO ACCOMPLISH TASKS IN REAL-WORLD PRACTICE.

SPECTRUM OF MENTAL MODELS

Mental models are deeply held and if directly challenged will likely result in people "digging in their heels." Understanding individual teams' mental models will be crucial for transformation. The early majority open to change will cautiously move toward a new mental model in small steps. Supports will need to bring resources and tools that fit individual team values, their current state and local context, and patiently work with the team on those small steps.

Our research identified a distinct spectrum of mental models with regards to how primary care teams organize and deliver care to patients living with chronic diseases (Figure 3).

Early majority practices struggle to move away from the "I take care of patients and some people help me" physician-centric mental model of practice to the "we take care of patients" team-based mental model. They find it daunting to let go of centralized control of the key macrocognitive functions. Practice facilitation and direct coaching support to help them learn to distribute the macrocognitive functions across their teams are necessary for them to make the challenging shift from physician-centric practice to team-based care.

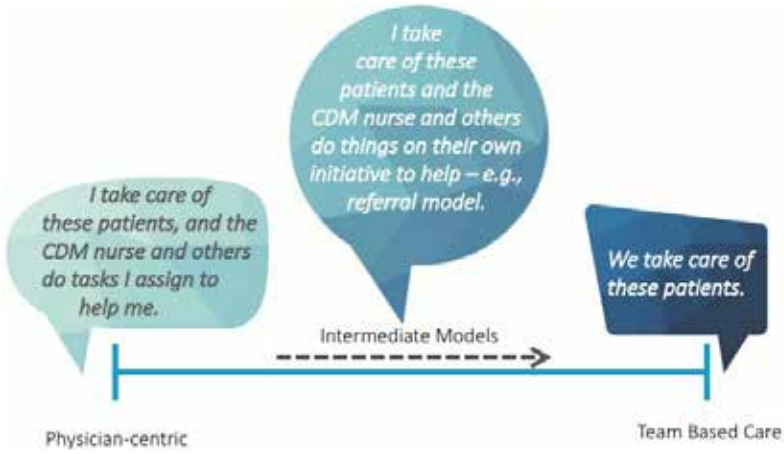


FIGURE 3. SPECTRUM OF CDM MENTAL MODELS IDENTIFIED

MENTAL MODELS

A mental model is the lens through which we make sense of what's happening around us. It is more than our beliefs and values and is dynamic in nature. Mental models determine what we pay attention to, what options and possibilities we consider, how we make sense of events and experiences, solve problems, make judgments, and ultimately make decisions and act. They are our understanding of how things work, what actions produce what consequences under what conditions, and how and why they do.

"WORKING ALONE TOGETHER" **CLINIC CULTURES**

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Early majority practices typically featured what might be termed "working alone together" cultures. Currently, like-minded "teamlets," i.e., teams within the clinic, take on new ways of working and may (or may not) engage others in their clinic by demonstrating value in their setting. This culture, not limited to the early majority, creates a complexity of differences in how the work of change can happen and what supports teams require.

The greater the disparity in how all clinic team members think about and approach change, the more they will struggle to transform. Clinic teams will require support to get everyone on the same page, i.e., development of a shared mental model.

SHARED MENTAL MODEL

Simply means that everyone on the team shares a similar lens. When mental models are misaligned team effectiveness can be markedly impaired, and often the team does not clearly understand why.

HOW TO TAKE INNOVATION TO SCALE

BRIDGING THE VALLEY OF DEATH

Implicit in Alberta's approach to date has been the expectation that working closely with early adopters would result in finding solutions and developing standard work and best practices that could then be readily rolled out economically to the early majority, e.g., toolkits and mass workshops. That expectation is the reverse of reality in the field, a finding not only consistent with experience in essentially all other health systems that have undertaken the PMH transformation,[9-13] but local experience too. Local success in Alberta also shows wider adoption of panel and proactive screening processes and correlates with focused efforts on building practice facilitation capacity within PCNs during the same timeframe.

Early adopters differ in crucial ways from the early majority; they conceptualize innovation differently. The features that motivate early adopters do not appeal to them. A particularly crucial difference is that while early adopters are self-starting and self-directed, the early majority require substantially more practice facilitation and change management support.

If we are to spread and scale transformation to the PMH, and reach the crucial tipping point, we must win over the early majority by speaking a language they understand. Their needs and attitudes must drive how we, from policymakers and academics to front-line change agents, make decisions. If we want them to listen, we must speak to what matters to them.

How the early majority thinks about and approaches the work of change

The following characteristics were identified amongst early majority physicians when taking on new ways of working:

- Prefer and are more willing to take up change in small incremental steps, i.e., trialability
- Are open to change but will not "swim upstream"
- Typically need the idea brought to them by someone they know and trust
- Are open to trying evidence-based changes that positively impact patient care and/or clinical operations
- Value support that is easy to access when needed
- Tend to need help to "see the bigger picture," e.g., how the improvement they're working on is connected to other pieces that feed into the PMH vision

Trialability[3] is "the degree to which an innovation may be experimented with on a limited basis"

AS DEMONSTRATED IN OTHER SYSTEMS THAT HAVE SUCCESSFULLY TRANSFORMED, A SKILLED WORKFORCE DEDICATED TO THE PURPOSE PLAYS AN ESSENTIAL ROLE IN FACILITATING ADOPTION OF CHANGE

REACHING THE TIPPING POINT

The findings from our research demonstrate that what the early majority require to transform is different than what worked for innovators and early adopters in Alberta.

To work with the early majority, we must recognize that a "standard work" based approach in PMH implementation (unlike hospital processes) is not realistic. Rather, the approach of "mass customization" is required. Principles scale, but programs do not. As demonstrated in other systems that have successfully transformed, a skilled workforce dedicated to the purpose plays an essential role in facilitating adoption of change.[9-13] Implementation is context-dependent and cannot be achieved without practice facilitators who understand the principles and can guide each practice to apply them in context.

To reach the tipping point, the math must be considered. The number of early majority (~34% in any innovation) compounded by (i) their need for a more individualized approach and (ii) the fact that the complexity of the change work grows as teams advance towards full PMHs means more support is needed. To transform our primary health care system at scale Alberta will need a larger, highly skilled practice facilitation workforce.

MASS CUSTOMIZATION

Also referred to as "built to order", is the concept of using a template that enables manufacturers to create specific products for each customer based on the customer's exact needs

A BARRIER TO TRANSFORMATION

HAZARDS OF THE SIMPLISTIC **USE OF INCENTIVES**

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In Economics 101, students are taught that changing incentives causes firms to change behaviour. In Advanced Microeconomics, they learn the reality: only some firms actually change behaviour; many simply fail and are replaced. We cannot afford such disruption in Alberta's health care system. We have no way to replace significant numbers of our family physicians, and patients would be placed at risk by such turmoil. We have to change incentives, but simultaneously help (almost) all practices succeed. The role of incentives is not to drive change but to remove obstacles to change and that is crucial because early majority practices (unlike early adopters) will not "swim upstream" against unfavourable incentives.

THE ROLE OF INCENTIVES IS NOT TO DRIVE CHANGE BUT TO REMOVE OBSTACLES TO CHANGE

AN EARLY WIN FOCUSING ON CHRONIC DISEASE MANAGEMENT

Transforming how teams do their work poses an enormous change management challenge. A crucial principle when undertaking large-scale change is to secure early visible wins. CDM via a well-organized, proactive, team-based approach is a critical component of the PMH. Recent research demonstrates CDM done well in this manner can deliver significant outcome improvement and cost savings (approaching three times the investment) within 18 months[14] and is the component of the PMH that delivers much of its benefit.[15] Additionally, a 2018 systematic review supports the conclusions of our local studies – i.e., practice facilitation plays a significant role in the transformation of care quality in primary care, specifically CDM outcomes.[16]

CDM is a "bright-spot" Alberta can continue to build upon to drive our transformational efforts forward. We already have many local examples[17] to learn from. In addition, and very importantly, Alberta primary care practices have done significant work toward panel[18] and proactive screening[19] which are both foundational elements to optimal CDM delivery.

CDM IS A "BRIGHT-SPOT" ALBERTA CAN CONTINUE TO BUILD UPON TO DRIVE OUR TRANSFORMATIONAL EFFORTS FORWARD

CONCLUSION

Transformation to the PMH in Alberta will require a shift in thinking at all levels, not just amongst physicians and team members delivering care on the ground. Policymakers, decision-makers and front-line change agents in our health system must be driven by how the early majority conceptualize change, which is different compared to innovators and early adopters.

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2 > HELP TEAMS LEARN TO DISTRIBUTE KNOWLEDGE WORK ACTIVITIES AND SHIFT THEIR MENTAL MODELS

3 > PRACTICE FACILITATION IS ESSENTIAL

4 > FOCUS INCENTIVE CHANGES ON REMOVING BARRIERS AND OBSTRUCTIVE INCENTIVES

5 > FOCUS ON TEAM-BASED, SYSTEMS-BASED CDM AS THE INITIAL TARGET

Please refer to Appendix A for specific change strategies for each principle.

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APPENDIX A

5 PRINCIPLES TO SCALE UP PRIMARY CARE TRANSFORMATION IN ALBERTA

A driver diagram approach[20] was used to generate the 5 change principles and associated strategies below. They are intended for policymakers, leaders, decision-makers and front-line change agents. Each offers practical considerations to support widespread adoption of innovations that will transform primary health care in Alberta. Additional strategies may be identified. Change ideas must be context-dependent.

1 ADDRESS THE EARLY MAJORITY IN TERMS THAT MAKE SENSE TO *THEM*

a. Understand the mental models of the early majority – i.e., invest in understanding each clinic's unique context, values, and challenges

b. Use a facilitative approach to get everyone on the same page with regards to change to support transformational efforts – i.e., developing a shared mental model

c. Consider factors that contribute to a team's shared mental model

   i. psychological safety – i.e., ability to speak and act without fear of negative consequences of status or career risk

   ii. organized, deliberate "sense-giving" from trusted sources (see local champions)

   iii. quality improvement structures and processes

   iv. shared EMR access/utilization

   v. co-location and use of physical space

d. Engage local champions in the PCN and beyond to share their experiences; someone credible, relatable and persuasive to the individual – e.g., innovators, early adopters, former skeptics or other early majority

   i. ideas introduced by those they know and trust are easier to accept

   ii. construct compelling narratives, with varied approaches to messaging, for example

      - numbers and narratives
      - evidence-based
      - clinical, patient, provider/team outcomes

e. Look for and capitalize on "change agents" within the clinic

f. Utilize formal outreach methods to engage

2 HELP TEAMS LEARN TO DISTRIBUTE KNOWLEDGE WORK ACTIVITIES AND SHIFT THEIR MENTAL MODELS

a. Teams who consistently distribute knowledge work activities (macrocognition) are more successful in organizing and delivering patient care
    i. sense-making and learning
    ii. decision making
    iii. planning and re-planning
    iv. monitoring and detection
    v. managing the unknown, unexpected, unclear or irregular
    vi. coordination

    These are concrete skills and behaviours that practices can learn to modify

b. Build awareness and capacity at the clinic level to maintain a culture of "distributed knowledge work activities (macrocognition)"

c. Understand "team within team" dynamics

3 PRACTICE FACILITATION IS ESSENTIAL

a. Provide a dedicated, knowledgeable, skilled and easily accessible transformation workforce to supporting the early majority

b. Teach a simplified variant of CTA to Practice Facilitators to allow for supporting clinic team's unique transformation – i.e., diagnose mental models, identify key knowledge work activities (macrocognitions) and how they are or are not distributed, offer solutions for distribution

c. Provide for individualized relationship-based support as the early majority

   i. will require higher level of ongoing support than early adopters, even when interested and open to collaborative team approaches to patient care

   ii. are able to take up change only in small incremental steps – i.e., attention to trialability and step-wise approach are key

   iii. are less risk tolerant and are not able to easily overcome barriers

      - remove barriers that make a change difficult to implement (changing incentives is key here, not to try to drive change, but to enable it)

   iv. are open to trying evidence-based changes that positively impact patient care and/or clinical operations

   v. value support that is easy and quick to access

   vi. need help to see the "bigger picture" – e.g., connection to pieces that feed up into the PMH vision and what others are working on in the same or surrounding clinics

   vii. need supports that bring resources and tools that fit their individual team values, current state and local context

4 FOCUS INCENTIVE CHANGES ON REMOVING BARRIERS AND OBSTRUCTIVE INCENTIVES

a. Do not attempt to force or induce change through incentives

b. Early majority practices lack the internal capacity to manage operations under new incentives; they need time and facilitation to develop it

c. Research shows that attempting to drive behaviour with incentives degrades performance for professionals (in contrast to simple labour tasks)

5 FOCUS ON TEAM-BASED, SYSTEMS-BASED CHRONIC DISEASE MANAGEMENT AS THE INITIAL TARGET

A German proverb states, "He who starts too much finishes nothing." In other words, trying to make everyone happy, and implementing all the aspects of the PMH at once, is a recipe for failure.

a. CDM delivers substantial and measurable results early

b. We have a good head start on CDM in Alberta, with some of the basic building blocks already in place and examples to leverage

c. CDM is our best bet for the early win necessary to build momentum to implement the entire PMH

APPENDIX B

METHOD & SAMPLE

A Cognitive Task Analysis (CTA) technique called Team Knowledge Audit was used. Facilitators trained in this technique conducted one-hour, individual interviews with clinic team members i.e., 1 physician and 1-2 team members.

CTA is a set of highly structured qualitative techniques with a long track record of successfully understanding and improving team functioning in many high-stakes settings e.g., aviation, firefighting, NASA, the military, ICUs. Its focus on eliciting the cognitive activities individuals and teams must perform to accomplish tasks in real-world practice makes it well suited to understand how primary care teams think about and do the work day-to-day.

A total of 42 CTA interviews across 18 family medicine clinics in Alberta (7 rural: 11 urban) were conducted; 24 interviews focused on how teams currently organize and deliver CDM and 18 focused on how team take on new ways of working.

Participants included team members in the following roles: Family Physician, Registered Nurse, Medical Office Assistant, Licensed Practical Nurse, Registered Dietician, Clinic Manager and Panel Manager.

Interviews were audio recorded (with consent) for transcription and analysis. Transcripts were coded independently by at least two CTA trained facilitators for macrocognitive functions (see image below). Group analysis meetings were then held to review the coded transcripts and develop mental models of how teams go about managing the work. Two member-checking focus groups were conducted with CDM team members to validate mental models found. A driver diagram approach was applied to distill overarching transformation principles.