USING CLINICAL PATHWAYS FOR CANCER DIAGNOSIS IN PRIMARY CARE:
UNDERSTANDING FAMILY PHYSICIANS' MENTAL MODELS

CANCER RELATED ILLNESSES HAVE A SIGNIFICANT IMPACT ON THE HEALTH SYSTEM. CREATING CLINICAL PATHWAYS IN AN EFFORT TO STREAMLINE THE DIAGNOSTIC PERIOD COULD ENHANCE SYMPTOM MANAGEMENT AND CARE DELIVERY WHILE IMPROVING THE EXPERIENCES OF HEALTH CARE PROVIDERS AND PATIENTS THROUGHOUT THE DIAGNOSTIC PERIOD.

OBJECTIVE

The objective of this study was to understand family physicians' thinking and approach to using three specific Clinical Pathways for Cancer Diagnosis: rectal bleeding, iron deficiency anemia, and suspected lymphoma. This understanding provides insights for the Cancer Strategic Clinical Network (SCN) on whether and how family physicians use the Pathways, how or where they would like to access them, and suggestions for how to integrate into existing workflow.

METHOD

We used a combination of mental simulation and "think-aloud" processes to gather information about: 1) how well the Pathway design supported family physicians' navigation or use of the Pathways; and 2) the fit between the family physician's mental model of the work and the proposed Pathways.

Setting: Primary Care in Alberta.

Selection: Eight family physicians whose clinics were not heavily oriented toward cancer patients, or who did not work in or closely with specialised clinics like the Cross Cancer Institute or other Cancer Centres

KEY FINDINGS

- The Pathways did not conflict with family physicians' mental models, meaning that they could fit within their diagnostic processes.

- Family physicians used the Pathways to scan for information, confirm what they already knew, support what they were already doing, or as a quick guide for what steps to take when unsure, or to check if they had missed anything. This was particularly true with the Iron Deficiency Anemia and Rectal Bleeding Pathways, as these are common issues family physicians see with patients.

Key Findings continued on next page

"THINK ALOUD"

The "think-aloud" process allowed us to assess the participant's information retrieval needs, their reasoning in how they used the Pathways, as well as the usability of the Pathways and how they might fit into or alter workflows or the thought processes of typical physicians.[2]

MENTAL MODELS

Mental Models describe the lens through which individuals make sense of what's happening around them. More than our beliefs and values, and dynamic in nature. Our mental models are so implicitly held that we're often not aware of them and how they constrain our thinking.

MENTAL SIMULATION

Mental simulation is one of the tools in the CTA methodology. It is the ability to imagine taking a specific action, and then developing the probable result before acting. It allows participants to consider events or scenarios, in this case using a cancer diagnosis pathway, as we question them and learn of possible consequences, results, and futures.[1]

KEY FINDINGS CON'T.

- Physicians did not use the Pathways as algorithms, rather, they used the Pathways as resources to support well-known System 1 problem solving[3], typically either recognition-primed decision making[4] or satisficing[5]. It was important to participants that they be able to stay in System 1 thinking in order to quickly work through the issue at hand.

- Family physicians did not feel comfortable describing something as low-risk or not referring the patient when the outcome held any chance of missing or preventing cancer. Family physician's approach was instead to refer in order to ensure they were taking due diligence for the patient's sake.
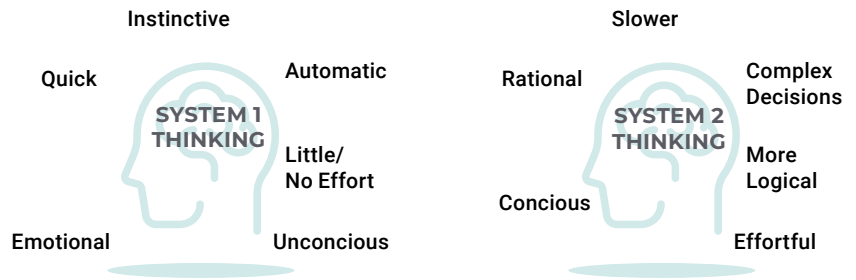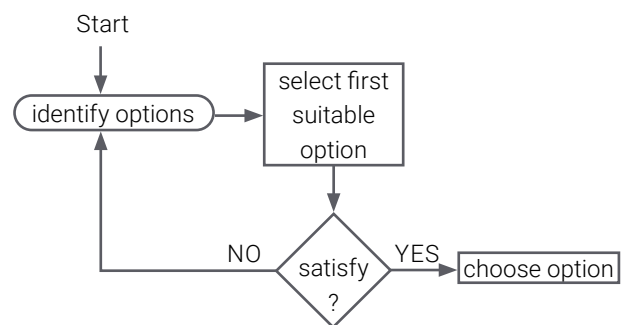
SO WHAT?

- In general, family physicians indicated that the Pathways must be easy to find, easy to use, and easy to incorporate into their work-flow. The Pathways need to be designed to provide the key information up front and very succinctly.

- Pathways for health issues that family physicians see commonly (e.g., rectal bleeding, iron deficiency) are not necessarily going to be a tool that family physicians use, or perhaps not in the expected way, as they have already developed the pattern or decision tree in which to act by. This includes relying upon their own tools (e.g., TOP Guidelines, Specialist Link, UptoDate, Forzani Group).

- Pathways for uncommon health issues (i.e., lymphoma) would be more useful and something family physicians would more likely use.

- The Pathways could serve as a platform for developing a needed shared understanding among family physicians and specialists, but also among specialists themselves, as to what is considered "urgent" or "semi" urgent, "low" or "high" risk.

- Family physicians would be more likely to use the Pathways if they included clearer steps for the referral process, as opposed to the diagnostic or decision-making process. Being able to refer from within the Pathway itself (e.g., clickable form that can then be submitted for referral) would be an asset.

Figure 1. Dual Process Model of Thinking (after Kahneman[3])
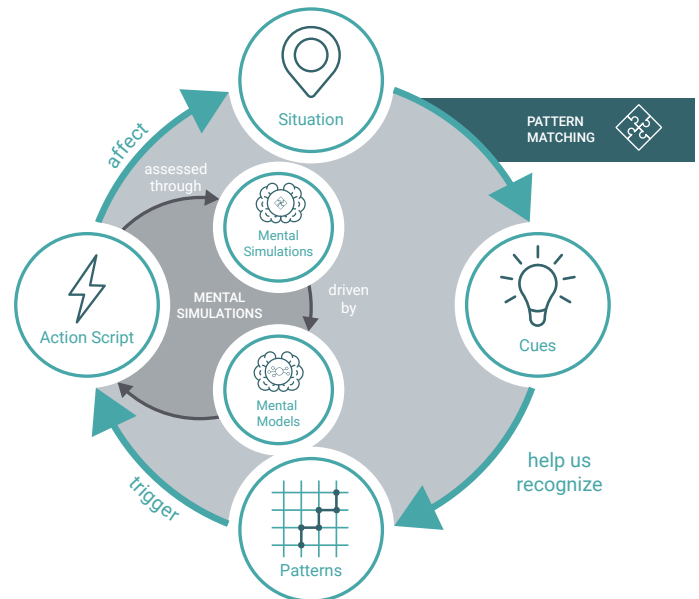
Figure 2. Recognition-Primed Decision (RPD) Model

Figure 3. Satisficing Decision Model

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