

Circle of Care Modelling: Improving Care from a Patient-Centric View

Morgan Price, MD, CCFP & Francis Lau, PhD

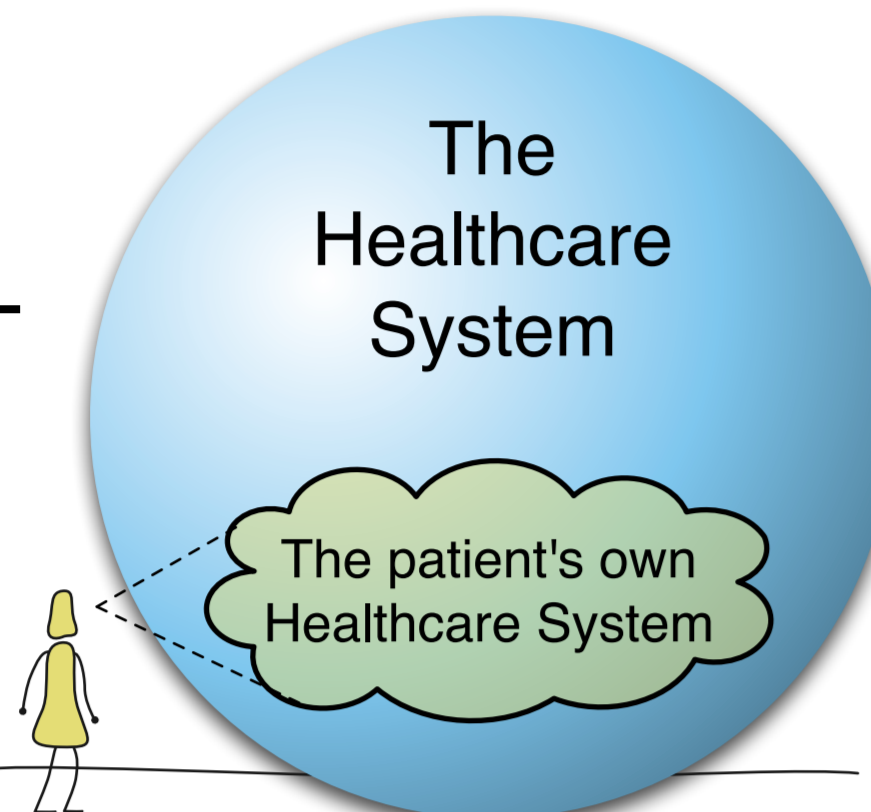
University of Victoria

The Challenge:

How do we visualize the healthcare system in a way that supports reasoning about systemic improvements to patient care?

Most approaches to modelling the complex healthcare system are organizational or technological.

Circle of Care Modelling is an approach to patient-centric modelling of the healthcare system and can be used to seek improvements in care.



Circle of Care Modelling Approach:

Determine the specific issue for improvement.

Build evidence-based **patient personas** for the patient population of interest.

Use patient personas to structure **interviews** with providers, seeking to understand the issue, who else is involved in care, and how they communicate.

Develop **Rich Pictures** that describe the patient journey(s) through the healthcare system at a community level.

Build **Conceptual Models** describing:

- **Providers** involved in care of patient
- **Communication Patterns**
- **Information Repositories** containing patient data, including flows of information.

Recruit additional providers based on previous interviews, repeat until saturation.

Complement interviews with other analysis to understand the patient's Circle of Care (e.g., documentation reviews).

Iterate and Refine pictures and models, highlighting **care gaps** within the diagrams.

Use the visuals to structure group discussions to reason about potential improvements to the care system.

Case Study: Seeking Improvements to Continuity of Care at End of Life

Continuity of Care is a component of quality care. It spans organizations and is a systems issue.

Continuity is a challenge for patients with chronic conditions, such as many end of life patients.

This case study used two simulated, evidence-based patient personas to seek improvements in Continuity of Care at end of life in two communities. 34 participants (providers and health IT professionals) were engaged in interviews and discussion groups as per the approach.

Six proposed improvements were discovered and endorsed by participants through the study.

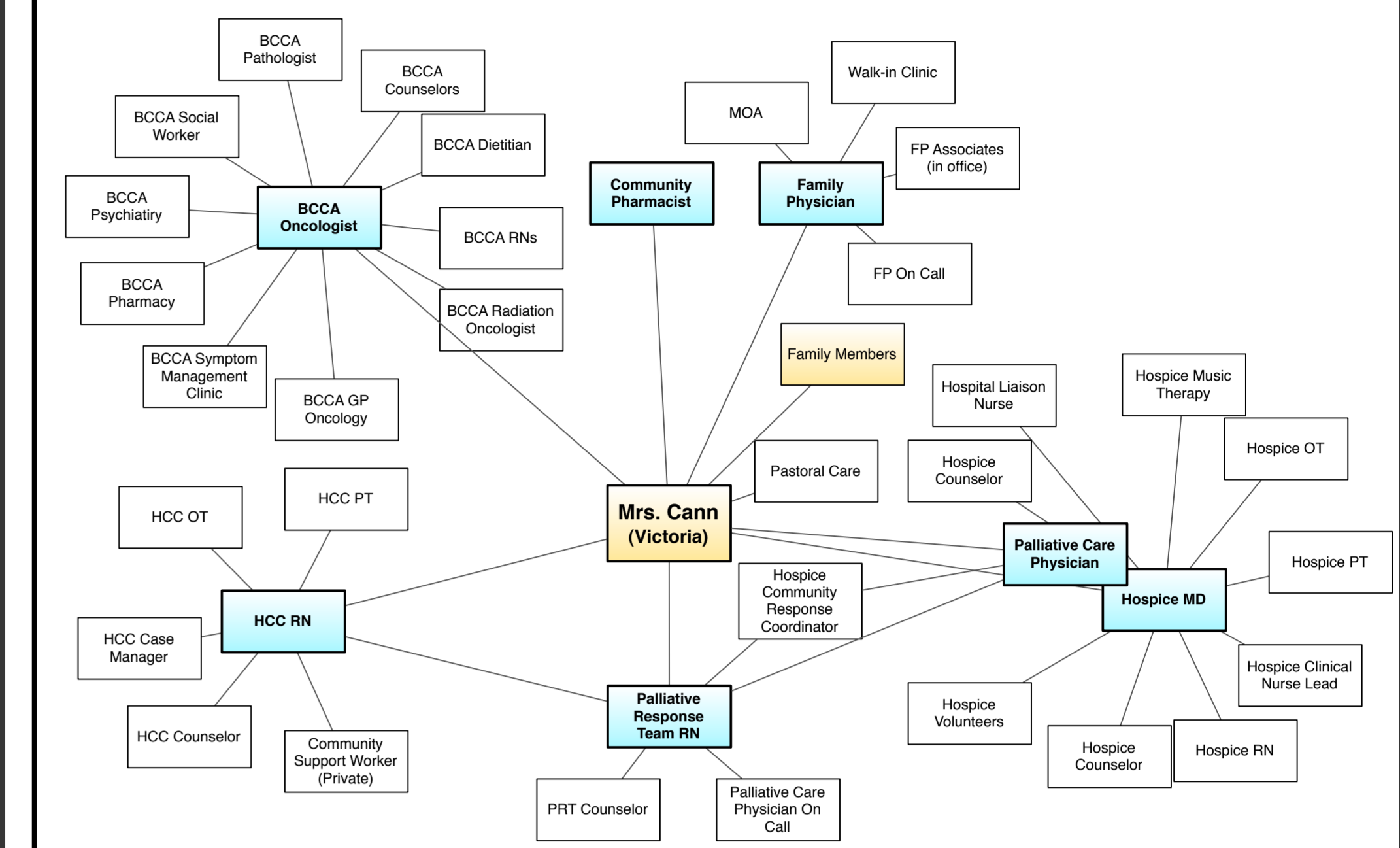
Patient Persona Example: Mrs. Cann in Victoria

Mrs. Cann is a 64 year-old widow with metastatic breast cancer. She is otherwise relatively healthy and has a supportive family. Mrs. Cann's story begins when she is living at home and she is just beginning to have difficulty coping. In time, she has a pain crisis. Later, we see her living at her daughter's house. Finally, she moves to a facility for her final days.

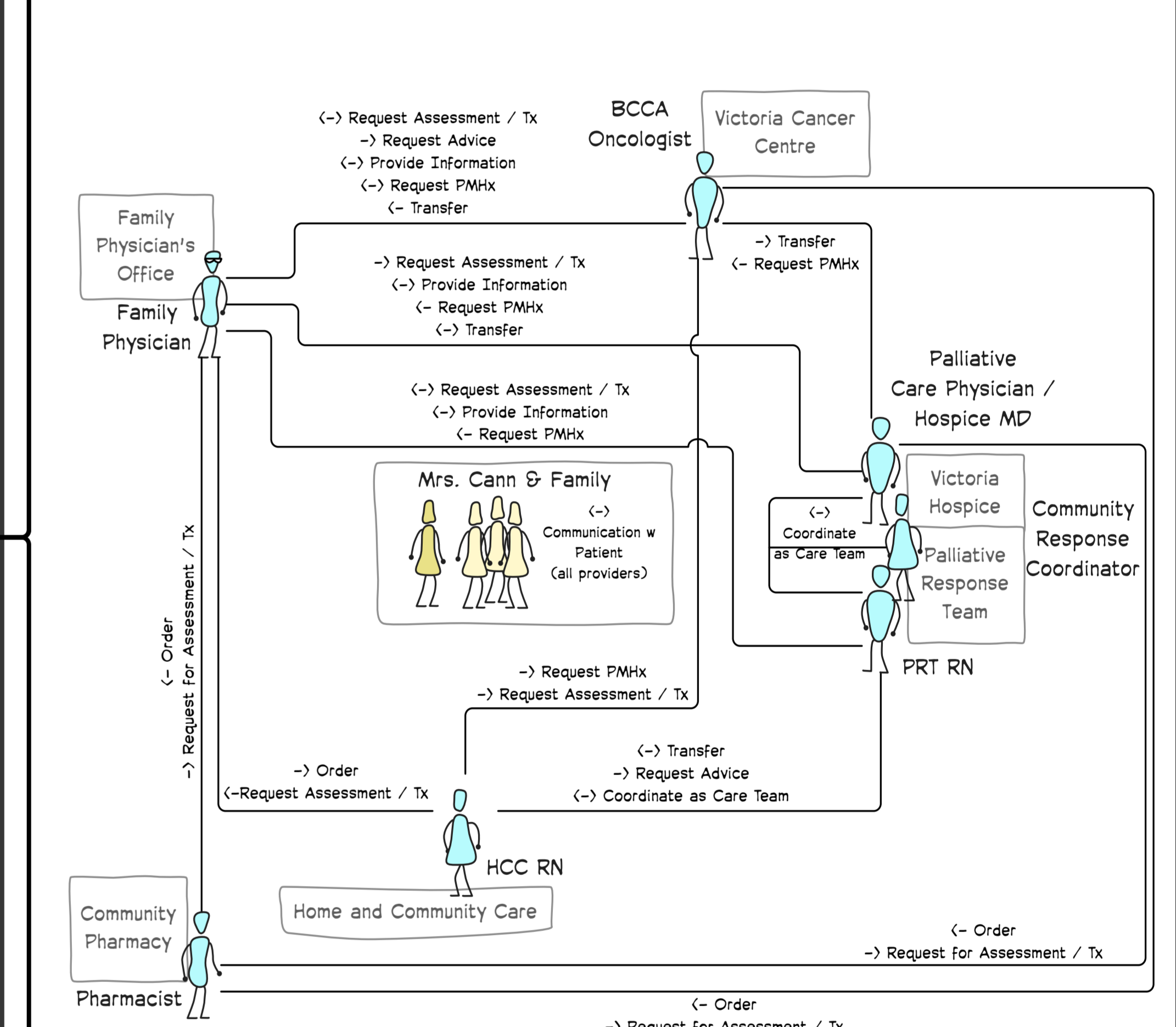
This case was used to allow participants to describe Mrs. Cann's care and challenges in continuity.

Mrs. Cann's Circle of Care Models

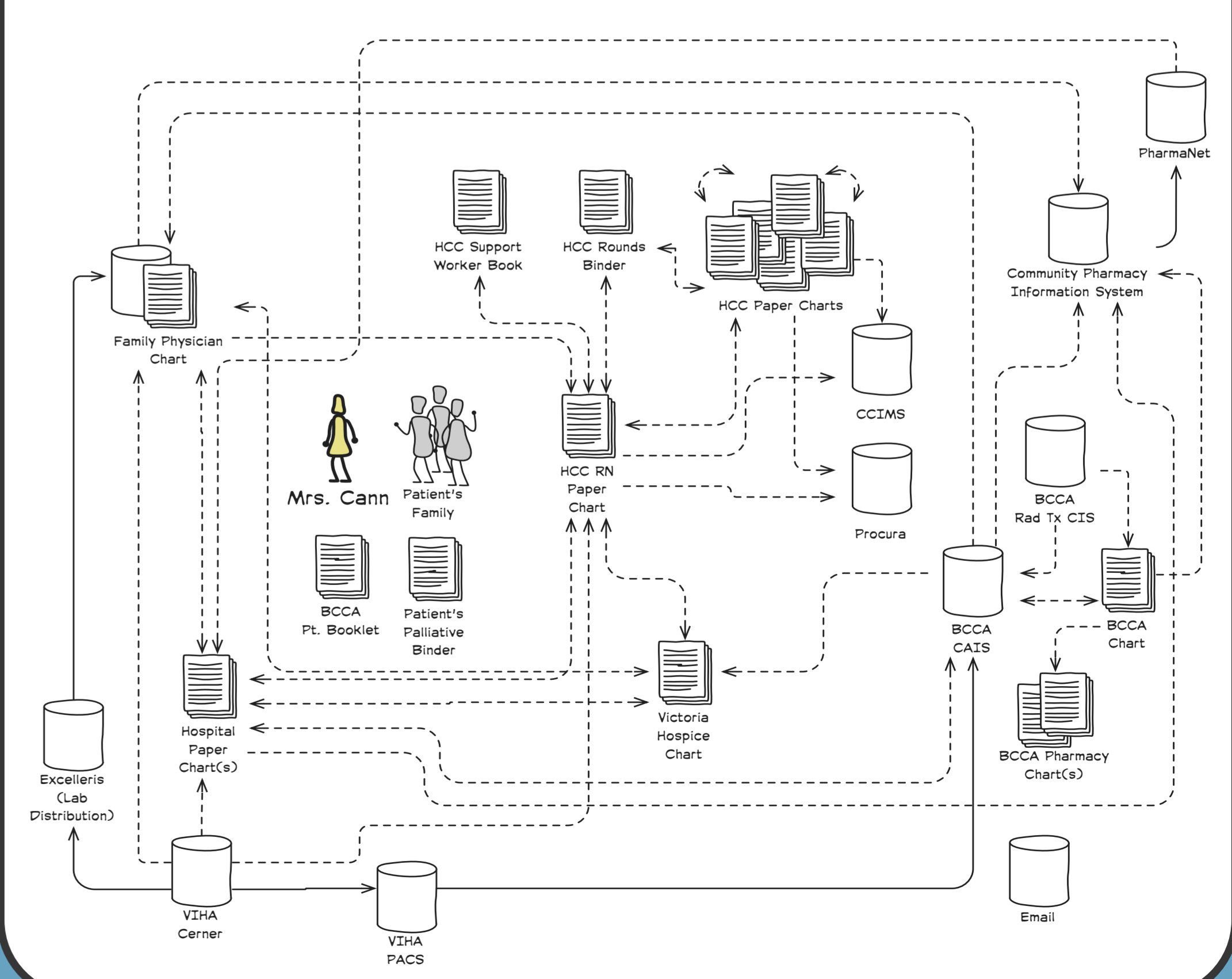
Provider View



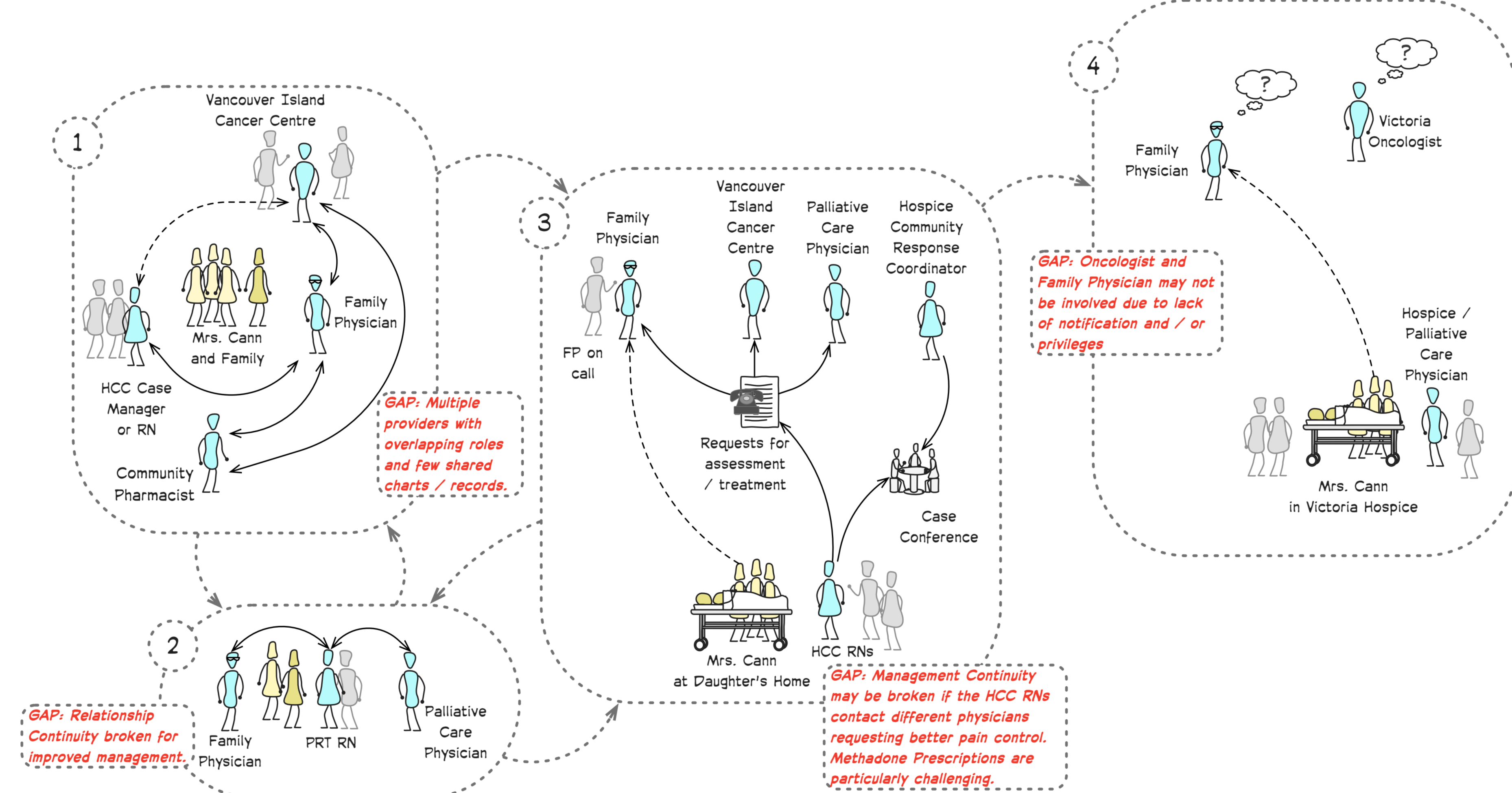
Communication Patterns



Information Repositories



Case Study: Rich Picture of Mrs. Cann's in Her Last Year of Life (Victoria)



Case Study: Proposed Improvements

Participants developed and endorsed six suggested regional improvements:

1. Improve provider access to appropriate Clinical Information Systems (CIS).
2. Develop an electronic advance directives repository.
3. Electronically document patient-provider relationships in regional CIS.
4. Develop automatic notifications for patient transitions to key providers.
5. Improve use of case conferences.
6. Design a regional clinical communication tool.

Benefits of Circle of Care Modelling:

- Approach helps define Circles of Care, which are not clear, even to most providers.
- Meso-level analysis complements higher-level policy work and detailed workflow analysis.
- Patient perspective transcends organizational boundaries.
- Allows for community level engagement and is accessible to healthcare providers and IT.
- Focuses on overall system improvements.
- Use of standard patient personas allows for comparisons between communities (not shown).