The Complex Care Hub & Community Paramedicine

A hospital at home model for patients with complex medical conditions

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Assess Treat and Refer
Coordination Center
Emergency Medical Services
Mobile Integrated Healthcare

Objectives

1. Overview of the Complex Care Hub.
2. What role do the Community Paramedics have within the Complex Care Hub?
3. What is the evaluation revealing?

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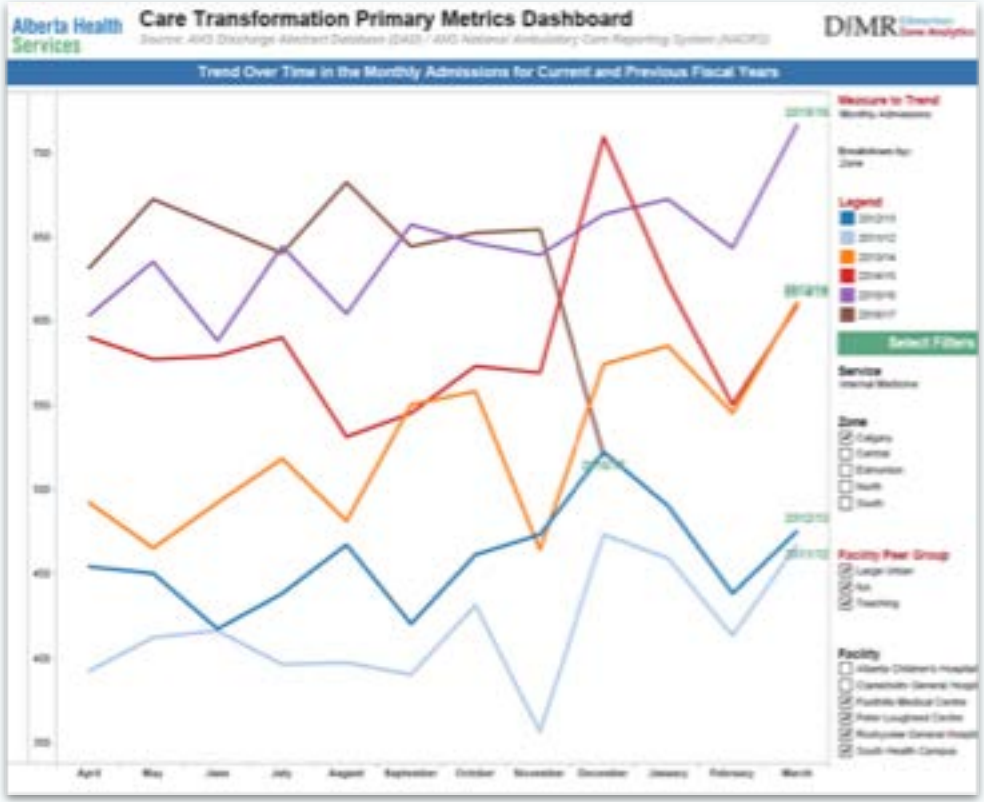
Rising Volume of Medical Admissions in Acute Care



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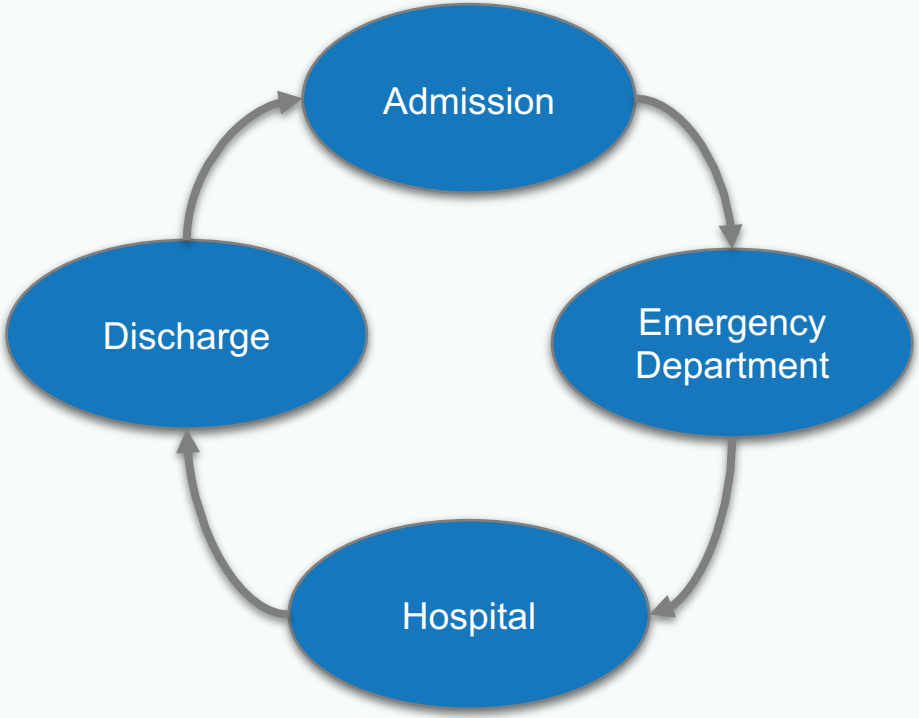
Source: Tableau Alberta Health Services

Impact on Emergency Medical Services



- Emergency Department wait times are up 11% from 2016 and 17% from 2011
- 43% of emergency medical service transports are for people over 65 yrs
- In 2018 Ambulance wait times in the major emergency departments in Calgary were exceeding 2 hours

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How can hospital wait times be reduced?

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Complex Care Hub: Bridge to the Community

Acute Care

Complex Care Hub

Primary Care

Community Services

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Complex Care Hub: Bridge to the Community

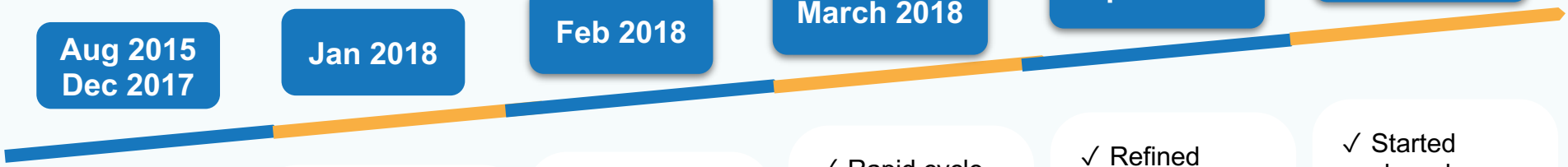
Leveraging

Existing services & processes

Combining Strengths

Community Paramedicine Case Management + H & H

Planning and Implementation



Aug 2015 Dec 2017

- ✓ Literature review
- ✓ Model development
- ✓ Business case
- ✓ Steering committee
- ✓ Stakeholder engagement

Jan 2018

- ✓ Table-top exercises
- ✓ CP observationship on IM wards
- ✓ Simulation with Physician and CP

Feb 2018

- ★ *Rapid cycle modifications for IT*
- ★ *ED and clinical processes*

Program Launch

March 2018

- ✓ Rapid cycle modifications for IT, ED, lab and clinical processes (e.g.home O2)
- ✓ Addition of caregiver survey

April 2018

- ✓ Refined clinical process
- ✓ Test inpatient transfer
- ✓ Development of shared care framework for long-term care

May 2018

- ✓ Started shared care with LTC
- ✓ Start transfers for IM wards

Planning

Pre Implementation

Phase 1: Run-in Period

- Feasibility testing and process consolidation
- CCH patients vs comparison group

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Who makes up the team?

- Patient
- General Internal Medicine physician
- Hospitalist
- Nurse Navigators
- Community Paramedics

Complex Care Hub Partners

- Day Medicine
- Diagnostic Imaging
- Alberta Provincial Lab
- Allied Health Services (PT, OT, SW, Pharmacy)
- Home Care, Primary Care Networks
- Emergency Department, In-patient units, Rapid Access Unit

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Target Population

Frail

- 65 and older,
- multiple comorbidities,
- Polypharmacy,
- requiring community supports

Not Frail

- high users of acute care
  - > 3 ER visits/year

and/or

  - > 2 ER visits in past 3 months

Stable

- require
  - an expedited workup (cancer, PE etc)

or

  - short-term intervention (limited IV hydration)

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Inclusion Criteria

Basic patient characteristics

- Not at risk of self-harm
- Will be able and willing to follow management plan
- Safe at home (ie: falls, home care)

Suitable home environment

- Responsible adult available to help
- Working telephone
- Not homeless
- Home environment safe

Exclusion Criteria

- ☒ Stroke/MI/surgical emergency
- ☒ Reason for presentation to ER is recurrent/injurious falls
- ☒ Undiagnosed severe delirium
- ☒ Unmanageable high risk behaviours
- ☒ Unsafe home environment / homeless / unable to follow plan

Assess Treat and Refer - Coordination Center

Access Point 1
Community healthcare staff directly request Community Paramedic services via phone

Access Point 2
Physician or clinics request services via referral form

Access point 3 EMS crew referral via phone

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Care Networking

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Patient

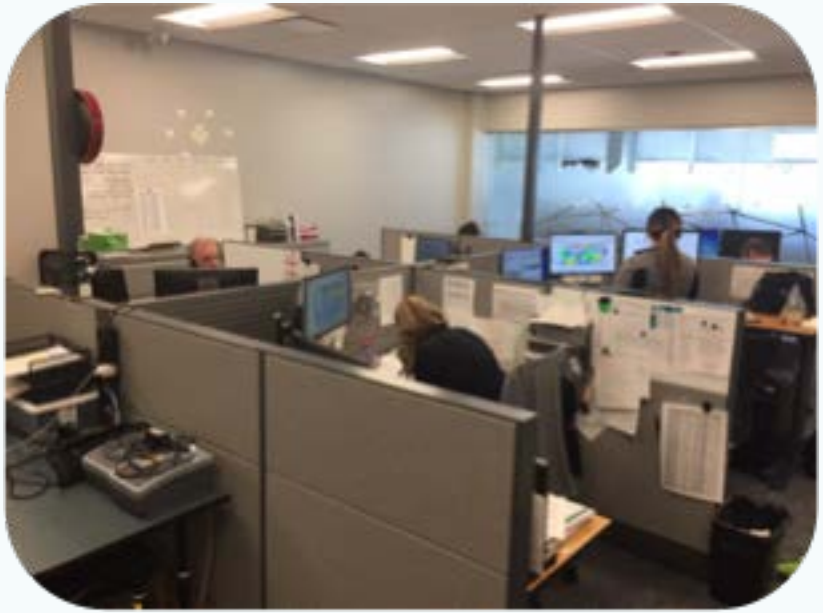
CCH Physician

Lab

Patient's Family

Pharmacy

Community Resources



Community Paramedic

Nurse Navigator

Home Care

Bed Placement

Primary Physician

Interfacility Transfer

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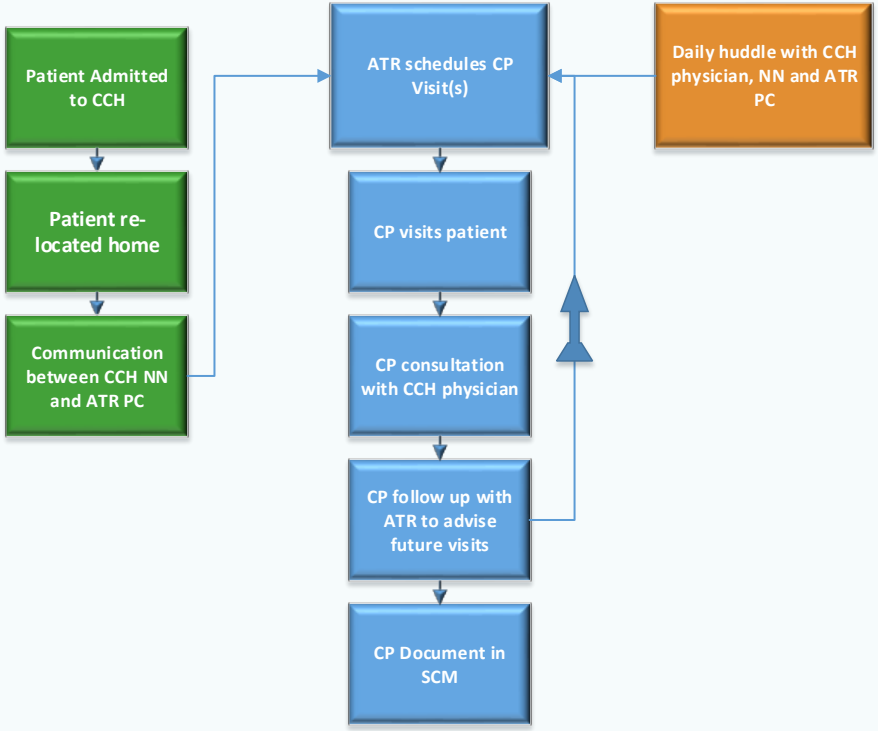
What Happens When Patients Are Admitted



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Daily Virtual Inpatient Visits

CP Home Visit

Assessment, labs, interventions

Day Medicine

MD and Nurse Navigator
in-person visit

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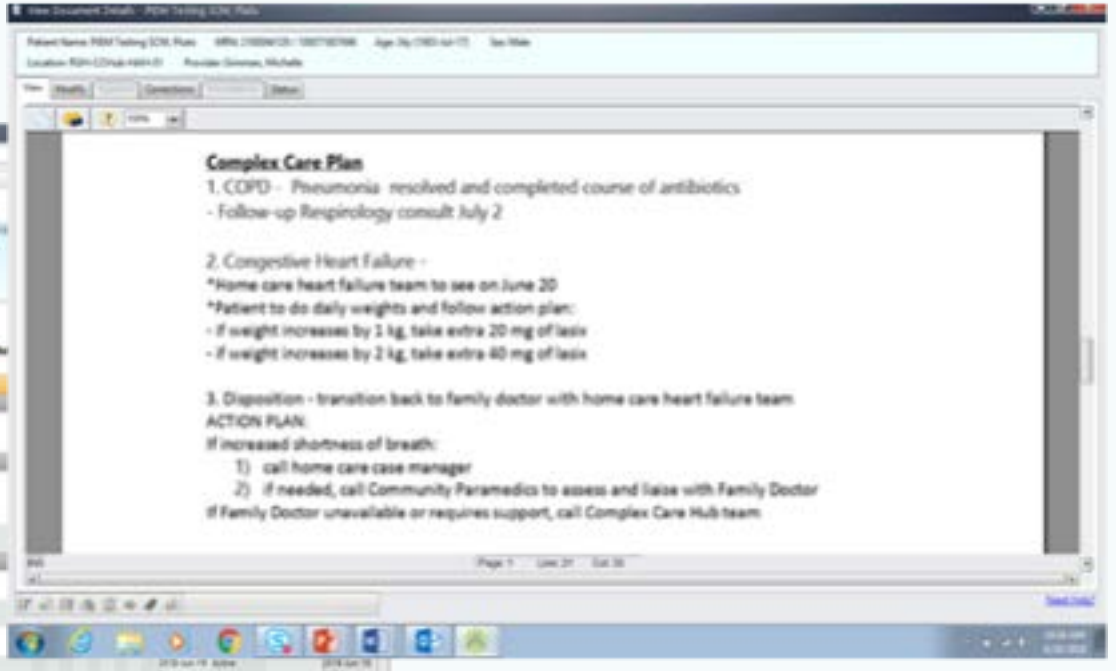
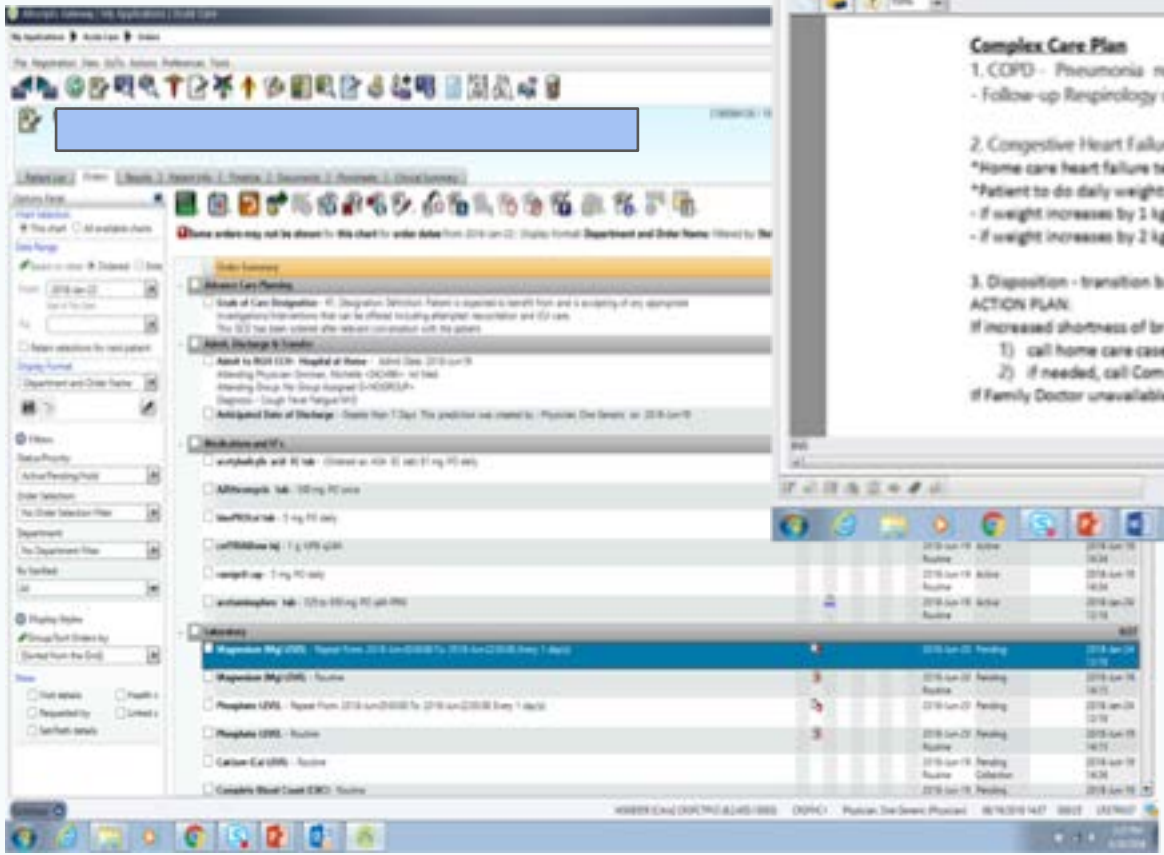
Documentation





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Community Paramedic Clinical Interventions Provided

- CVC & IV rehydration
- IV, SQ, IM, PO, PORT & PICC medication administration including IV antibiotics
- Specimen collection (blood, urine, wound)
- Extensive medication formulary available (70 stocked), Prescription facilitation
- Blood transfusions
- Facilitated DI transports
- Urinary catheterization
- Wound closure & care (tissue adhesive, sutures, dressings, staples)
- Oxygen and nebulizer therapy

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Community Paramedic's and the Complex Care Hub

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Care Provider Satisfaction (February, 2018 - April, 2019)

97%

of **care provider** survey responses (N=37) rated the Complex Care Hub staff as **good** or **excellent.**

86%

of **care provider** survey responses (N=37) indicated that the Complex Care Hub had helped patients regain their function and indepence **quite a bit** or **completely.**

92%

of **care provider** survey responses (N=37) indicated that provider experience on the Complex Care Hub was **good** or **excellent.**

[6] Care providers include physicians, nurses, and Community Paramedics. Physicians receive provider satisfactions surveys after every weekly rotation through the service. Therefore surveys can be completed more than once by the same provider. Community Paramedics and nurses receive their provider satisfactions surveys quarterly.

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1,380 Hospital Admission Days Avoided

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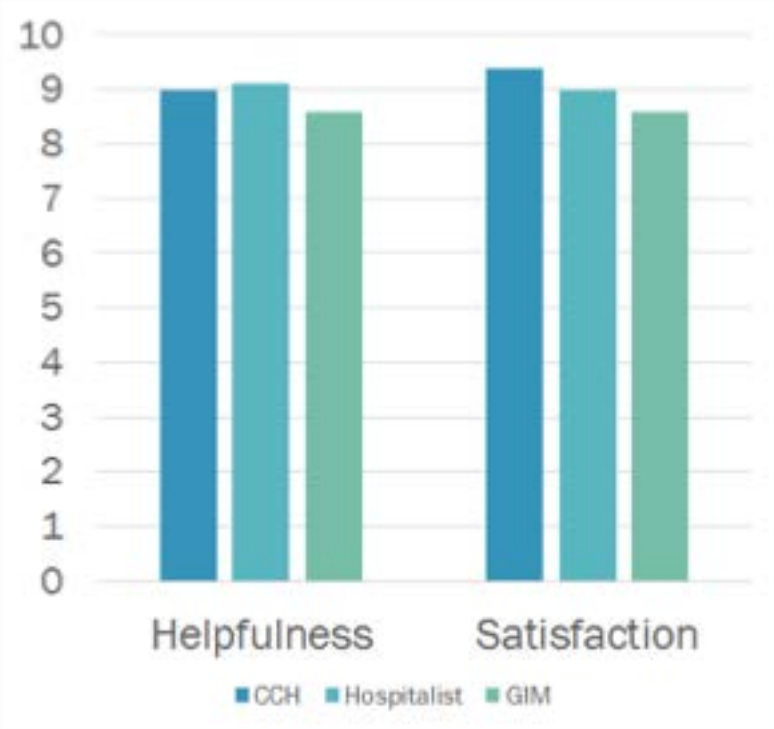
Patient satisfaction (February, 2018 - April, 2019)

85%

of patients (N-41) felt that the Complex Care Hub had helped them regain their function and independence
quite a bit or **completely.**

98%

of patients (N-40)[4] rated Complex Care Hub staff as
good or **excellent.**



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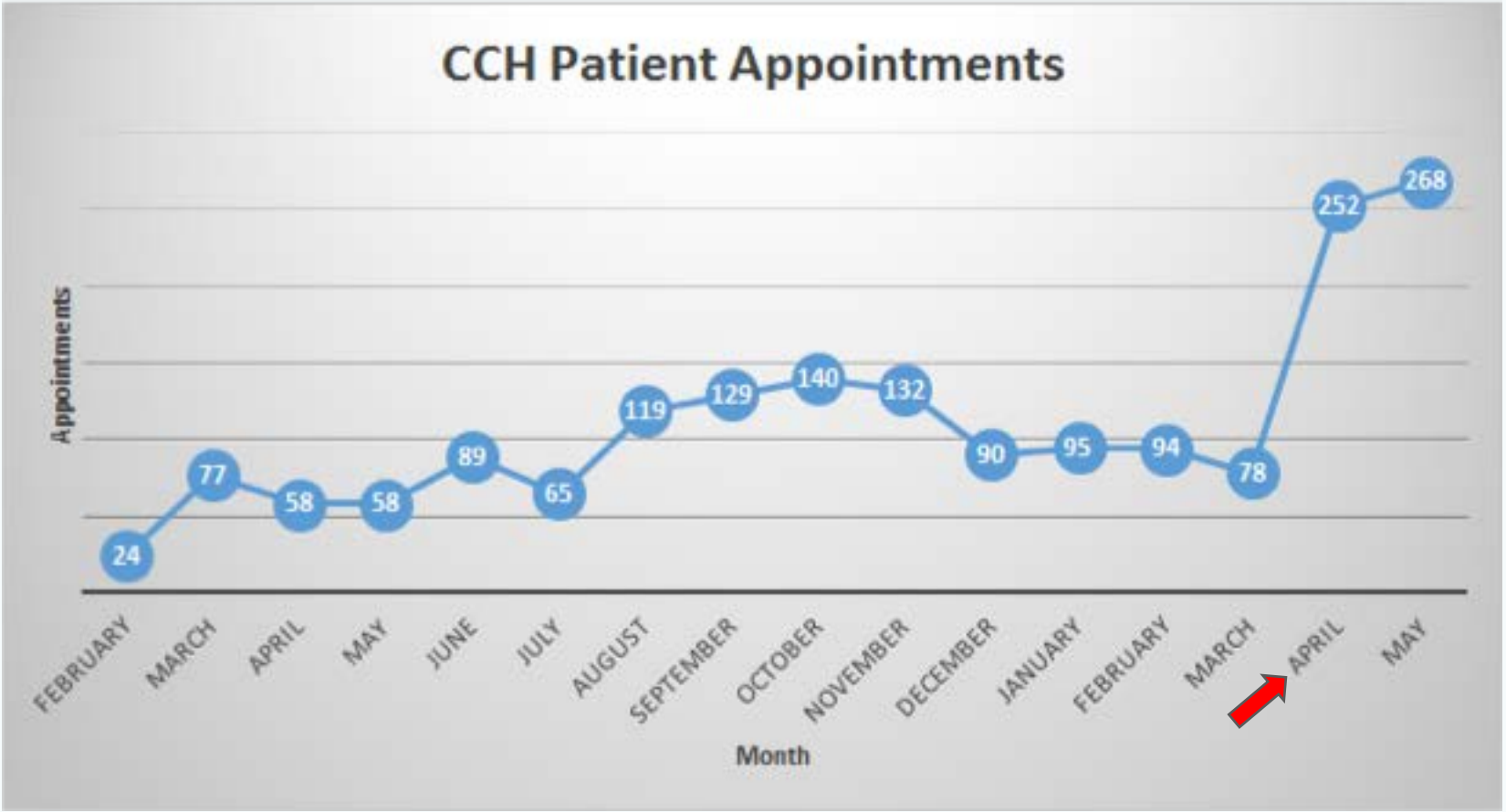
[1] Three patient satisfaction surveys were completed prior to Research Ethics Board approval to administer an accompanying post-discharge EQ-5D. Two patients completed a post-discharge EQ-5D, but not a patient satisfaction survey.

[2] Units 71/72 are hospitalist units and units 93/94 are general internal medicine. The CCH is compared to these units because it includes patients from both these populations. This unit data is from 2018/19 Q3.

[3] The overall N varies by question due to patients skipping questions.



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Patient Comments on CHH

- *“It really gave me strength, it encouraged me to look after myself and get better myself”*
- *For “patients who have complex health conditions - let them access [the Complex Care Hub] because it’s made a difference of night and day for us and i’m sure it can help a lot of other people. Having [my husband] at home means everything to me and this program has made this possible.”*

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Future State

- Adding home monitoring technology and point of care assessment tools.
- Economic Evaluations
- Decreased hospital admission review
- Goal is a provincial model

Acknowledgements

Implementation and design team

- Dr. Michelle Grinman
- Ryan Kozicky
- Michelle Smith
- Dr. Vivian Ewa
- Dr. MaryJane Shankel
- Laura Bettcher – IT
- Ming Gao – IT
- Marie Fajardo Johnson – IT
- Bryan Haggarty – ED
- Dr. Nancy Zuzic - ED
- The various department leads at RGH and SHC
- Executive sponsors – Debbie Goulard, Jana Ambrogiano, Dr. Colin DelCastilho, Dr. Sid Viner
- Dr Leanne Reimche
- Dr Bhavini Gohel

Clinical team

- Kirsten Proceviat
- Azadeh Motehayerarani
- GIM physicians at RGH

Evaluation team

- Jason Goertzen
- Ashley Sagan
- Marysia S
- Lindsay Woodinski