

# Community Paramedic In Home Blood Transfusions

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# A patient's story



# Why Home Blood Transfusions?

- Blood transfusions improve **quality of life**, particularly for patients living with chronic disease or at end of life.
- Lack of health system capacity and **access barriers** can result in delays in receiving blood transfusions especially for frail patients with mobility issues.

# Home Blood Transfusions

**Risky?** Possibly

**Precedence?** Yes in Nova Scotia, not in Alberta

**Standards?** Yes - Provincial and National

**Duplicating existing services?** No, not in Alberta

**Need?** Yes – from physicians

**In Scope?** Yes – Alberta College of Paramedics

**Training Requirements?** Yes, Alberta Health Services specific

# PILOT Objective

We hoped to show that transfusions can be done **safely** in the home by community paramedics, to improve **access** to this care, and to improve the **patient experience**.





# TEAMWORK

Together Each Achieves More



Alberta Health  
Services

Tom Baker Cancer Centre - Calgary



Calgary<sup>®</sup>  
Laboratory  
Services



Alberta Health  
Services

Community Paramedic

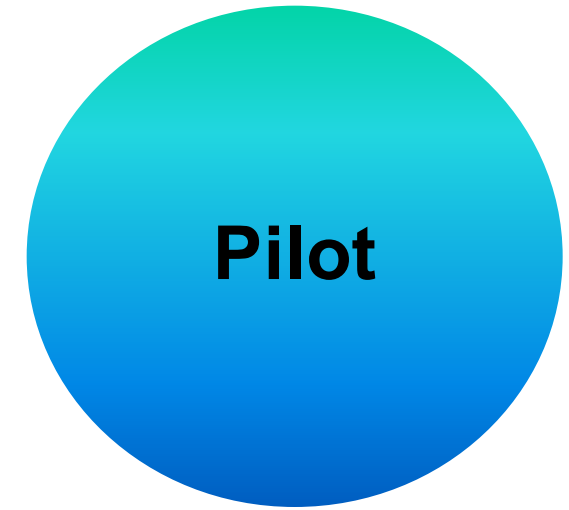


- Transfusion physicians
- Community Paramedics
- Program Medical Directors
- AHS Policy
- Alberta College of Paramedics
- Lab technicians
- Patients / families



## **DESIGN**

- Meet applicable standards
- Risk management & mitigation
- Education package
- Equipment requirements
- Procedures / protocols
- Referral criteria
- Project Management
- Change Management
- Evaluation



# PILOT

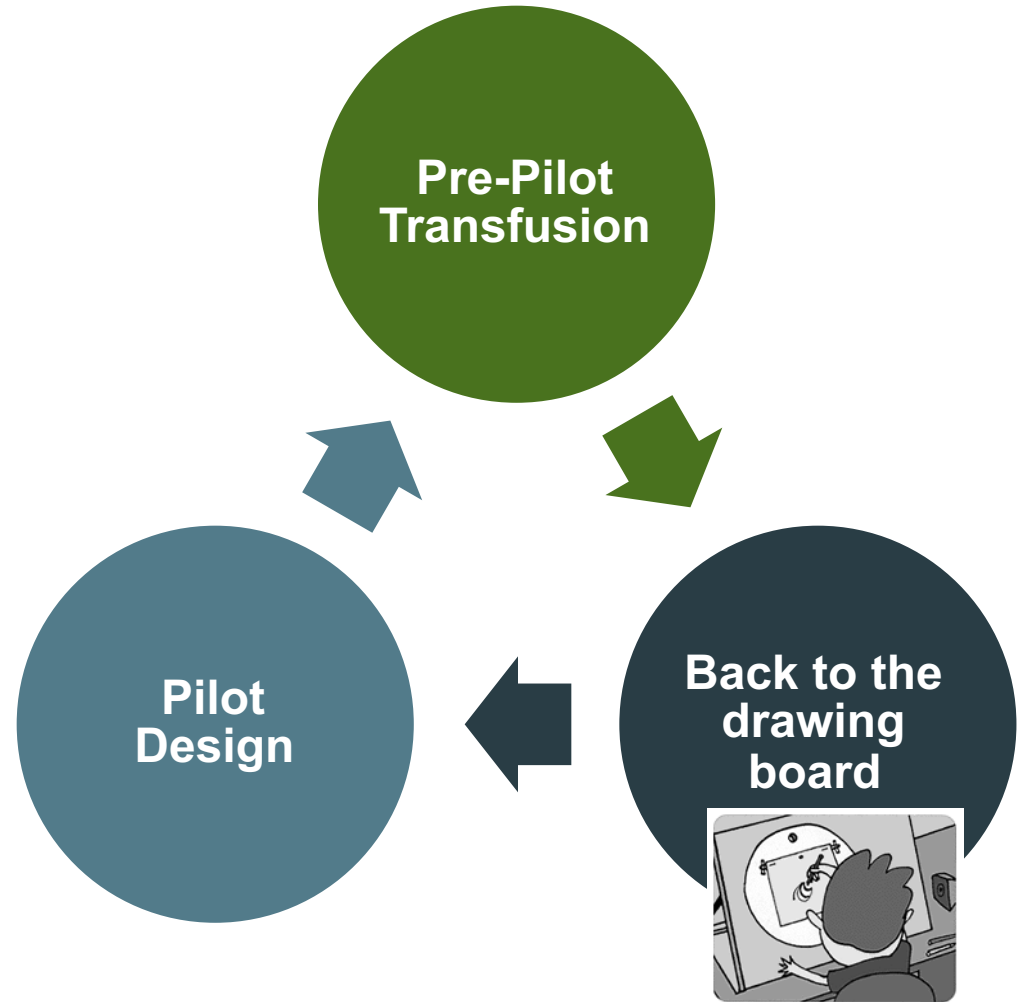
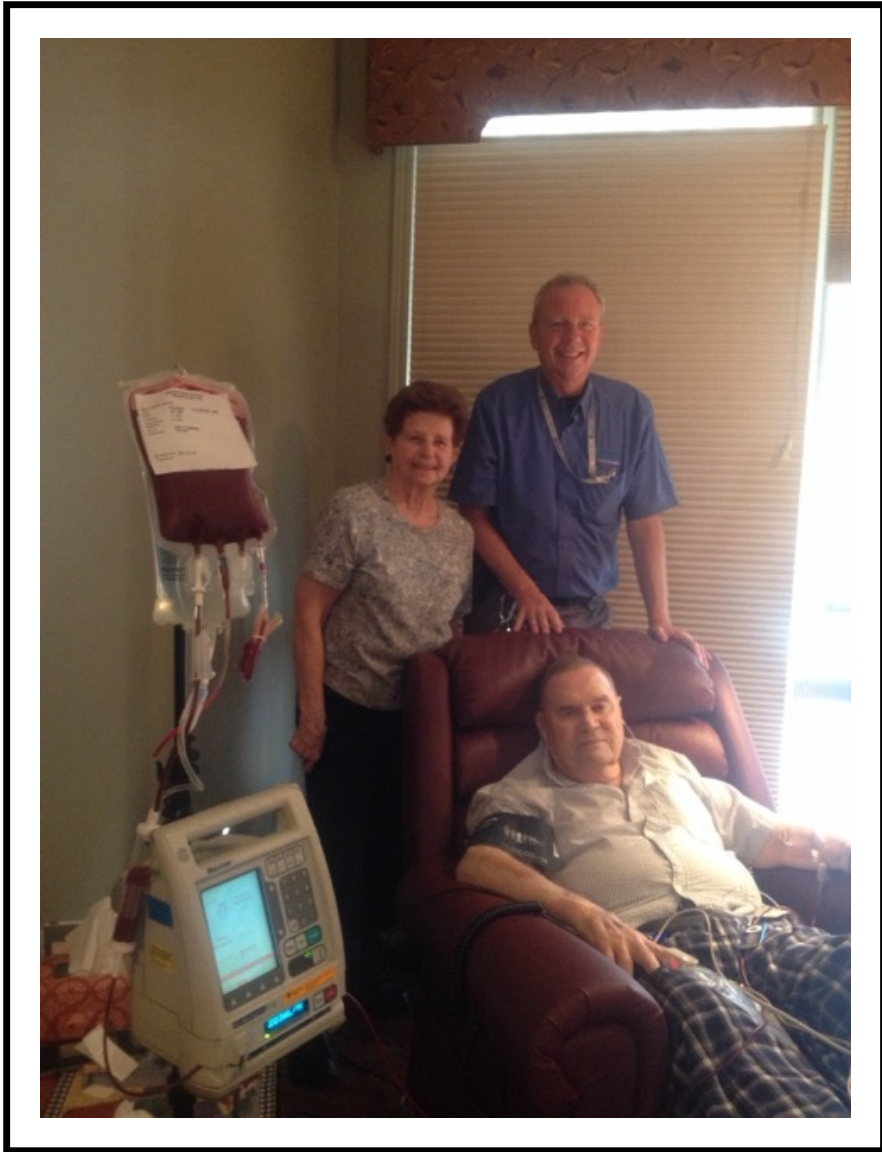
- Started on October 8, 2015
- 2 months or 40 transfusions
- Initially only RBCs
- Two community paramedics
- Eligibility criteria
- Transfusion medicine review of all each referral CPs perform thorough pre-transfusion assessment
- One location for blood pick up / drop off location
- Protocol & equipment in place for reactions, including physician consult



REACTION

Medic, I think I'm having one





# Pilot Evaluation

Evaluation grouped into **3** themes:

## 1. Clinical Activity & Patient Safety

- number of referrals
- number of transfusions
- frequency of adverse events
- health outcomes of transfusion patients

## 2. Patient & Family

- benefits or concerns with in-home vs. in-hospital transfusions

## 3. Staff (community paramedics, transfusion medicine, referring physicians)

- education, documentation and referral process improvements



# HINDSIGHT

*Those really were the droids you were looking for.*

# What did we learn?

*Fantastic program* it's absolutely amazing and I really appreciate it.

The *Community Paramedics* are *so professional*.

*I was...very comfortable, relaxed and relieved.*

*There is a sense of 'stillness' at home*, in hospital everyone is running around you. It doesn't feel so intrusive at home.

*My caregivers know I'm in good hands*

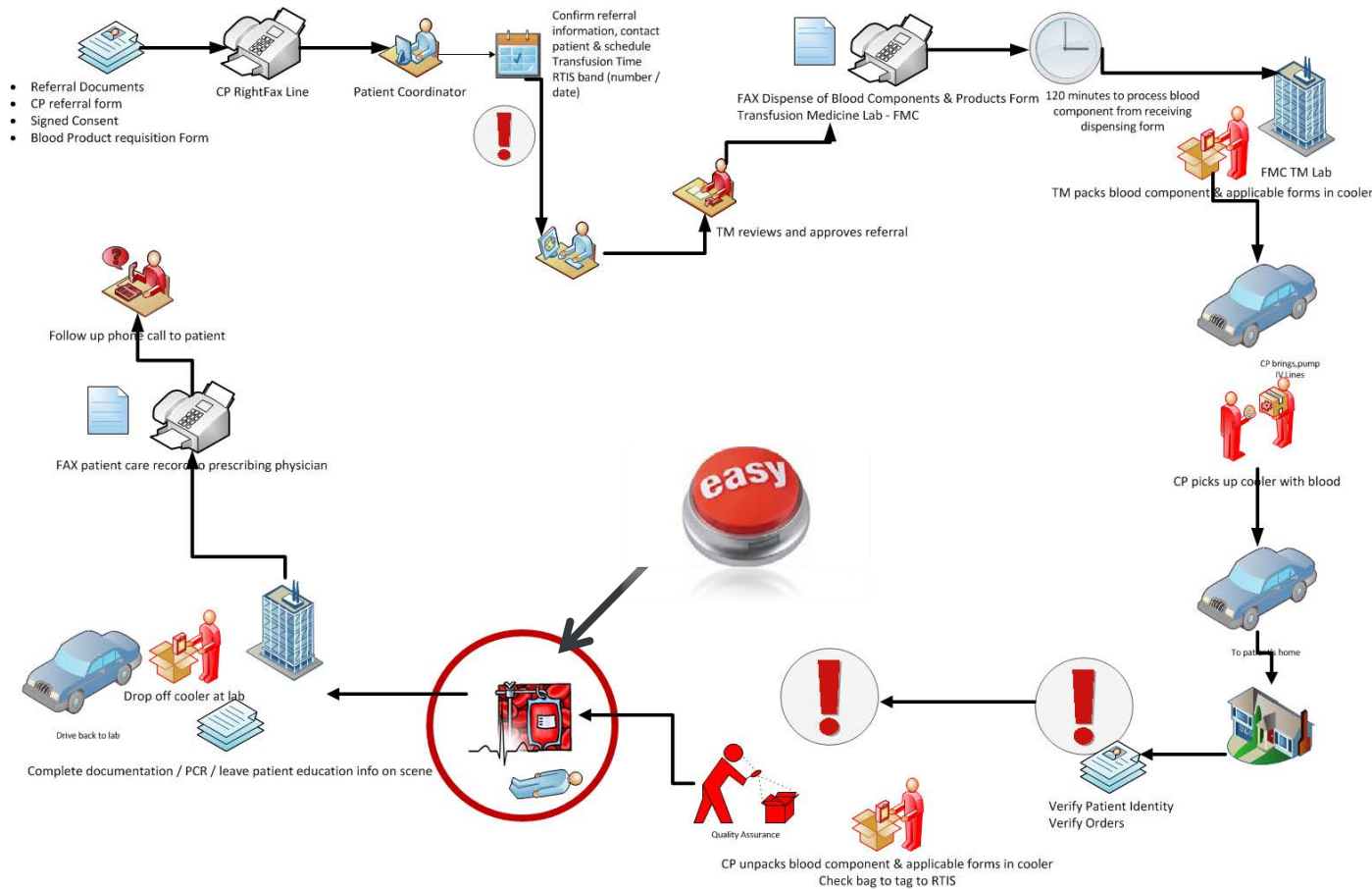
*this process is safe & successful*

*Reduces everyone's travel time*, juggling of schedules.

"It was physically more comfortable for my mom; *my mom was so relieved to not have to go to hospital for the transfusion*

*"It meant his spouse didn't have to worry* about parking / driving and didn't have to cancel any of her appointments

# What **else** did we learn?





# Our community paramedics are incredible



# Key Findings

- No adverse events or poor outcomes
- Patient & family feedback was positive
- Transfusions take a long time
- Issues with referral & scheduling processes

## Key recommendations:

- In-home transfusions by Community Paramedic Program should be continued
- In-home transfusions need to be limited to 1 per day
- Referral criteria & scheduling processes need to be updated



### Community Paramedic In-home Transfusion Criteria & Information

Community Paramedic Program accepts referrals for medically fragile adults living in the community requiring timely access to in-home blood transfusions (RBC, platelets and albumin) to improve health outcomes and remain out of hospital.

**To be considered eligible for this service:**

- Your patient must be 18 years or older
- Your patient must have had a previous transfusion with no serious reactions
- Your patient must be able to tolerate infusion rates between 90 – 120 minutes per unit of RBC
- The order must not exceed 2 units of RBCs and 1 dose of platelets
- The referral must be received at least 24 hours prior to the requested transfusion date
- CBC and type & screen, if applicable must be completed and interpreted within 96 hours of the requested transfusion date



**NOTE:** if your patient requires re-occurring transfusions, the requesting physician must submit a new referral for each transfusion request

**AND meet at least one of the following criteria at the time of the referral:**

- Patient has a mental health problem such as agoraphobia, debilitating anxiety, or psychiatric condition that prevents them from leaving their residence
- Patient has dementia or brain injury that would present as a safety risk travelling to a facility
- Patient suffers from a medical condition such that a trip of an hour or more outside of the home would compromise the patient's health
- Patient has high oxygen requirements that cannot be safely met by the use of portable oxygen

**NOTE:** All transfusion referrals, may be subject to review by AHS Calgary Zone Transfusion Medicine

# Implementing Recommendations

<input type="checkbox"/>	Transfusion Criteria Eligibility Met	PC name & date	<input type="text"/>
<input type="checkbox"/>	Referral Form	PC name & date	<input type="text"/>
<input type="checkbox"/>	Consent Form	PC name & date	<input type="text"/>
<input type="checkbox"/>	Blood Requisition form	PC name & date	<input type="text"/>
<input type="checkbox"/>	Infusion rate confirmed	PC name & date	<input type="text"/>
<input type="checkbox"/>	T&S booked or confirmed	PC name & date	<input type="text"/>
<input type="checkbox"/>	CBC booked or confirmed	PC name & date	<input type="text"/>
<input checked="" type="checkbox"/>	Medication checked for reaction history If history present, consult with TM (physician prior to accepting)	PC name & date	<input type="text"/>
<input type="checkbox"/>	Tentative appt booked with patient	PC name & date	<input type="text"/>
<b>Transfusion Medicine Pre-Alert</b>			
<input type="checkbox"/>	Email sent to TM?	PC name & date	<input type="text"/>
<input type="checkbox"/>	call rec'd from TM to proceed?	PC name & date	<input type="text"/>
<input type="checkbox"/>	book appointment	PC name & date	<input type="text"/>
<b>Setting up Appointment</b>			
<input type="checkbox"/>	Faxing TM docs Event booked	PC name & date	<input type="text"/>
<input type="checkbox"/>	Arrange pick up	PC name & date	<input type="text"/>
<input checked="" type="checkbox"/>	Complete Blood Dispense Form	PC name & date	<input type="text"/>
<input type="checkbox"/>	Relieve patient if home care due same	PC name & date	<input type="text"/>

# CURRENT STATE - TRANSFUSIONS

## 31 unique patients - 88 transfusions

**Two** events with minor reactions – managed by community paramedics on scene

7 days outcomes –

2 EMS events not associated with transfusion,

5 ED visits, 4 related to progression of disease not transfusion

18 patients 1 transfusion only

12 patients 2 – 7 transfusions

1 patient 26 transfusions



# Challenges

- Transfusions represent a large time commitment
  - Modified duty staff
  - Additional lab drop off sites
  - Rotate staff
- Finite resources
  - Refine referral criteria
  - Develop discharge criteria
  - Seek sources of funding
  - Expand the model to other health services
- Continuous Learning
  - FAQ updates
  - Practice Support for our community paramedic
  - Plans to interview our patients
  - Communication!

**solutions**

**solutions**

**solutions**







# COSTS

- Tom Baker Cancer Centre **\$1300**
- Emergency Department via ambulance **\$1400**
- Day Medicine Outpatient Unit **\$400**
- Private Contracted Transportation **\$350**
- Ambulance Transport **\$600**

Time of family or caregivers **\$\$\$?**

**Patient's Home \$400**

**7 days a week (0600-2200)**

**VALUE?**





Banff, Alberta

*You miss 100% of the shots you don't take*

# Thank you

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