

# Reducing Time Toxicity & Improving Access to Care: A Pilot Project to Decrease Wait Times for Blood Transfusions for Patients with Cancer Using a Haemobank

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## Problem Statement

By March 2022, the Starr 3 Infusion average minutes to receiving a red blood cell (RBC) transfusion treatment (time of check-in to time of start of blood transfusion) was **215 minutes**. Prolonged wait times for RBC transfusion impact patient treatment flow, treatment chair turnover, overall infusion center operations, and leads to negative patient experience.

## Background

Oncology and hematology patients require a high volume of red blood cell (RBC) transfusions. In 2021, 3960 units of RBCs were transfused in the Starr 3 Infusion Center.

Trended data from 2021 patient Q-Reviews indicated patient dissatisfaction in wait time from check in to the start of the RBCs. A remote refrigerator reduces time spent by staff waiting for blood to be released and transporting units.<sup>1</sup>

The Starr 3 Infusion Center purchased a Haemobank 80 (HB80) blood refrigerator in 2017, however data from July 2021 – January 2022 indicated that **only 8%** of RBC administered in the Infusion Center came from the HB80.

## Project Aims

From November 2022-January 2023, this project aims to reduce the wait time (time of check-in to time of start of blood transfusion) for patients with cancer requiring RBC transfusion utilizing a Haemobank.

## Methods

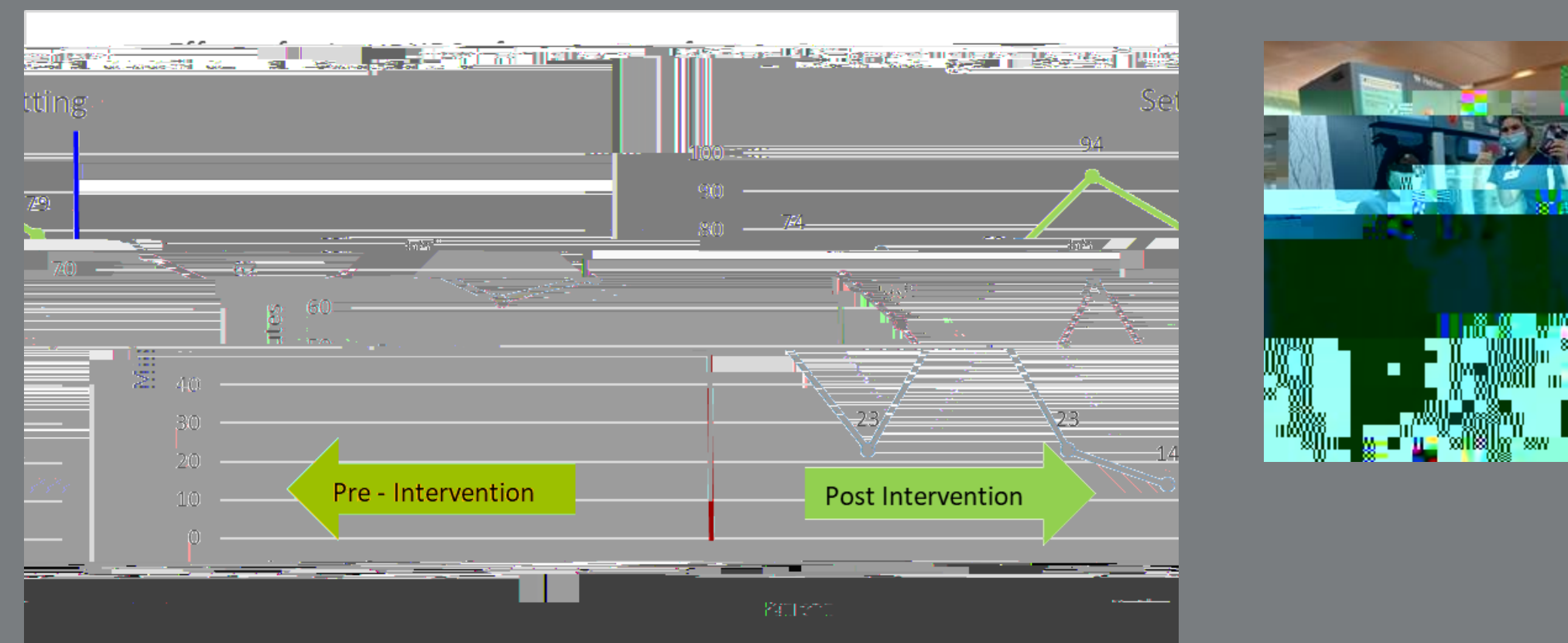
Developed and launched in February 2021 to improve communication between Blood Bank (BB) and Infusion Center. Infusion, Blood Bank and Haemonetics IT/Sales team conducted a walk through to evaluate the workflow process end-to-end.



## Results

### PDSA 1: Initial small tests of change

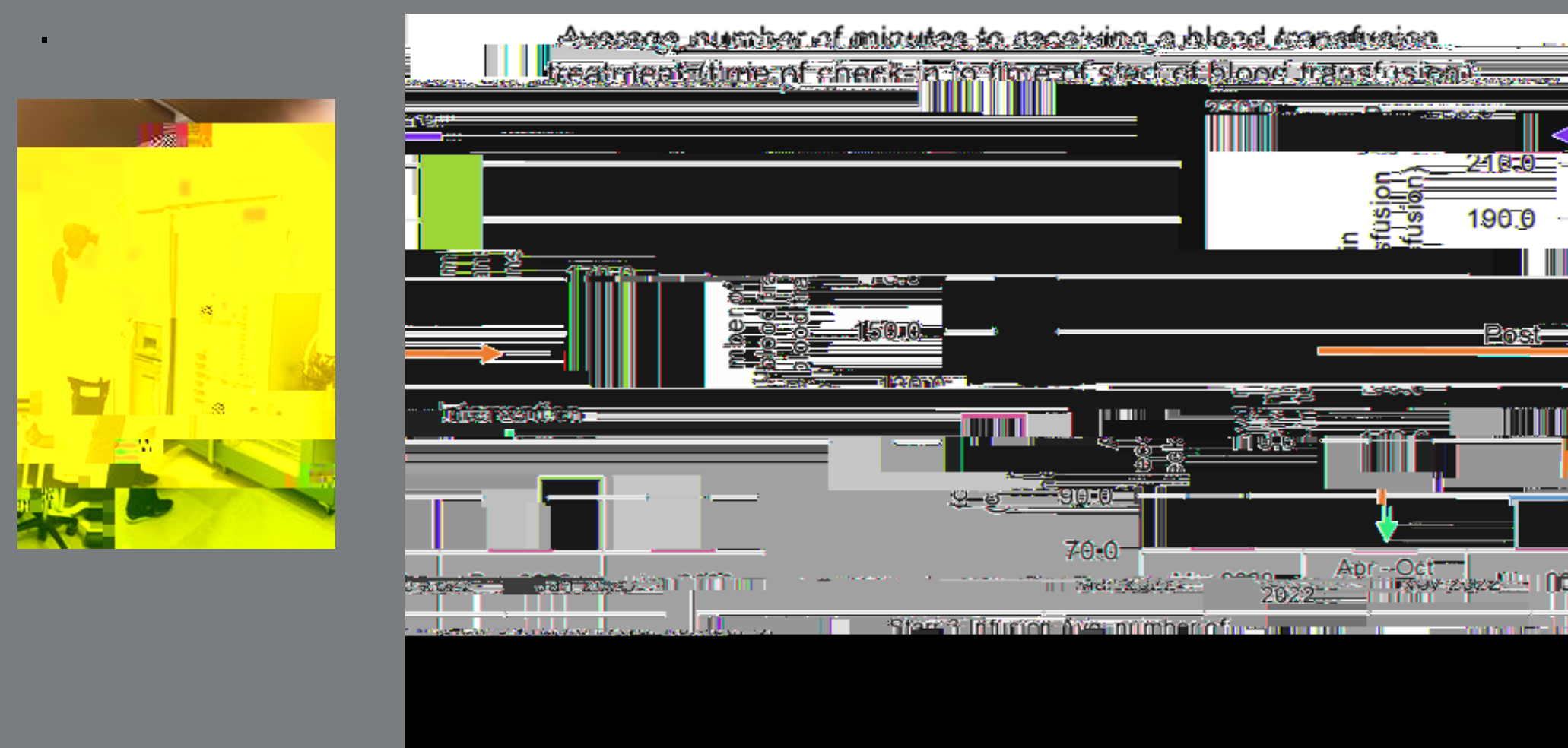
Two cycles of small test of change were performed where charge nurse releases the blood transfusion orders the night before, then BB cross-matches and loads HB80 in anticipation of scheduled transfusion. For the small test of change patient group, the average wait times decreased from **75.4 minutes** pre-intervention to **36.8 minutes** post intervention.



\* Outlier attributed to lab delay, provider visit delay, and premedication/pharmacy delay

### PDSA 2: Pilot

As a result of the Haemobank 80 technology, the average minutes to receiving a blood transfusion treatment (time of check-in to time of start of blood transfusion) decreased from **215.0 minutes** in March 2022, to **120.3 minutes** in January 2023.



## Conclusions

Initial small tests of change demonstrated reduction in wait times for patients prescreened and crossmatched the night before visit of **51%** (PDSA Cycle 1).

The new process flow using Haemobank 80 technology significantly reduced time spent by patients with cancer awaiting blood transfusion by **44%** (PDSA Cycle 2).

HB80 reduced time spent waiting in the clinic and freed up infusion space by expediting transfusions.

Over time, HB80 has showed the reduction in time is sustainable with **December 2023 average time to transfusion of 126 minutes**.

Patient satisfaction surveys had fewer complaints related to blood transfusion wait times

## Challenges

Timely data collection has been challenging as time study is currently manual extraction

Difficult to tease out individual time components for each segment of the visit, provider visit delays and premedication/pharmacy delays can affect wait time

Overall time may be longer depending on

## Next Steps for PDSA cycle 3

Continue to collaborate with transfusion medicine in improving the usage of the Haemobank and monitor outcomes.

Explore automated ways to gather time information and Hemobank usage

Consider expansion to other high volume transfusion sites in New York Presbyterian System

