# Feed with Speed: Improving efficiency of outpatient feeding clinic in multi-disciplinary setting

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Singapore Healthcare Management 2018
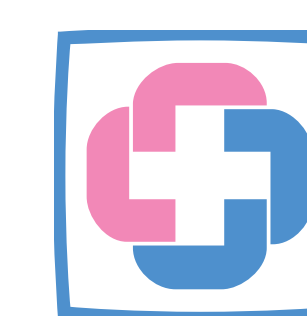
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Background

Premature babies born with very low birth weight are being seen by speech therapists and dietitians under a blanket referral in the Neonatal Intensive Care Unit and Special Care Nursery. After discharge from the hospital, these babies are also being followed up for their feeding and nutritional needs in the outpatient clinic.

The outpatient "PREMFEED" clinic is a clinic that provides feeding and nutrition review for this population of premature babies. It runs concurrently with selected Neonatologists' clinics, and was started with the hope of providing a convenient, one-stop service for the families of these premature babies who often have multiple outpatient appointments due to complex medical needs.

Problems

Since the commencement of PREMFEED clinic in 2015, the speech therapists and dietitians have faced numerous issues with the running of the clinic. Specifically, patients were not seen on time (i.e. within 15 minutes of their scheduled appointment time), resulting in the clinic often ending past lunch time and after working hours. Additionally, Patient Service Associates (PSAs) assisting the Neonatologists' clinics concurrently were also reported to be feeling overwhelmed, confused and stressed on days when those clinics were running.

Aim

Preliminary data collected showed that 48% of the patients seen at the PREMFEED clinic were not seen on time. In view of the problem, the Process Improvement Project (PIP) team was formed to aim to reduce the number of patients not seen on time for their scheduled appointments and subsequently, ensure timely completion of the PREMFEED clinic.

Root causes

To analyse the problem further, the team used a fishbone diagram to visualise a list of potential root causes. It was identified that "method" was the main root cause of the targeted problem (see Figure 1).
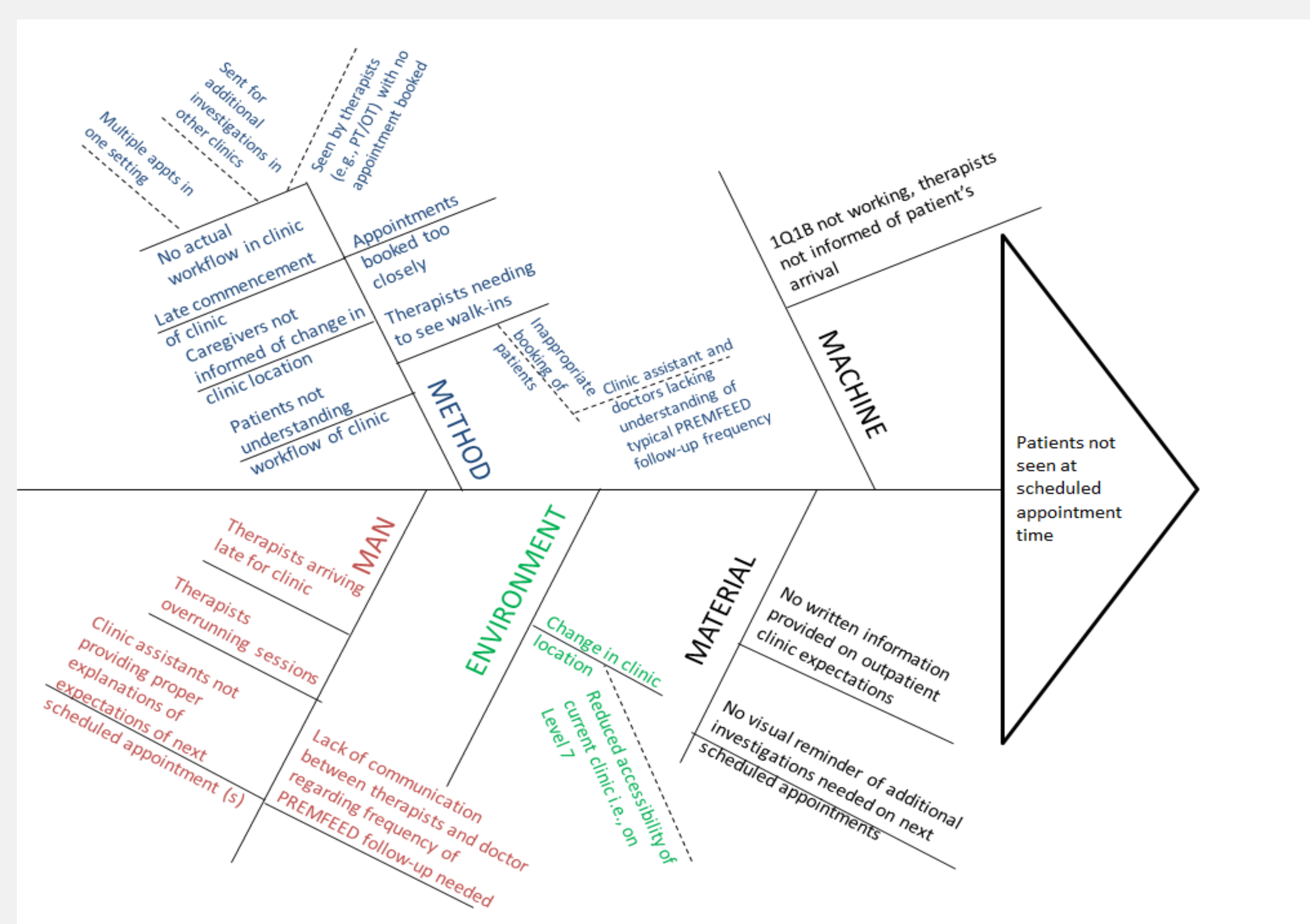

Figure 1: Fishbone diagram

Solutions

After discussion within the team and with other stakeholders, 3 solutions were selected (see Figure 2).

To allow buffer time at the end of the clinic for walk-ins or patients who attend late, the PREMFEED clinic appointment slots were adjusted to begin earlier while the same number of slots remained.

To improve communication between clinicians and improve workflow of the clinic, the team implemented a systematic method of updating PSAs on the patients that need to be seen at PREMFEED clinic (either scheduled or walk-ins). Specifically, the PREMFEED therapists will indicate "FEED OA" on the master list of patients attending the clinic before the clinic commences.

While modifying the SMS reminder was considered as a solution for improving timely arrival to the hospital for additional investigations prior to attending the PREMFEED clinic, the approach was deemed unsuitable after discussion with the relevant department. As a result, this solution was not implemented.
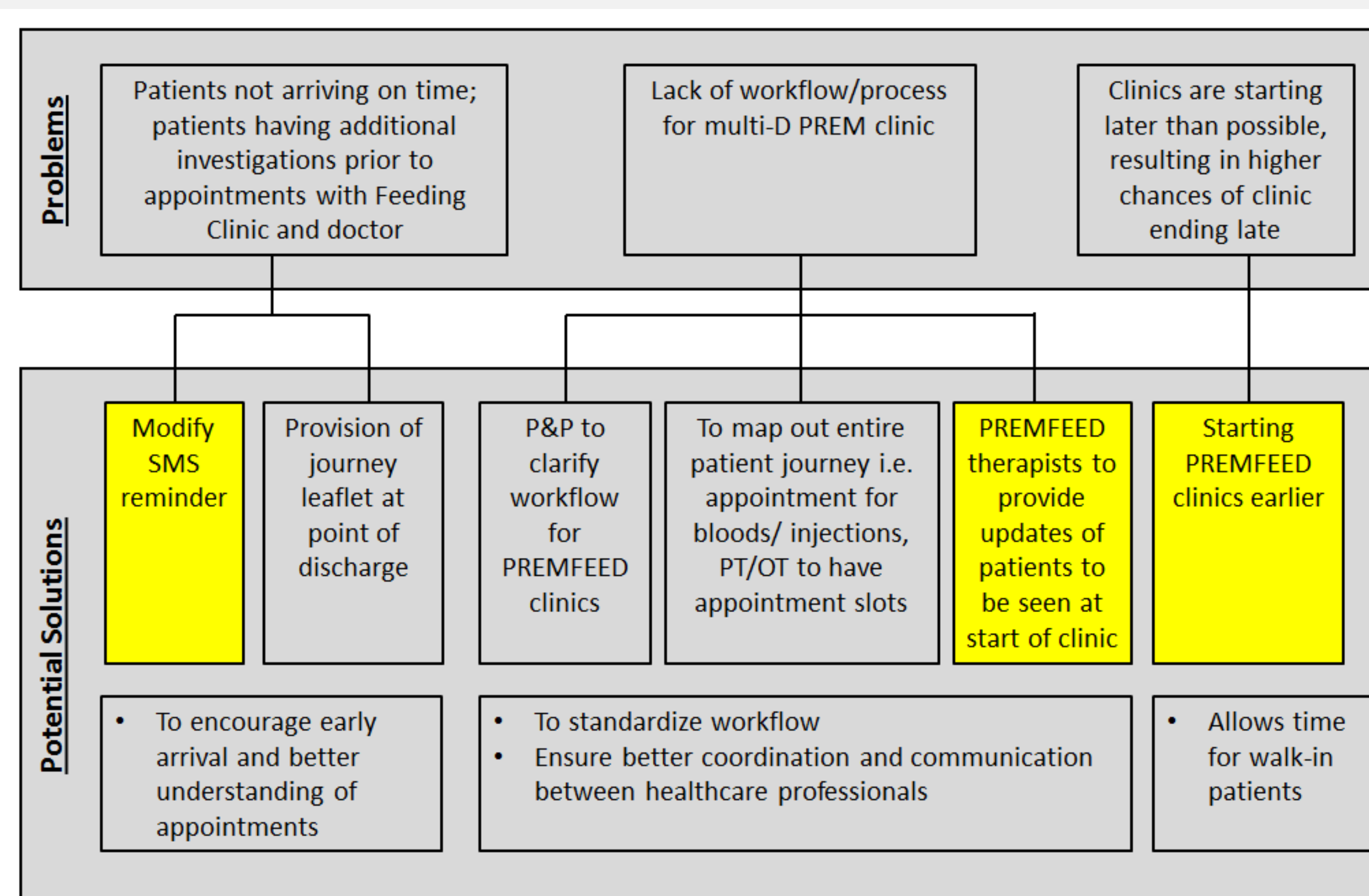

Figure 2: Solution selection

Results

The abovementioned solutions were implemented gradually between the period of December 2016 to February 2017. Unfortunately, no significant improvement was found in the percentage of patients arriving late for the clinic or percentage of patients seen late for PREMFEED clinic after solution implementation.

However, anecdotal reports by the clinicians and PSAs suggested that clinic appeared to be running more efficiently after solution implementation. To investigate the potential improvements and to understand the perceived improvements after solution implementation better, the team organised a focus group with the PSAs to find out more about the changes that have occurred since the implementation of the solutions.

After considering the new findings from the focus group, the team speculated that while there was no improvement in the percentage of patients arriving on time for the clinic, there may be a reduction in the time between each review session. Specifically, PSAs were able to channel patients that require a feeding review to the therapy room more efficiently, resulting in reduced lull time spent by therapists waiting for patients to be available for a review.

Indeed, the data revealed a **statistically significant reduction in lull time of an average of 13 minutes** between each feeding review session. Specifically, the average lull time between each PREMFEED review after the implementation of solutions was less than the average lull time before the implementation of solutions (see Figure 3).
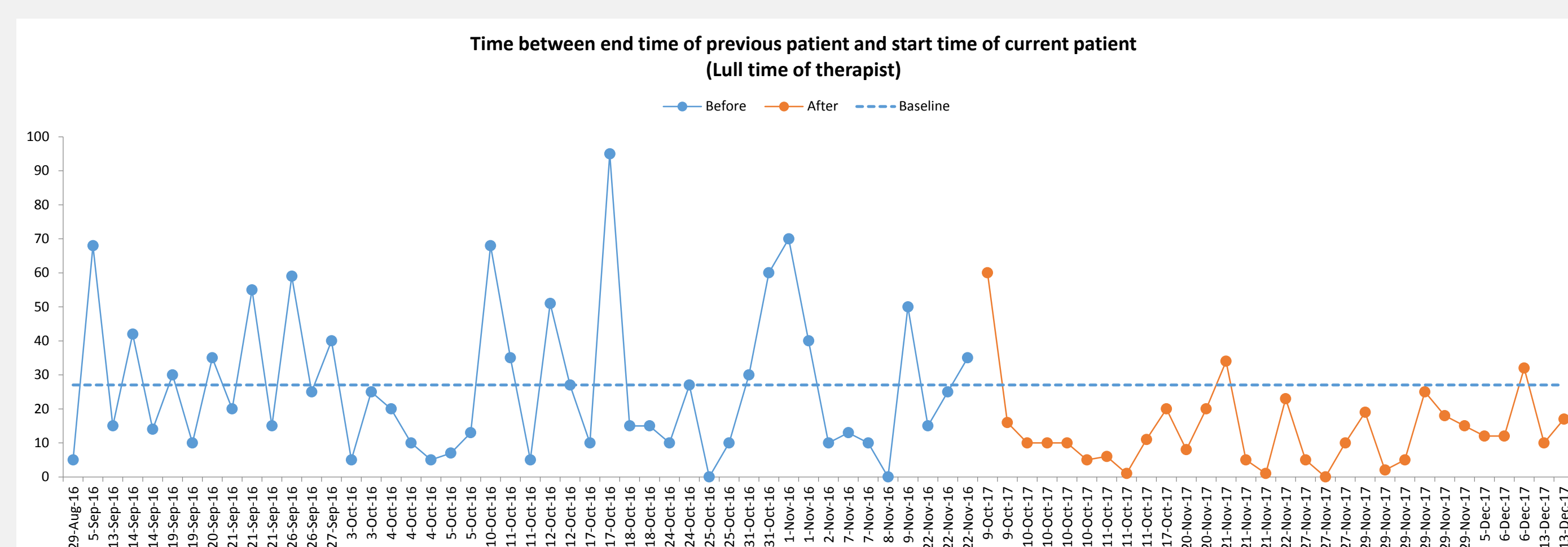

Figure 3: Duration of lull time (minutes) between each PREMFEED review

Conclusion

Based on the findings from the data collection after solution implementation, the team concluded ensuring effective communication between clinicians running PREMFEED and PSAs assisting the Neonatologist's clinic was pivotal in improving the efficiency of the PREMFEED clinic. More importantly, the reduction in lull time between patients suggests that there is increased potential for more patients to be seen within the same time frame and consequently increased productivity. Improvements in patient satisfaction and experience could be inferred from the reduced wait time between each "journey stop".