



# Reducing The Failure Rate of CT Colonography Using Oral Fleet



Changi General Hospital  
SingHealth

Chong Mei Choo / Wee Jun Chiang /  
Noor Aqilah Bte Abdul Rahhim /  
Katherine Tiong Kai Qian

Singapore Healthcare Management 2018

## Background

CT Colonography (CTC) plays an essential role in screening for colorectal cancer. However, preparation for CTC procedure is tedious and require patient compliance to adhere to strict instructions for 3 days. Root cause analysis was performed to identify the reasons for delayed or cancelled scans and the possible solutions. Often the procedure is unsuccessful due to poor bowel preparation.

Below are the few measurements previously implemented:

1. Redefine CTC guideline & workflow,
2. Tailor the bowel preparation for different groups of patients.
3. Recommend a different type of bowel prep medication for patients requiring re-preparation as well as CAT "A".
4. Radiographer evaluates the quality of bowel preparation and decides whether to proceed.
5. Radiographer takes up the role of counselling for re-preparation.

Outcome from previous implementation:

1. Operational efficiency was improved through workload distribution between radiologist and radiographer.
2. Procedure time was reduced by 50% (40mins to 20 mins).
3. More scanning slots created within a specific time frame.

Problem observed after implementation:

- When we used oral fleet for the initial preparation, possibility of re-preparation remains high at 70%.

Aims:

- Reduce the re-preparation rate of CT colonography using oral fleet.
- Minimize resource wastage for additional time slots for re-preparation patients.
- Reduce the chances of patients that do not show up when 2<sup>nd</sup> appointment given.

## Sustenance Strategies (Methods)

Sustenance strategies include:

- CT colonography information is readily available online for quick reference.
- Talks and trainings are conducted for radiographers to evaluate the quality of bowel cleanliness before proceeding with the procedure.
- Statistics of CT Colonography case are generated monthly and presented to statistician to examine the correlation between the failed cases with clinical history, age and gender.
- Literature review on the bowel preparation for CT Colonography.
- Patient interviews are conducted and feedbacks are collected to identify the possible causes of poor bowel preparation.

Having reviewed all the above, we have further implemented strategies as shown in table 1:

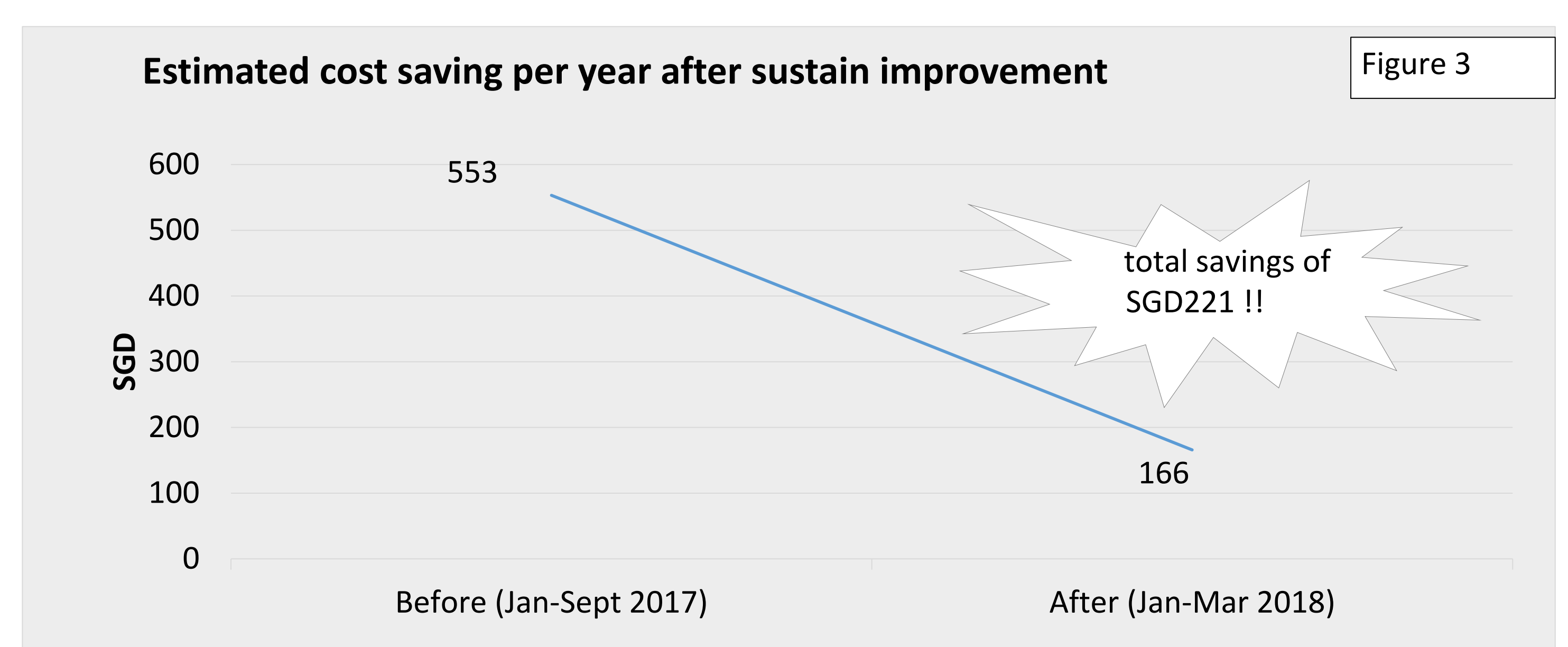
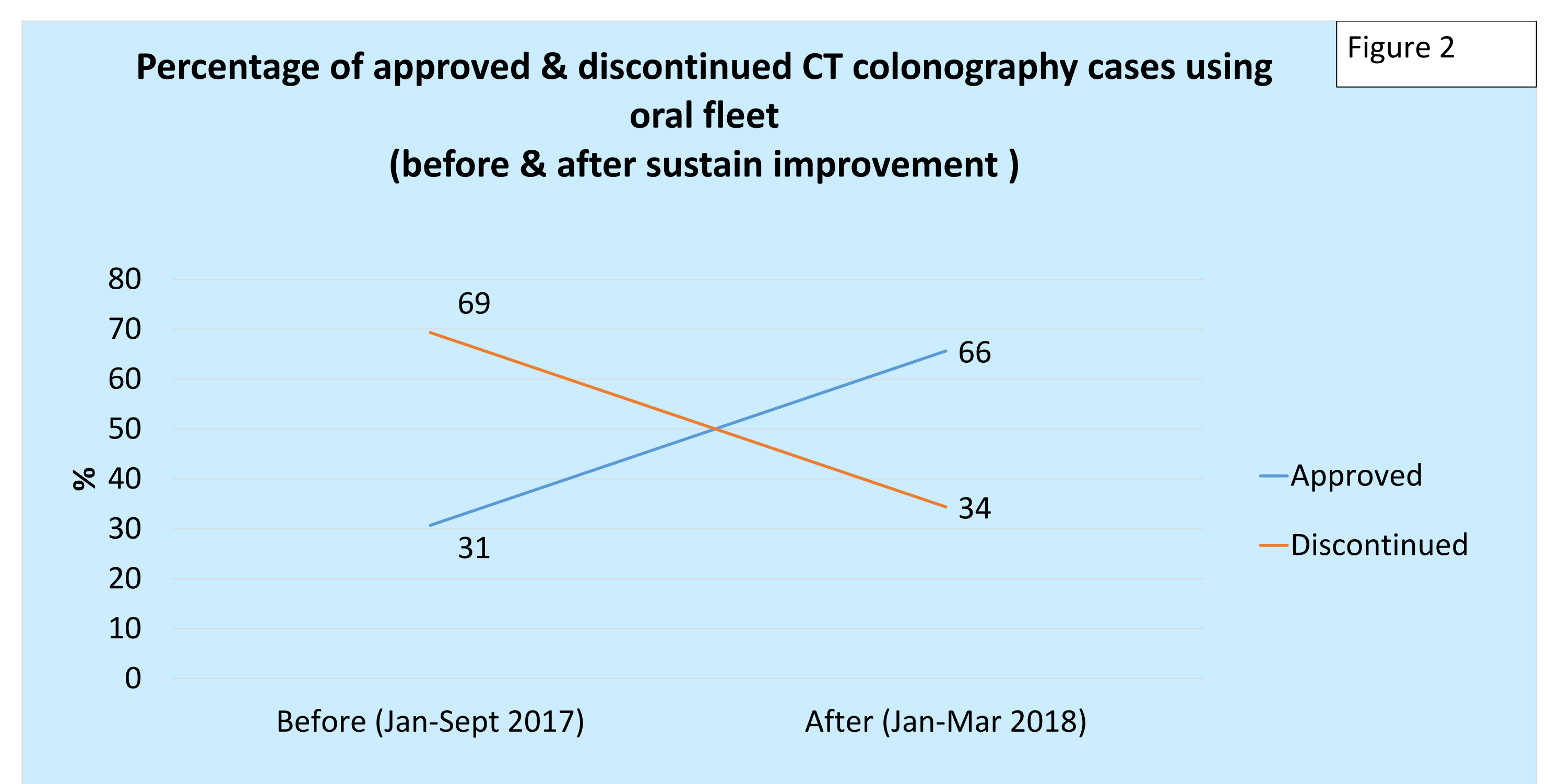
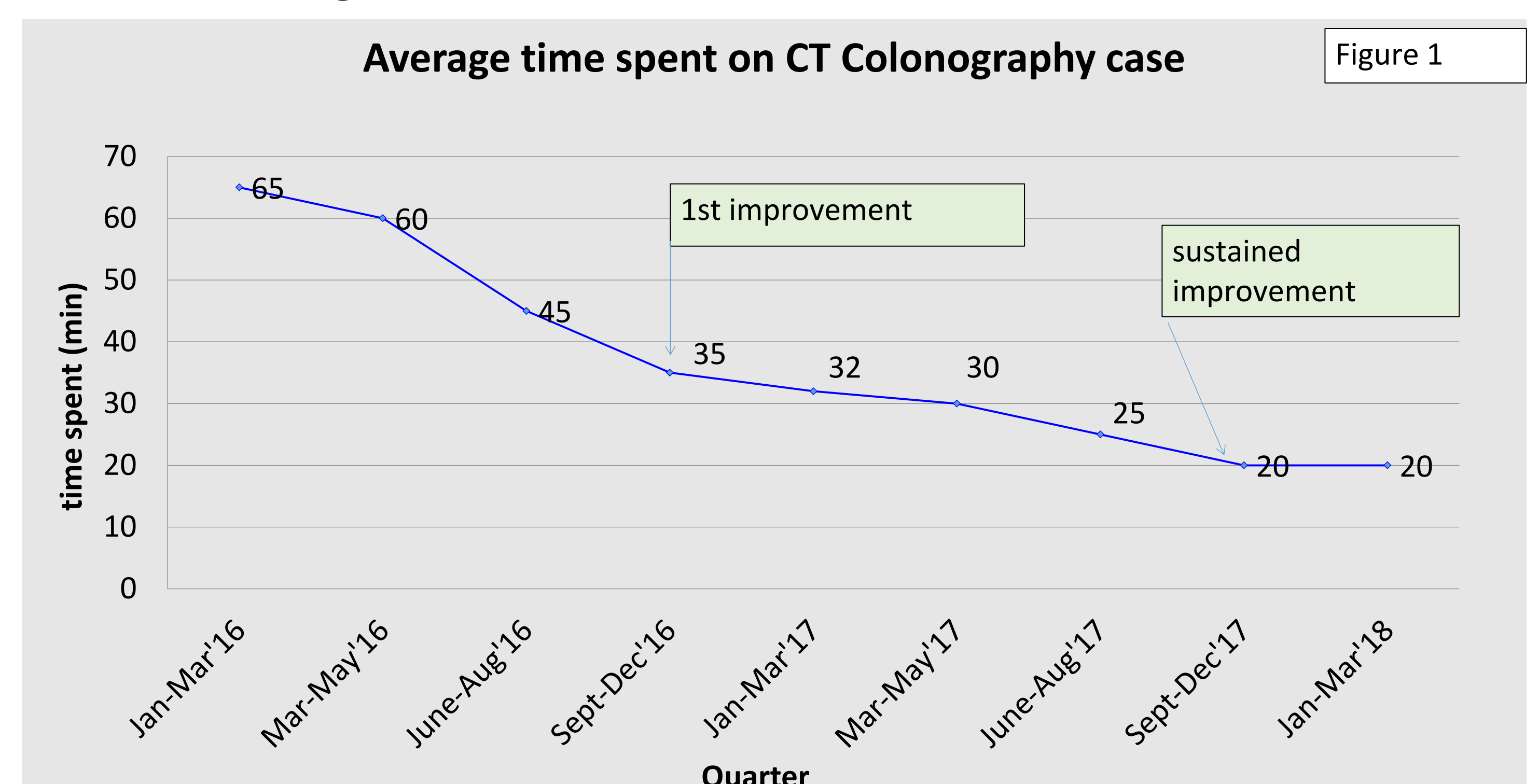
Previously	Now
<ul style="list-style-type: none"> <li>• Non-compliant and patient suffering constipation remain under Oral fleet prep.</li> </ul>	<ul style="list-style-type: none"> <li>• Non-compliant and those suffering from constipation to be placed under another category of bowel prep using PEG.</li> </ul>
<ul style="list-style-type: none"> <li>• 2 tabs of Bisacodyl</li> </ul>	<ul style="list-style-type: none"> <li>• 4 tabs of Bisacodyl</li> </ul>
<ul style="list-style-type: none"> <li>• Advise patient to drink as much water as possible</li> </ul>	<ul style="list-style-type: none"> <li>• Stating the various timing to drink water and 300mls per drinking session</li> </ul>

Table 1: Further implemented strategies.

## Results

Current successes:

1. Procedure time (time taken to perform the examination) is kept within 20 minutes in most circumstances (figure 1).
2. Increased efficiency as more imaging slots are freed up from the existing time interval
3. Re-preparation rate of oral fleet has decreased by half, from 69% to 34% (figure 2).
4. Estimated cost savings for the medication on 2<sup>nd</sup> time bowel preparation is SG221/year (figure 3).
5. More positive patients' feedbacks with clearer instructions and reduced patients' negative experience for having to re-prepare due to inadequate bowel cleansing.



## Conclusion

By customizing the right preparation according to the patients, there is reduction of patients having to re-prepare for CT colonography leading to greater efficiency and enhanced patient experience.