

# Subcutaneous Home Chemotherapy - Moving from Hospital to Patients' Homes.

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## Background

1. Patients requiring subcutaneous chemotherapy treatment at Singapore General Hospital's (SGH) Haematology Centre in year 2014 waited between 120 to 240 minutes before receiving their injections.
2. From year 2014 to year 2017, the total number of outpatient attendances for subcutaneous chemotherapy injections (Bortezomib) increased from 1599 to 2244 cases.
3. 87% of patients receiving outpatient subcutaneous chemotherapy injections (Bortezomib) were accompanied by a loved one / caregiver for their treatment.

## Objectives

To reduce patients' waiting time when receiving outpatient chemotherapy.

## Method

The department of Haematology collaborated with a pharmaceutical company to introduce the subcutaneous home chemotherapy administration programme at SGH in year 2017.

Patients who filled the following criteria were enrolled into the programme.

- Diagnosed with Myeloma requiring subcutaneous Bortezomib injection,
- Agreed to receive home treatment,
- Agreed to purchase a personal blood pressure machine and thermometer, and able to monitor own vital signs at home.

## Home treatment delivery

- Two chemotherapy trained registered nurses from the haematology units commute individually using public taxi service across Singapore on every Tuesdays and Thursdays to deliver and administer the subcutaneous Bortezomib injections at patients' home.
- Each nurse visited between 6 to 10 homes on each trip.



Picture 1: Requisites for home subcutaneous Bortezomib injection.



Picture 2: Nurse administering subcutaneous Bortezomib injection at patient's home.

## Results

- The first home subcutaneous Bortezomib injection was administered on 23<sup>rd</sup> February 2017.
- A total of 71 patients were enrolled into the programme.
- From end February 2017 to end May 2018, patients saved a total of 875 visits to the Haematology outpatient treatment centre (Table 1).
- In the same period, caregivers saved 380 days of leave as a result of the home chemotherapy service.
- Patients' wait time to receiving subcutaneous chemotherapy treatment at Haematology Centre was reduced to between 40 to 120 minutes in year 2018 (Chart 1).
- There were zero cases of home treatment related complications or chemotherapy drug spillages.

Total Numbers of Home Treatment as of 31<sup>st</sup> May 18 (n = 875)

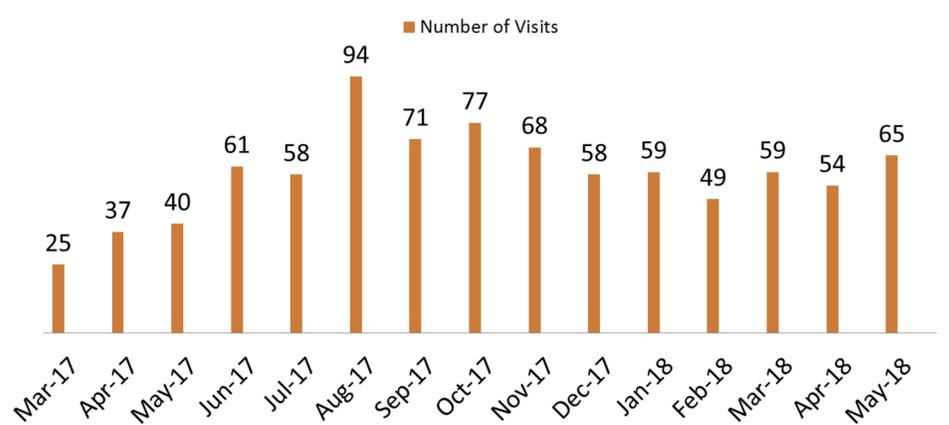


Table 1: Total numbers of home treatment delivered.

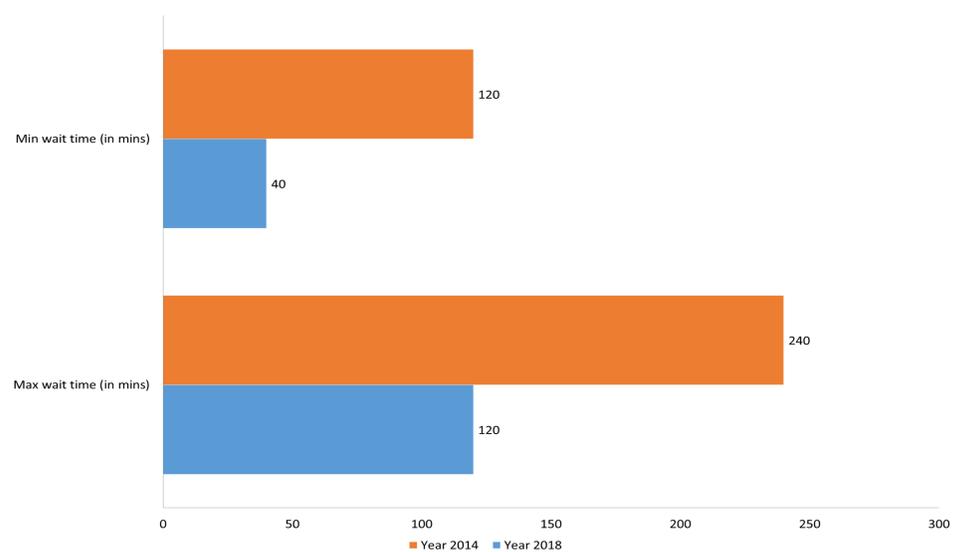


Chart 1: Patient wait time to receive subcutaneous chemotherapy.

## Conclusion

This service reduces:

1. Patients and caregivers' frequency of traveling to the hospital to receive subcutaneous Bortezomib injections.
2. The number of days of leave taken by caregivers accompanying patients to hospital for treatment.
3. The overall Haematology Centre outpatient treatment workload, and waiting time of patients receiving subcutaneous chemotherapy injections.

In conclusion, the home chemotherapy service for the administration of subcutaneous Bortezomib is safe and beneficial for patients.

**Home Chemo Team are:**

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