Value stream mapping of patient journeys in adult oncology department, National Oncology Centre-Royal Hospital, Oman

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RELEVANCE

It entails an example of our efforts in removing barriers to innovation with change management.

CONTEXT AND AIMS

The oncology department at national oncology centre, and patient experience of these systems, were examined from the perspective of 'Lean theory', by using the quantitative methodological approach of VSM. VSM was applied to our research and we presents the quantitative findings and impact on our quality of medical service care. We describe care processes and waiting times between process steps, investigating the impacts of different care models on patient experience and treatment plan during their journey to receive the chemotherapy and other services that are provided by our team at adult oncology centre. This study aimed to describe what happens during patients' hospital admission process and what are the strategies to increase productivity in the workplace, improving patients flow and reducing the department crowding. To do this, admission process pathway was mapped for each site. Visual representations of these pathways (or ‘value stream maps’) are shown in the following chart.

FINDINGS

The VSM analysis examined patient journey time by site, and revealed that the median journey times, which ranged from 300 to 400 minutes, with a mean of 380 minutes. Further analysis revealed that during this journey, the ratio of value (contact) to waste (predominantly non-contact time and waiting) ranged from 35% to 50%, with an average of 45.5% at each site. Our key time points that we had chosen were:

- Time waste from collection of blood samples to the laboratory.
- Waits till assessment by a doctor and prescribing the chemotherapy dose and medications.
- Waits till pharmacy preparation till actual starting the dose.

We took the following steps with corresponding to each point the aforementioned key points. Firstly, as regards the laboratory service:
The time of blood collected till transported to lab was aimed not to exceed more than 30 minutes to ensure that:

- Create a time table to schedule the time of transporting the specimens to lab.
- The orderly to take every 30 minutes to transport blood samples to laboratory.

Train the orderlies to take blood and hand over it to the lab technician as urgent sample.

Regarding the second key point, the doctors were encouraged to prescribe chemotherapy and approve as soon as blood resulted.

INNOVATIVE CONTRIBUTION

As organizations look to improve overall systems to reduce costs and improve quality of service throughput, lean principles are being more widely implemented. Herein we presents our experience in applying a value stream mapping project at our department that resulted in recommendations that would significantly lower patient wait time, improve patients flow and reducing the department crowding which increases the opportunity for patients to be managed appropriately, and lower the stress levels for the clinic's staff, despite the availability of sufficient time appeared to be an overriding requirement in order to make the best decisions in more complex cases.