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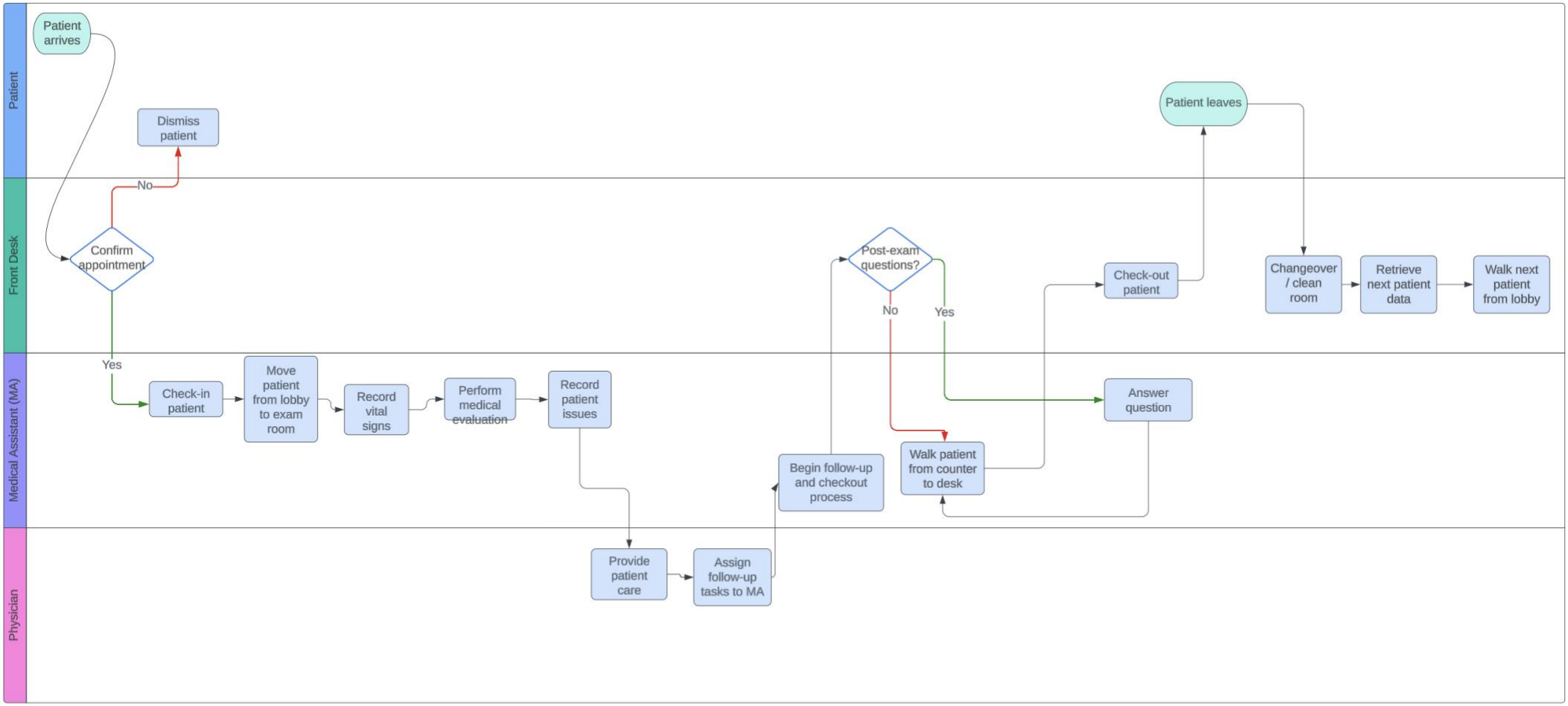
Capstone Doctor Your Patient is Waiting - Process Wait Time at Bayside Clinic

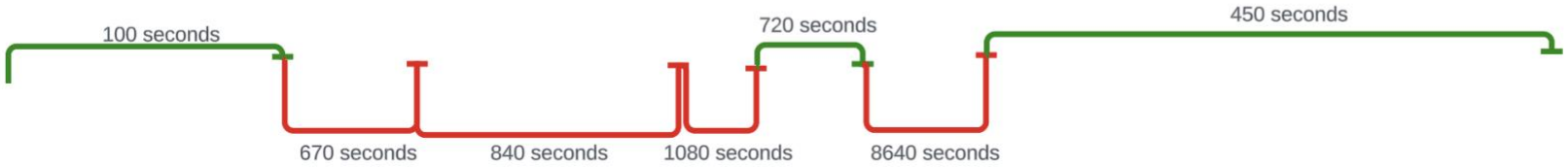
1) Below (next page) is a process diagram illustrating the process steps, as well as the respective value-added / non-value added assignments. The patient processes that require further attention are the non-value added process steps (moving patient from lobby to exam room, etc. as indicated in red). A small number of physicians (3) have been recorded as having 0 seconds wait time between patient care and the initiation of the check-out process; we assume this measurement is not in error and indicates an efficient handoff between physician to medical assistant (MA).

   The other 7 physicians are therefore executing their duties at a sub-optimal level. Whether this performance can be attributed to another factor other than MA availability is uncertain. Missing data includes the timestamps corresponding to the processes: *"Changeover / clean room", "Retrieve next patient data", and "Walk new patient from lobby to exam room".*

Value Add:
1270 seconds (= 21.20 minutes = 0.35 hours)

Non-value add:
11,230 seconds (= 187.17 minutes = 3.12 hours)





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1270 seconds (= 21.20 minutes = 0.35 hours)
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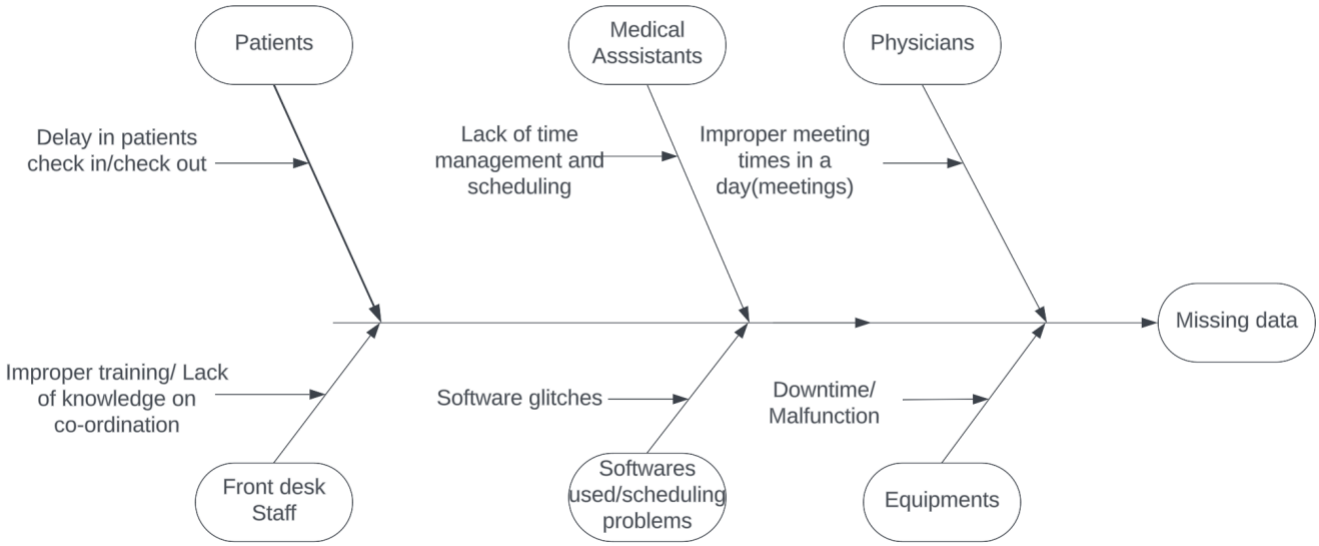
11,230 seconds (= 187.17 minutes = 3.12 hours)

2) The dataset provided from the EMR system has some missing data. The absent values can be attributed to human error (i.e. during medical emergencies) or possibly technical glitches. To address this, we consider training staff on the EMR system to reduce human error, as well as streamlining the workflow with form validation and auto-complete.

   Further, the time consumed by the MA's room changeover is not fully elaborated in the data, leading us to suggest capturing extra metrics such as the time required to clean a room before another patient, time required to query to medical records of the next patient, and the time required to walk from the exam room to the front desk and back again.



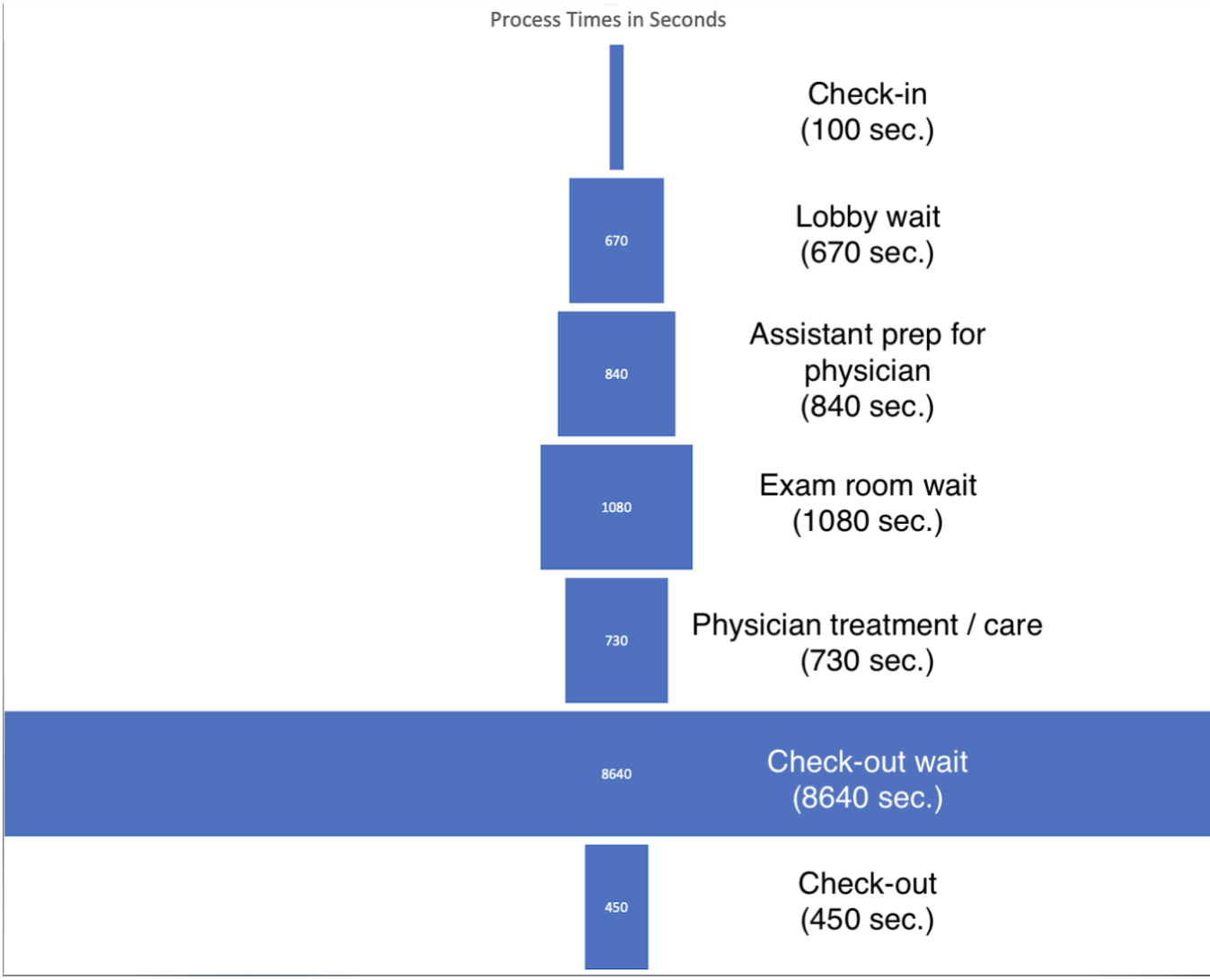
3) The major concern of the medical assistants is that there is not enough time between patients to transition from one patient to another without causing schedule delays. Because of this reason only we can observe the "Wait from check in to room" is having the comparatively higher after waiting from MA to Physician share with the other parameters under the Non-value added step times.

   This is mainly due to various procedural steps involved like cleaning the leaving patient room, getting the entering patient room ready, pulling up the entering patient data, and retrieving the entering patient from the lobby.

   As there are only 4 MA's working for all the 5 working days associated with 10 physicians creating additional workload and causing more waiting time with respective to the patients.

   Hence, we propose to recruit the cleaning staff who can take of the cleaning activity of the room, keeping the room ready for the entering patient. Along with this another set of 4 MA's are available, they can attend the next patient when the previous patient follow up & check is going on which reduces the total time cycle in view of the patient and the work burden on MA's as well.

4) The visualization below shows the time length for each "checkpoint" currently being recorded. While some aspects of the full process are omitted (due to unavailability, i.e. room changeover). A bottleneck can clearly be seen by multiple levels of magnitude, the check-out time exceeds other processes and is mostly non-value added.
This could be due to over-extending the MAs time allocation, especially when considering the single task of "checkout" has a multitude of tasks that could reasonably extend the expectation of completion time (i.e. some patients will need instructions + prescriptions + ad-hoc physician requests, while others might need none).



5) The clinical capacity & capacity should be addressed from the aspect of minimizing waste (specifically, waiting times). It is apparent from the visualization above the checkout process is consuming most of the patient experience with little to no value add. Instead of forcing patients to wait for elongated periods of time after treatment, we

suggest utilizing the existing workforce and having two MAs available for each physician, regardless of schedule or exam room availability. There are two predominant reasons for this; the lack of available data on the changeover process for MAs as they prepare rooms for upcoming patients (i.e. time to clean and time to retrieve next patient data) and the input from the MA staff themselves (not having enough time to turnover rooms when appointments are scheduled within 15 minutes of each other). We have strategically decided to optimize this part of the process (with added utilization of existing staff) before changing any aspect of the scheduling or physician scheduling (given the likelihood of physicians leaving the company, as they have in the past when attempting to standardize scheduling).