

Quinte mir



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The immediate issue is that Benton-Cooper Medical Centre's MRI clinic has been open for 6 weeks and not performing to expectations and to the promises made by their new MRI provider, Quinte MRI. With referrals to the clinic, doctors expect to receive MRI transcription reports within two days and the current backlog exceeds 14 days. As a result there is a loss of patient referrals from doctors within the hospital and surrounding community which means a loss of revenue for BCMC. Quinte MRI must determine what is causing the backlog and how to fix it.

Secondary Issues

A secondary issue in the clinic is that the MR Technologist is putting in a lot of overtime even though the maximum number of patients each week is not being met. Quinte MRI personnel need to examine and analyze the interaction between the capacity, the process flow and the bottleneck and provide a resolution and action plan back to the CEO, Dr. Syed Haider within 2 days. Environmental and Root Causes Quinte MRI, an international service provider specializing in medical diagnostic technologies signed an agreement in February 2002 with Benton-Cooper Medical Centre (BCMC) for the outsourcing of their MRI services.

BCMC believed that they could compete successfully if they had a third MRI machine as they anticipated continued growth in this area by 15% through doctor's referrals from the hospital and surrounding areas. BCMC also believed that they could generate enough revenue and promotional support through advertisements with local print and radio stations to be able to own their own fixed MR system and be recognized as a top rated hospital for the area. Quinte MRI promised the avenue for BCMC to be able to

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accomplish these goals through its service reliability and access to diagnostic equipment 24 hours a day, 7 days a week at a reasonable cost.

However, these expectations are not being met and David Wright has gone to the MR Technologist, Jeff Sinclair to examine and analyze what was causing the backlog (bottleneck) in the operation. Jeff indicated that due to poor communication between the hospital and the clinic, mistakes were being made due to a manual process for recording information. Patients were being booked at wrong time, cancelling or not showing up, wrong tests were being requested or recorded, and patients were not being screened properly for an MRI scan.

An assessment was being done when the patient came into the clinic. A patient preparation process has not been implemented in the new facility, whereas the previous MRI provider scheduled all appointments. Jeff felt that wasted time was being spent on delivering scans to the radiologist after each patient. Jeff also accounted for the fact that during May, the clinic used a Siemens unit, which took some time to get used to, however, now that the GE machine was in place (Jeff was originally trained on this machine), things were improving.

David next examined the cycle time on for a 30 minute procedure. The table below shows the current cycle time of the patient, the MR Technologist and the MRI machine. 15 minutes was dedicated to patient preparation for an MRI while only 27.5 minutes was spent in the Magnet Room. 42.5 minutes was being spent on a 30 minute procedure. This was where the bottleneck was in the process. Staying with this current process and resources, the maximum capacity of this process can only be 8 procedures if all other

inputs into this process ran smoothly (i. . no cancellations). Exhibit 1 Patient Check in until entrance into Magnet Room Minutes MR Technologist escorted the patient to the Magnet Room (asks questions to determine if any health risks/conflicts and if any patient has any metal components internally or on clothing) 59 Patient - 42. 5 minutes MR Technologist - 42. 5 minutes Changing Room for patients wearing metal on their clothing (25% of patients)

Magnet Room Patient Orientation and paperwork verification 127. 5
Positioning of Coil 4 MRI Scan time based on a 30 minute scheduled MRI scan) 16. 5 MRI Machine - 16. 5 minutes Data Entry (happened during scan) 1
Printing MRI Scans (average 8 sheets at 45 seconds each) 6 Patient back to reception Escort the Patient back to Front Desk 26 Changing Room 4
Monica Zimmerman, radiology department manager was pressuring Quinte MRI to hire another MR technologist to lighten Jeff's workload and improve the process flow. David needed to review the cost of hiring an additional person to make the process flow better.

He knew that the 1. Tesla MRI machine rated capacity was 2 patients per hour, however the actual scans in a day, would be based on the type of scan required. David used the 30 minute and the 1 hour procedure to determine what the potential spend per day was and what the annual spend would be. Note that any lost appointments resulted in a \$700. 00 per scan loss, however this also could be a \$700. 00 increase for unscheduled (walk-in) appointments. By looking at the potential projected income, hiring another person was a possibility.

Exhibit 2 Time - Min/Hour# performed\$ scan suppliesper scan Daily RevenueBCMC chargeDaily revenue - BCMC chargeAnnual Revenue25% Tax \$Income 3016145\$700 \$ 11, 200\$2, 320\$8, 880\$2, 800, 000\$700, 000\$2, 100, 000 18145\$700 \$ 5, 600\$1, 160\$4, 440\$1, 400, 000\$350, 000\$1, 050, 000 Alternatives and Options Criteria 1. Increase the process flow, machine capacity and change the position of the bottleneck 2. Increase revenue 3. Repair relationship and reputation with BCMC Alternative 1: (Strategic) Quinte MRI has found out that the manual process for taking appointments is creating many errors.

If the system was computerized MRI test requirements could be input into the system and throughput could be maximized based on MRI procedure time required in order to maximize time slot available. Quinte MRI also realized that the MRI Technologist was performing administrative tasks that could be assigned to an assistant. By removing these tasks from the technologist, more time availability would become available for scheduling additional MRI tests. In order to process patients faster, a form could be developed that specifies what the patient must do prior to arrival at the MRI Clinic.

Another form could be developed for when that patient arrives at the clinic that asks questions regarding health risks and indicating what restriction would prevent a patient from having an MRI. The assistant could take the patient all the way through the process until the Magnet room at which point the MR technologist would take over. There are necessary requirements that the MR technologist must do prior to completion of the scan, but the

collection of the MRI scans and delivery of them back to the radiologist could be done by the assistant that is escorting the patient from the Magnet room.

If we assume that most of the MRI scans are a half an hour, than patients could be scheduled every half hour in order to maximize both the capacity of the machine and the capacity of the technologist. Pros: By implementing the computer, there is more accuracy being collected for appointments and test requirements. By hiring the MR assistance, there is increased flow capacity because the technologist will handle only the MRI scans and not the administration task that were previous being done him.

This takes the bottleneck out of the administrative task and aligns it to the maximum capacity of the machine thereby increasing revenue which provides the ability to hire the assistant. This would create reliability with the clinic again so that doctors will send their referrals to the clinic. Cons: A second MR technologist will not be hired and when it comes time for vacation of illness, there will be no one to step into the technologist position and ensure continuous flow.

Quinte MRI would need to hire from a temporary agency in order to fulfill their requirement which means addition dollars will be spend. Alternative 2: (Tactical) Quinte MRI could hire a second MRI Technologist to perform MRI scans alternating times with the first MRI Technologist to increase the flow and capacity of the process. This would take away the backlog and doctors could send their referrals to the clinic with a sense of reliability that the clinic will get it turnaround within 2 days. Pros:

This would allow Quinte MRI to always have a back up in the event that one of the technologists is on vacation and / or ill. The increase revenue being <https://assignbuster.com/quinte-mir/>

generated due to increased MRI procedures could pay for the second MR Technologist. Cons: Based on the current practices, hiring a second technologist would alleviate some of the workload, however given that no effort has been made to correct the communication issues between the hospital/patient and the booking department, there is a strong possibility, that patients will still continue to be booked at the wrong time, cancel or just not show up.

Without a procedure to hand how patients are dealt with from checking to magnet room, people could still be turn away due to health reasons, clothing that is not appropriate for scanning purposes. Recommendation The recommendation is to take Alternative #2 as it addresses all of the criteria by increasing the process flow, machine capacity and changes the bottle neck to the maximum machine capacity. It increases revenue and repairs the relationship and reputation with BCMC.