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Improvement in the Robustness of the Vetting Process for Radiology Requests

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INTRODUCTION

Previously, there was no prior vetting for BMD (Bone Mineral Density). All CT (Computed Tomography) and MRI (Magnetic Resonance Imaging) Radiology requests were vetted by busy radiologists one day before the patient's appointment. Thus, the radiologists were only able to vet if the appropriate requests were being requested.

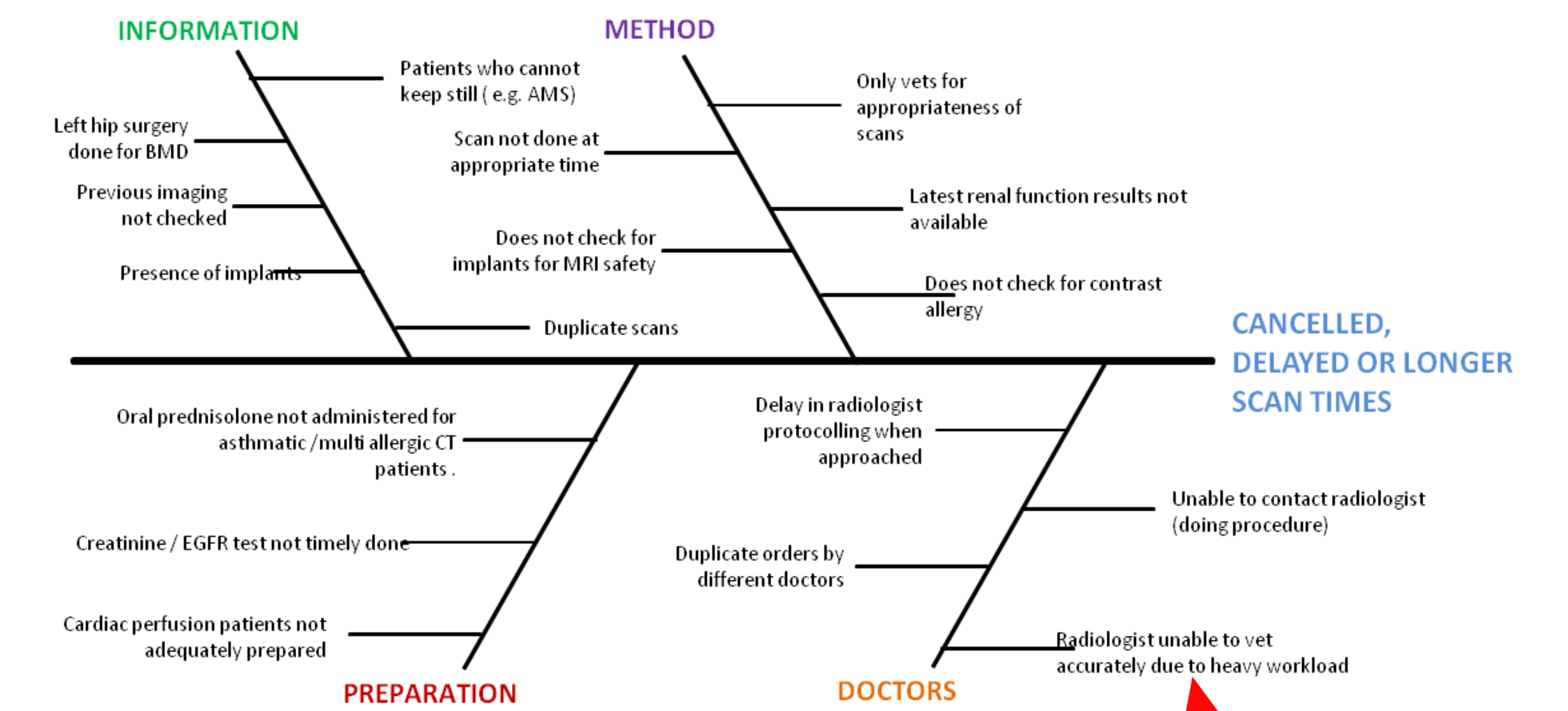
Aspects like right preparation, appropriate appointment time and patients' safety were not taken into consideration. This led to some of the patients' scans being cancelled or delayed on the day of examination as the patients were not adequately prepared or screened for safety.

OBJECTIVE

To increase the robustness of the vetting of radiological requests by changing the workflow and vetting process.

METHODOLOGY

The pilot project involved 3 modalities, namely BMD, CT and MRI. Radiographers representing the 3 modalities set their individual vetting guidelines. Radiologists from various specialities were also identified for clinical knowledge consultations to help the vetting task.



Vetting Process		
	Before (Jan-March)	After (April-June)
Who	Few radiologists	1 radiographer
When	A day before	Upon request
What	Only correct request	Correct request Patient preparation Patient safety

- The new process involves an experienced senior radiographer vetting instead of the radiologist. This frees up 4-5 radiologists from having to vet every valid request.
- Vetting is done upon ordering/putting up of request and not on the day prior to the patient's radiological appointment. This enables inappropriate requests to be flagged and changes can be addressed earlier.
- Screening the patient for safety is also carried out during vetting. This ensures patient safety and minimises radiation dose for BMD and CT.
- The request that requires prior preparation or intervention will be flagged. This enables advanced planning, resulting in less delay for patients and better utilisation of the scan rooms.
- The data was gathered over a period of 6 months. Pre-implementation period was from January to March 2017. Post implementation was from April to June 2017.

RESULTS

The percentage change of pre and post implementation is documented to assess the effectiveness of the new vetting process.

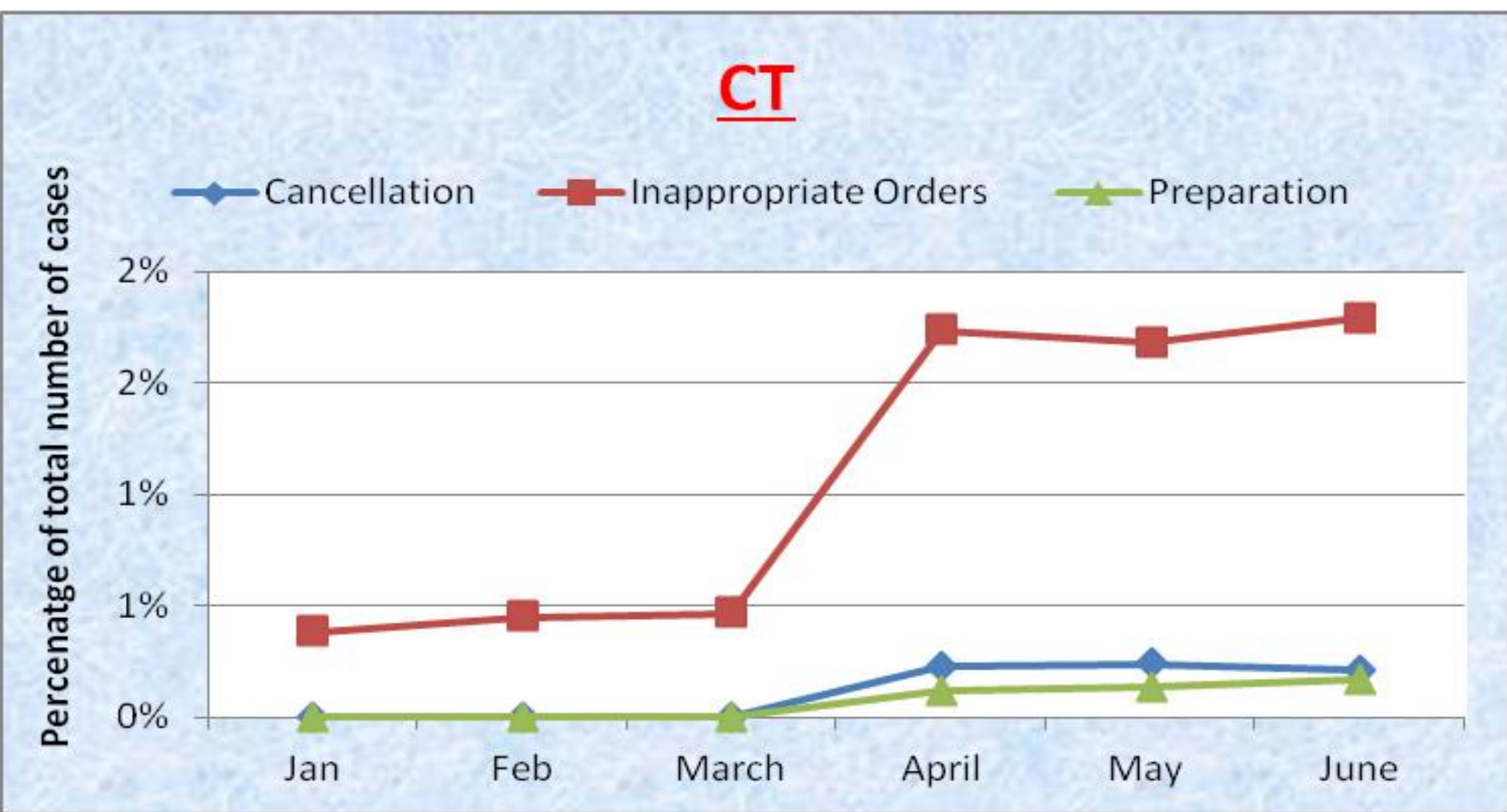
The data measured are:

% of cases cancelled, % of patients with inappropriate requests, % of patients who require prior preparation.

Post implementation modality findings:



	Increase Patient Care	Increase in Safety	Increase Operational Efficiency
MRI	Scan done promptly	Advance checking of serum creatinine for contrast scans Increase detection of patients with unsafe implants	Reduced scan time due to advance protocoling Additional 4 patients scheduled per week



	Increase Patient Care	Increase in Safety	Increase Operational Efficiency
CT	Scan done promptly	Advance checking of serum creatinine for contrast scans Detection of patients with asthma / multiple allergies to administer prednisolone Duplicate orders detected	Right scan at right time Recall rate reduced



	Increase Patient Care	Increase in Safety	Increase Operational Efficiency
BMD	Better pain management for patients when scan is done on 4th day post surgery instead of the 3rd day.	Duplicate orders detected Post operative hip/factured hip is not scanned Infection precaution cases are scheduled at the end of the day	More orders amended before appointment time Appropriate scan time Advance uploading of prior scans for result comparison

CONCLUSION

The new robust vetting process is more thorough so it is able to detect more requests that require amendment and/ or preparation. This led to better patient care, increased safety for patients and increased efficiency throughput across all three modalities. Maintaining and improving this new process with a justification and protocol software would greatly enhance this vetting process in the future.

In addition, this improved vetting workflow has resulted in more appointment slots being freed up (15 for BMD, 10 for CT and 5 for MRI) per week which resulted in an increased throughput.