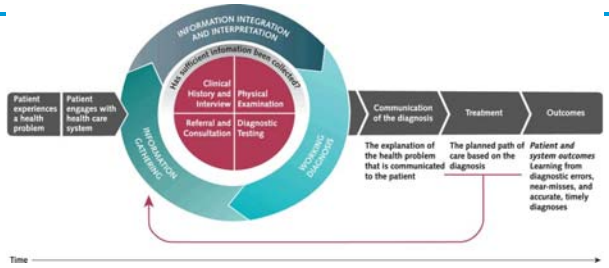
REDUCING RADIOLOGY REFERRAL FORM INADEQUACIES TO IMPROVE PATIENT SAFETY AND QUALITY OF CARE

DR. DINESH SUBHASH BAVISKAR
DR. ASHOK KUMAR
DR. SHEETAL B

Problem statement :

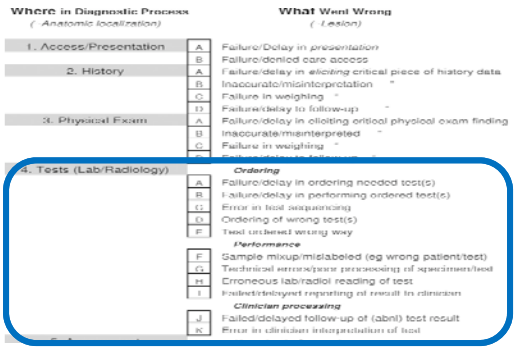
- Radiology request forms / referral forms are essential communication tools for Radiological investigations in the diagnostic process, however their importance is underestimated.
- Incomplete radiology request forms are common occurrences, impacting the workflow and efficiency of the radiology departments in the hospitals world over.
- The risks to patient safety and potential for delayed treatment, with time wasted and frustration experienced by the radiology staff makes it a significant problem.
- The “Quality Indicators” in terms of – Report Turn-around Time, Patient and Physician Satisfaction, Recall-retake rates and productivity are directly affected by the inadequacies in the request forms.

The Diagnostic process



Ref: Improving Diagnosis in Healthcare, National Academy of Sciences

Diagnosis Error Evaluation and Research (DEER) taxonomy.



Ref: El-Kareh R, et al. BMJ Qual Saf 2013;22:ii40–ii51. doi:10.1136/bmjqs-2013-001884

Problem Solving Methodology:

WHY?

"Inadequate" forms can lead to :

1. Increased risk of performing the wrong test
2. Using incorrect protocols to perform the test
3. Imaging the "wrong" – patient, side, organ
4. Inaccurate interpretation of the test

WHO ?

The "TEAM":

* Radiologists
* Physician Representative – GP and Specialists
* Radiology Supervisor
* Chief Radiology Technician
* Administrative Assistant
* Nursing Representatives from OPD & IPD
* Quality Department representative

WHEN ?

WHAT?

1. Define and study the types of inadequacies we encounter
2. Analyze the effects of the inadequacies
3. Devise methods to reduce the inadequacies

HOW ?

Perform 3 PDSA cycles in this project over a period of 4 months

Our AIM :

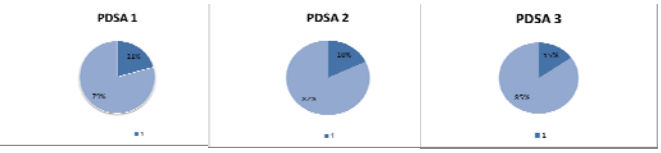
To reduce the incidence of the "Inadequacies" in the Radiology referral forms filled by the physicians, to 50% of the current occurrences; within 4 months from the start of the project.

We Performed 3 PDSA Cycles during this project – Evaluated 2000 request forms in each cycle.

METRICS EVALUATED AND RESULTS -

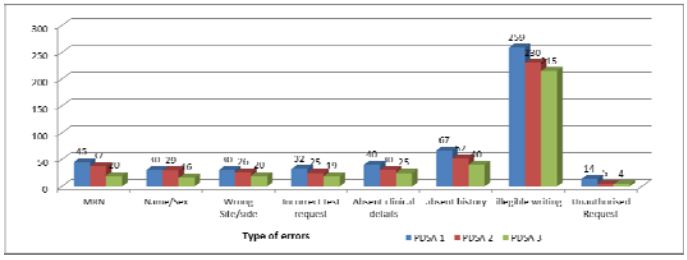
1. **Incidence of Errors:**

Incidence of errors		%
PDSA 1	517	21
PDSA 2	434	18
PDSA 3	359	15



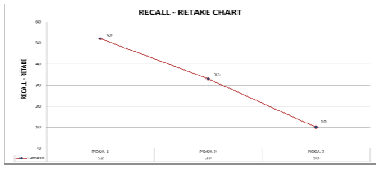
2. **Type of Error :**

Type of errors									
	MRN	Name/Sex	Wrong Site/side	Incorrect test request	Absent clinical details	absent history	illegible writing	Unauthorized Request	
PDSA 1	45	30	30	32	40	67	259	14	517
PDSA 2	37	29	26	25	30	52	230	5	434
PDSA 3	20	16	20	19	25	40	215	4	359



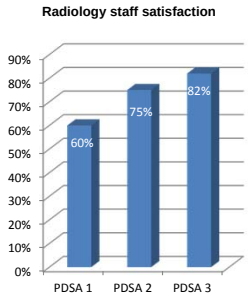
METRICS EVALUATED AND RESULTS -

3. Repeat-Recall Rates :



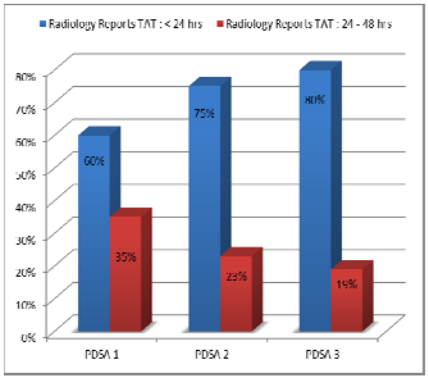
4. Radiology Staff Satisfaction :

	Radiology staff satisfaction
PDSA 1	60%
PDSA 2	75%
PDSA 3	82%



5. Radiology TAT

Radiology Reports TAT :		
	< 24 hrs	24 - 48 hrs
PDSA 1	60%	35%
PDSA 2	75%	23%
PDSA 3	80%	19%



CHALLENGES :

- ✓ Acceptance of the “goals” to be achieved by the "TEAM" members and sponsors
- ✓ Formulating a mechanism to gather information / data.
- ✓ Presenting the data analysis to the stakeholders as an opportunity for improvement rather than a punitive / fault-identifying mechanism.
- ✓ Compliance of the Referring physicians.
- ✓ Sustaining the implementation of the positive outcomes

Overcoming Challenges:

- ✓ Team meetings & brain storming sessions with the team members, staff in Radiology department, out patient clinics and in the hospital departments.
- ✓ Focus group meetings with referring physicians.
- ✓ Sharing of the information and analysis with the higher management for further policy improvements and enhancements.

SUMMARY OF RESULTS:

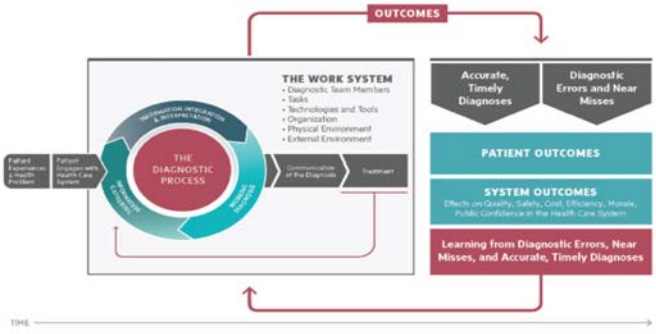
Patient Safety:

- ✓ Reduced Recall-Retake rates ~ 30 %
- ✓ Reduction of unnecessary investigations
- ✓ Tailored study - effective timely diagnosis
- ✓ Better communication between the referring physician, radiologists and technicians.

Quality Improvements:

- ✓ Reduced "Turn around Time" ~ 20%
- ✓ Improved productivity ~ 20 %
- ✓ Increased Patient satisfaction ~ 30 %
- ✓ Increased Physician satisfaction ~30 %.

Outcomes of "Ideal" Diagnostic process :



Ref: Improving Diagnosis in Healthcare, National Academy of Sciences

Continuous improvement is better than delayed perfection

— Mark Twain.