

A health care system to meet our needs

The Power of Innovation

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Health

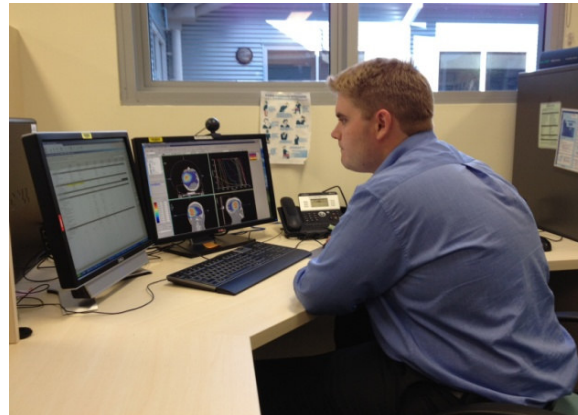
Our Innovation: How We Improved Care/Services

Refined Radiotherapy Quality Assurance activities to:

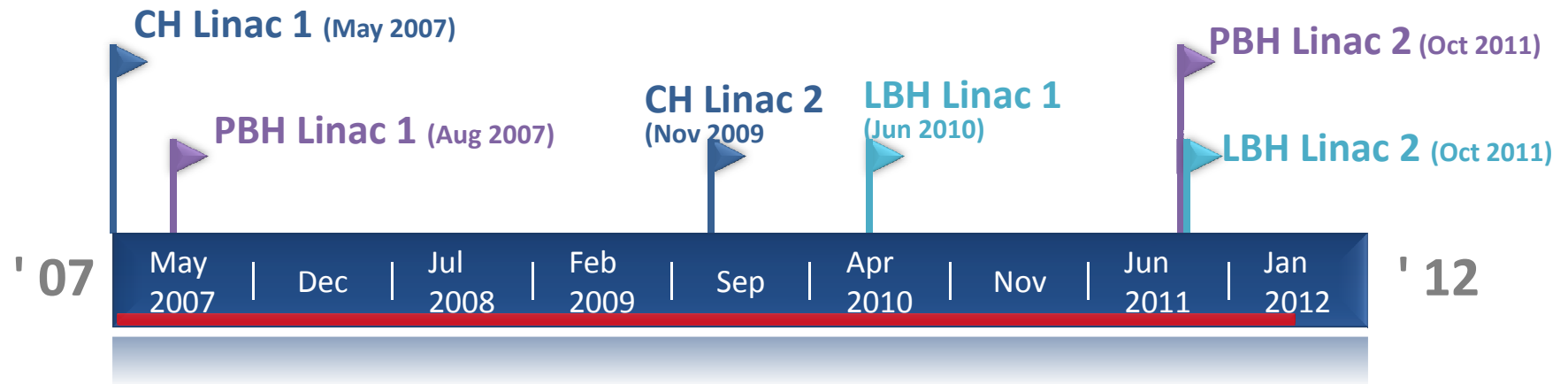
- Streamline and structure processes
 - Improve efficiency
- Improve training resources
- Reduce QA burden and improve staff satisfaction

Our Inspiration:

Improved consistency
Zero Radiotherapy Treatment Errors



Our Inspiration: The Start of the Journey

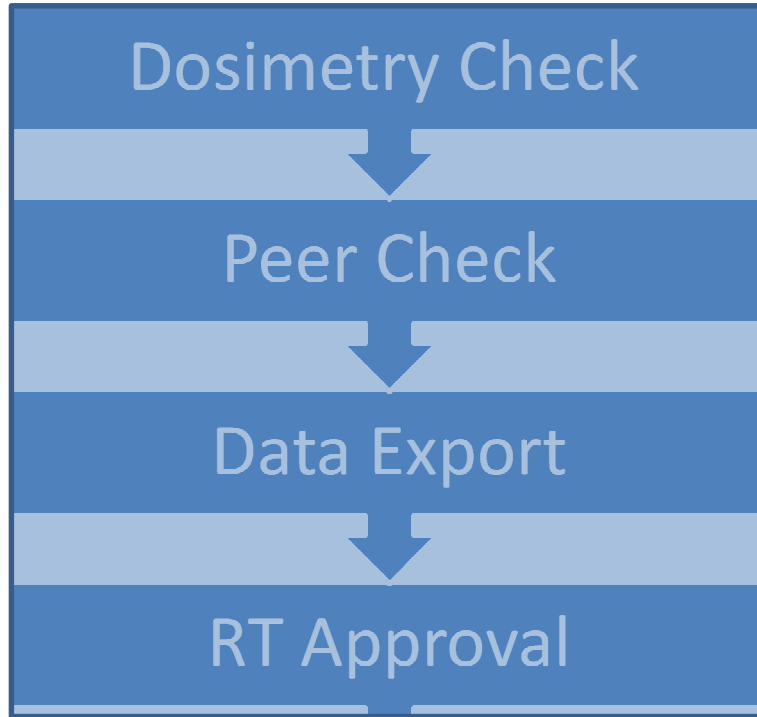


Initial Review
Updated Checking Process Developed
Updated Checking Process Implemented
Review of Updated Process

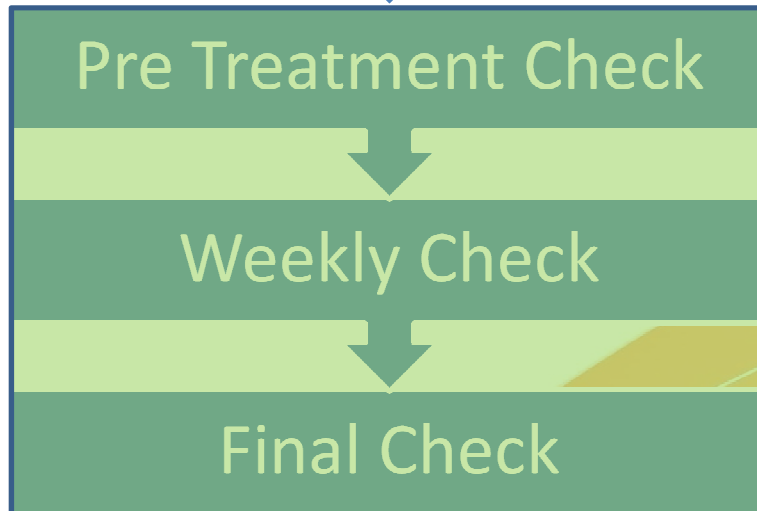


Some background

Planning



Treatment



The screenshot shows two overlapping windows from a clinical software application. The top window is titled "Assessments/ZZRx Pre-Treatment Checklist" and displays patient information: "Diagnosis: Malignant neoplasm of prostate [C61 | 77]" and "Histology: Adenocarcinoma NOS [81403.00]". It includes tabs for "Flowsheet", "Clinician Worksheet", "Laboratory", "Vital Signs", and "Assessments". The bottom window is titled "Assessments/ZZRx Weekly/Final Tx Checklist" and shows a hierarchical tree view of tasks. The tree includes categories like "Rx Mosaiq Data/EMR" and "Rx Final Tx Checks", with sub-items such as "Rx Pt History/Notes Review", "Rx eChart Check", "Rx Diagnoses", "Rx Careplan/Courses", "Rx Prescription Variations", "Rx Simulation", "Rx Site Setup Check", "Rx Dose Summary", "Rx Dose Action Points", "Rx QCLs", "Rx Images", "Rx SSDs", "Rx Schedule & Tx Calendar", "Rx Toxicity Review", "Rx Localisation Trend Review", "Rx Mosaiq Data/EMR Comments", "Rx Localisation Exclusion", "Rx Patient Status in Mosaiq", "Rx Appointment Statuses", "Rx Inactivate I/View Patient", "Rx Inactivate XVI Patient", "Rx Treatment Summary Letter", and "Rx Final Check Comments". There are also fields for "Approved By" and "Rx Transport" / "Rx Other Comments".

Our Idea Comes to Life

Stage 1

- Audit of QA checks for all patients receiving radiotherapy

Stage 2

- Review of the QA items and the frequency with which these items “failed”

Stage 3

- Staff Survey and review of Staff Orientation Evaluation Form

Stage 4

- Review of all incidents/near misses reported in IIMS

Initial Review

Possibly Over Checked

Information Checked	CT Assessment	Planner	Peer	RT Approval	Pre-treatment	Weekly
Implanted Devices	x	x	x	x		
Consent Form		x	x	x	x	
Bolus/Packing		x	x	x		
Prescription OK		x	x	x	x	x
History Check		x	x	x	x	x
QCL's		x	x	x	x	x
Photos		x	x	x	x	
Toxicity Assessment		x	x	x	x	x

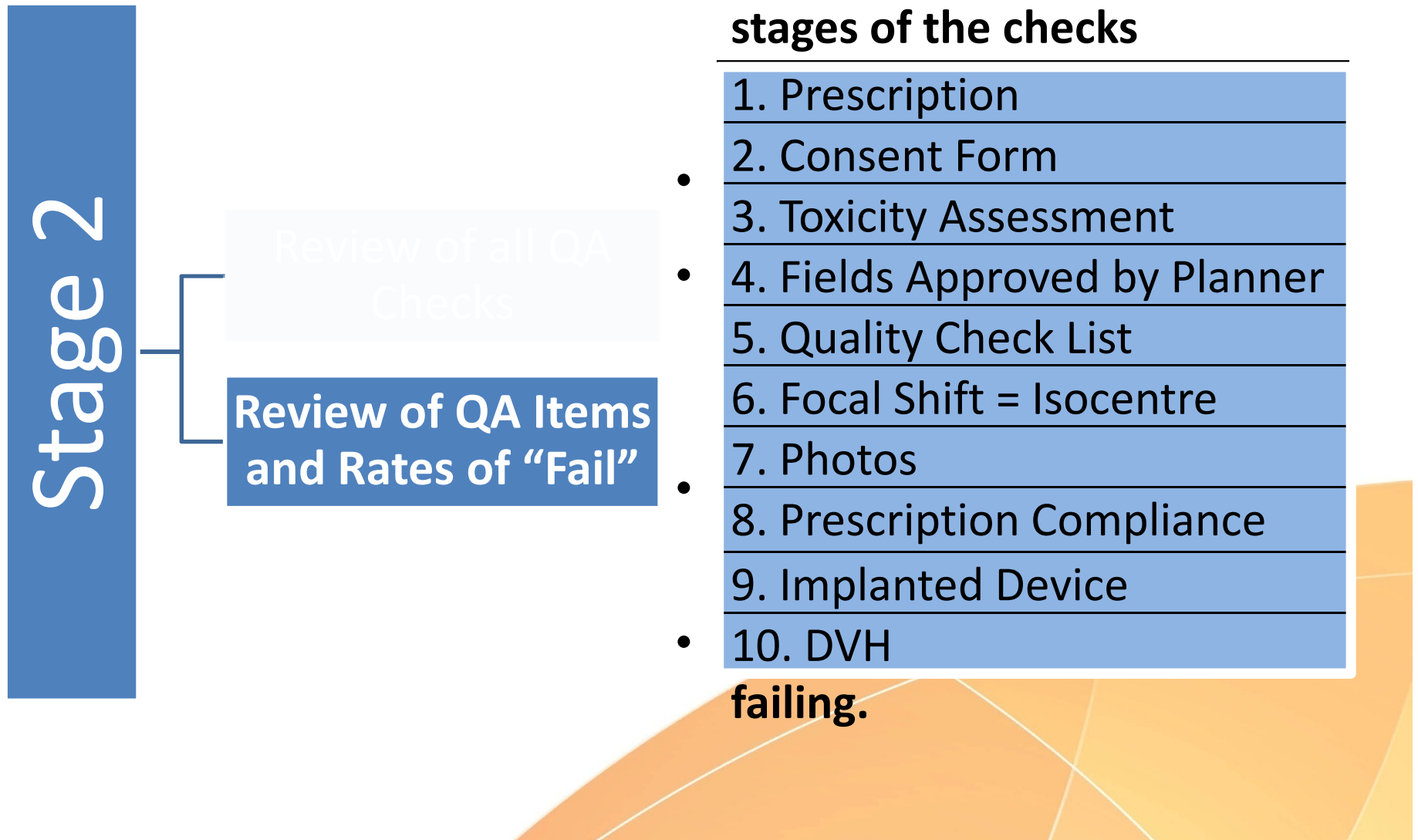
Stage 1

Review of all QA Checks

Possibly At risk

Information Checked	CT Assessment	Planner	Peer	RT Approval	Pre-treatment	Weekly
Image Import					x	
Annotations					x	
iCom					x	
XVI Import					x	
Conebeam Setup					x	
Demographics					x	
Medications					x	

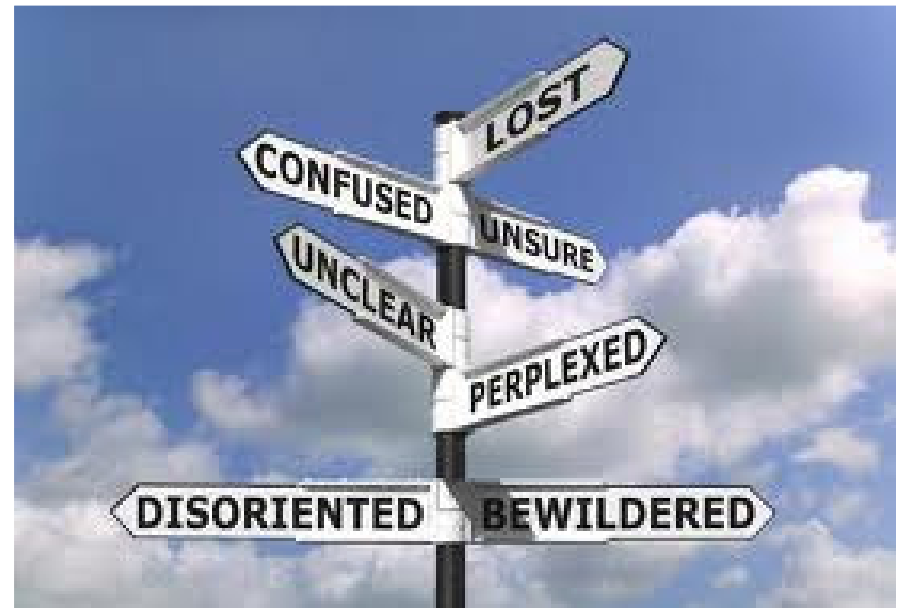
QA failure rate review



Staff survey and input

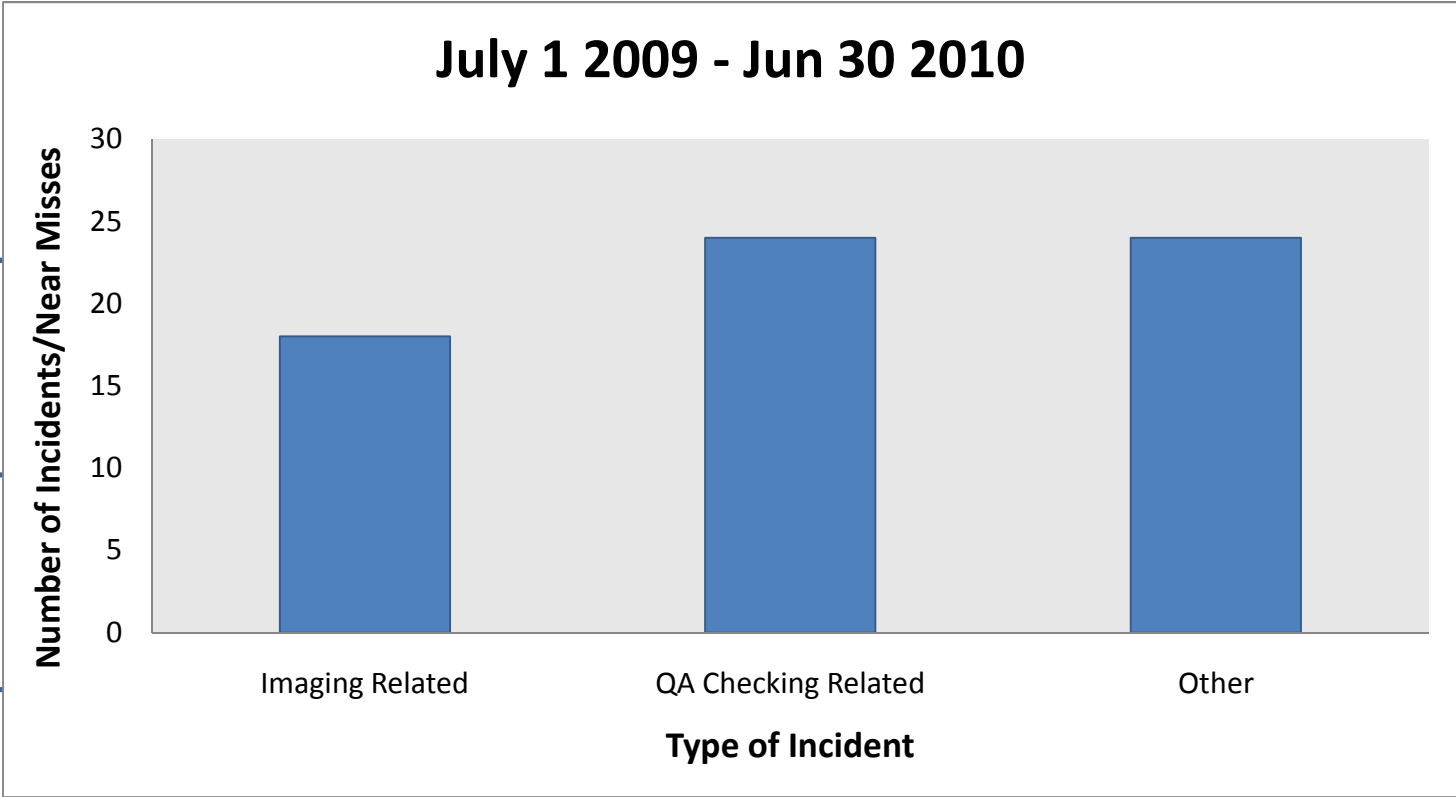
Stage 3

Staff
Survey/Feedback



Incident Review

Stage 4



Incident Review



Updated Checks – Mosaiq Assessments

RT Approval

Dosimetry

Peer

Data Export

Pre Treatment

Weekly/
Final

The image displays five screenshots of the Mosaiq software interface, each showing a different assessment checklist. The checklists are organized into folders and sub-items, with a 'Notes Approved By' field at the bottom of each.

- Assessments/Rx QA 1. Dosimetry:** Includes folders for Patient Information, Prescription, CT, Plan Evaluation, Contours, Points, Beams, Dose, and Electronic Medical Record.
- Assessments/Rx QA 2. Peer Check:** Includes folders for Patient Information, Prescription, CT, Plan Evaluation, Contours, Points, Beams, Dose, and Other.
- Assessments/Rx QA 3. Data Export:** Includes folders for Patient Information, Prescription, CT, Plan Evaluation, Electronic Medical Record, and Other.
- Assessments/Rx QA 4. RT Approval:** Includes folders for Patient Information, Prescription, CT, Plan Evaluation, Contours, Points, Beams, Dose, and Electronic Medical Record.
- Assessments/Rx QA 5. Pre-Treatment:** Includes folders for Prescription, Electronic Medical Record, and Other.
- Assessments/Rx QA 6. Weekly & Final:** Includes folders for Weekly QA Checks, Final QA Checks, and Other.

Education Outcome

	Original Checking Process	Updated Checking Process	Reduction in the Number of Checks
Data Items	83	65	- 18
Number of Individual Checks	206	146	- 60

Original Checking Process (6 months Prior to Implementation)

	Total
Assessments	5406
Data Items	206
Discrete Items Checked	152 117
Total Number of Fails	2963
% of Fails	2%

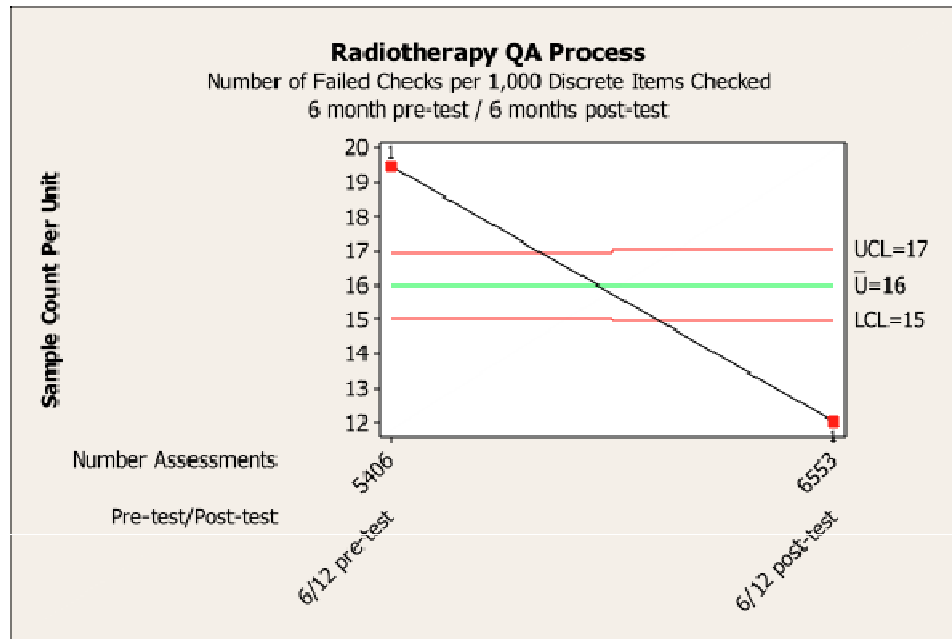
Updated Checking Process (6months Post Implementation)

	Total
Assessments	6553
Data Items	146
Discrete Items Checked	133 105
Total Number of Fails	1603
% of Fails	1%

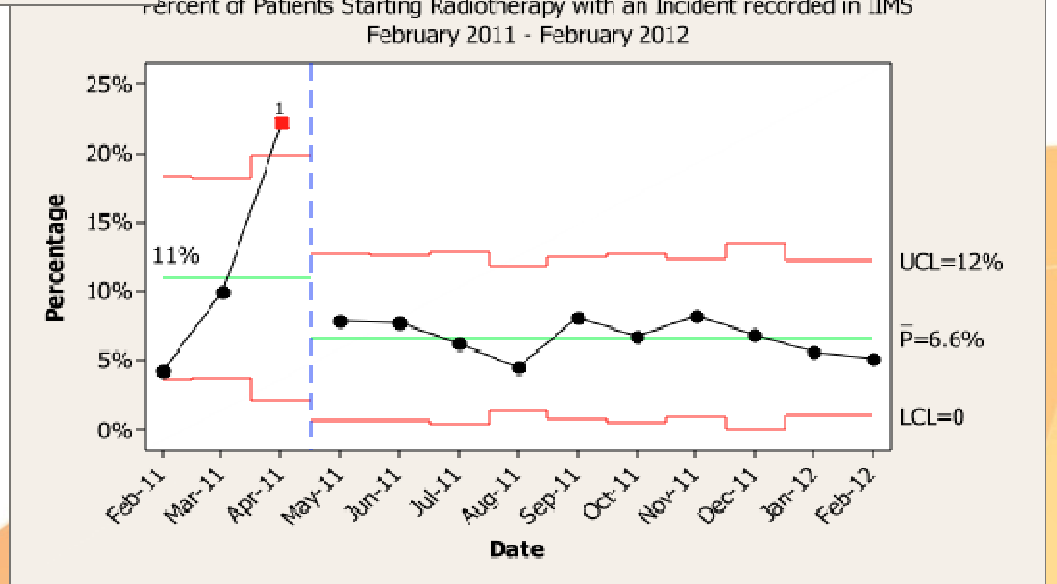
Education & Training Resources

Quick Ref Sheet	Dosimetry Check	Peer Check	Data Export	RT Approval
Course/Phase (s) (Treatment)				
Review Planning Assessments				
Patient Information				
History	Notes & Documents	Notes & Documents	Only if Previously Pending	Notes & Documents
Care Plan	RFC	RFC	Only if Previously Pending	RFC
Previous Tx Details	Booking Assessment & Documents	Booking Assessment & Documents	Only if Previously Pending	Booking Assessment & Documents
Consent	Sim (IV) and T'ment		Only if Previously Pending	
QCLs	Check Dates	Check Dates	Only if Previously Pending	
Prescription				
Prescription	Remains Pending,	Remains Pending	Confirm Approval	Rx details & approval
In Vivo Dosimetry	Booking & MOSFET, Assessment, QCL, Interest Point on Plan		Only if Previously Pending	Booking & MOSFET, Assessment, QCL, Interest Point on Plan
Therapy/Medication	Chemo Timing, Booking Ass'ment for Meds		Only if Previously Pending	Chemo Timing, Booking Ass'ment for Meds
CT				
Simulation Documentation	Cross Check photos and Notes, CTDi, Landmarks, Brst Doc 'complete'	Cross Check photos and Notes, CTDi, Landmarks, Brst Doc 'complete'		
Implanted Devices	Is ext-CT scale req? Check CT & XiO, if p'mker follow protocol			Is ext-CT scale req? Check CT & XiO, if p'mker follow protocol
Accessories	Labelling, Orientation storage location.	Labelling, Orientation storage location.		
Photos	ID & positioning	ID & positioning		
Toxicity Assessment	Radical pts, all criteria complete	Radical pts, all criteria complete		
Simulation Code	As in Booking Ass			As in Booking Ass

Quality Award submission



Mid North Coast Local Health District
 Percent of Patients Starting Radiotherapy with an Incident recorded in IMS
 February 2011 - February 2012



Our Insights: What We Have Learned

There is scope to decrease the QA burden maintaining or even improving Quality

Use of detailed clinical practice data provides significant confidence when changing practice.

KISS - Staff readily adopt clearer simpler practices.



Health

Our Insights: What We Have Learned

QA can in some respects be likened to searching for the needle in a haystack.

The trick is to make the haystack smaller so the only thing left is the needle.

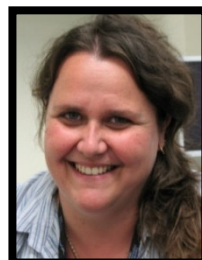
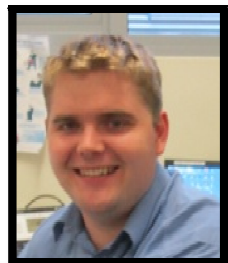
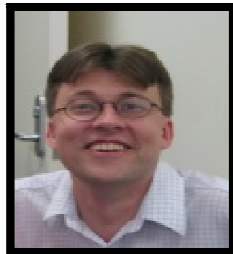
Stuart Greenham 2012

Accurate tracking of QA activity allowed NCCI to do otherwise impractical analysis and identify opportunities for safe improvements in efficiency



Health

Thanks to all the NCCI Radiation Therapists
and especially the project team!



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