Sensible Test Ordering Project (STOP) Brief

Background

A number of Emergency Departments have investigated the appropriateness and cost of diagnostic test ordering within their Departments and have found that without a specific focus and guidelines there can be widespread variation in the extent to which some pathology and radiology tests are ordered inappropriately[1][2] The National Coalition of Public Pathology has also recently published a report noting that there is widespread variation in pathology test ordering resulting in both over and under use[3]

Across NSW there is no current mechanism to identify whether Emergency Departments have implemented improvement mechanisms to improve and monitor the appropriateness of diagnostic test ordering. Consequently the aim of this project is to have all QSO sites undertake a local project in their respective EDs to examine their local practices and improve the appropriateness of pathology and radiology test ordering. In many sites this will result in decreased test ordering, decreased costs and improved patient flow. Likewise in some sites this may also result in an increase in the ordering of some tests, currently underutilised, however based on the experiences in sites to date this will still result in overall reductions of both tests and costs.

Each site is to be encouraged to run the project using the proven Clinical Practice Improvement (CPI) method demonstrated in the induction training.

QSOs will be asked to share their progress and results, thus creating a mini-breakthrough collaborative[4] across the 25 sites.

Support will be provided through the ECI in the form of templates, data collection tools, examples, access to experts and facilitating sharing of lessons across the 25 sites.

A sample Quality Improvement Template has been completed for this project. **Each site will need to customise this to their local requirements**. Whilst consistency in the capture of key data measures across sites for comparison and collation purposes, sites are able to implement their project flexibly to suit their local context.

Building on the success of projects conducted elsewhere (for eg Westmead and Prince of Wales) a sample approach to stratifying tests into a traffic light system is available on the QSO website. There is no requirement for this approach to be used.

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[1] National Institute Clinical Studies 2007.Emergency care – Closing the Gaps – Prince of Wales Hospital - STOP IMAGING – The Implementation of a Radiology Sensible Test Ordering Practice In The Emergency Department

[2] Stuart P, Crooks S, and Porton M. 2002. An interventional program for diagnostic testing in the emergency department. MJA 2002; 177: 131–134.

[3] National Coalition of Public Pathology. 2012. Encouraging Quality Pathology Ordering in Australia's Public Hospitals: Final Report. http://www.ncopp.org.au/UserFiles/file/NCOPP%20QUPP%20Project%20Final%20Report%20(web).pdf

[4] A breakthrough collaborative is the supported application of the Clinical Practice Improvement method to the same problem across multiple sites simultaneously

Resources including other sites experiences, journal articles, presentations and tools are available on the ECI QSO web page.

Project Mission

This project will substantially improve the appropriateness of pathology and radiology test ordering across the 25 sites with funded Quality Support Officers.

Project Aim:

Within 6 months reduce the overall number of tests performed per ED presentation by 20%.[5]

In addition we achieve:

- A reduction in pathology and radiology costs in the ED reduced by 20%
- Nil adverse events considered to be related to test ordering
- Nil evidence of cost shifting to other departments.

Project Measures:

Measures to be collected by each site are:

- Number of overall pathology tests per presentation (monthly[6])
- Number of specific tests per presentation as per Attachment A (measure and monitor locally monthly as relevant, report centrally quarterly)
- Number of overall radiology tests per presentation (monthly)
- Number of specific tests per presentation as per Attachment A (measure and monitor locally monthly as relevant, report centrally quarterly)
- Pathology costs for the Emergency Department (monthly)
- Radiology costs for the Emergency Department (monthly)
- Number of IIMs reports where test ordering specified as causative factor (quarterly).

Each site will need to work closely with their pathology departments and finance departments to establish consistent reporting.

Sites may want to capture more detailed data items for their own analysis and action than those listed above, however these are the key measures to be collected by all sites for central collation and comparison. A data collection sheet has been provided (Attachment B) for data to be submitted to the ECI on a monthly basis.

Project Plan:

Suggested steps to be undertaken in each site are to:

- Form project team with representatives from pathology, radiology, ED, Finance and performance management as appropriate
- Agree aims and specific measures, including refining any data definitions
- Determine local cause and effects and requirements for improvement (flow chart, brainstorm, cause and effect)

[5] This figure may be adjusted once baseline data is obtained from all sites
[6] This figure may be adjusted once baseline data is obtained from all sites

- Collect baseline data and establish regular reporting
- Agree and implement sensible test ordering protocol localising available resources
- Monitor and continually improve
- Feedback within local site and monthly to ECI via monthly QSO teleconferences
- Implement sustainability processes
- Write up project

References and Resources

The following documents are available on the ECI QSO webpage:

- National Institute Clinical Studies 2007.Emergency care – Closing the Gaps – Prince of Wales Hospital - STOP IMAGING – The Implementation of a Radiology Sensible Test Ordering Practice In The Emergency Department
- National Coalition of Public Pathology. 2012. Encouraging Quality Pathology Ordering in Australia's Public Hospitals: Final Report.
- Stuart P, Crooks S, and Porton M. 2002. An interventional program for diagnostic testing in the emergency department. MJA 2002; 177: 131–134
- McCarthy S. How to introduce and monitor a pathway for appropriate test ordering in the ED: S.T.O.P. and think! Sensible test ordering practice at Prince Of Wales ED Sydney, Australia (PowerPoint Presentation)
- STOP Template Posters
- QSO STOP Monthly Data Collection (Excel Spreadsheet)

Attachment A: STOP Specific Measures

Pathology tests:

- FBC: full blood count
- EUC: electrolytes, urea, creatinine
- Coags: Coagulation studies
- INR; international normalized value for prothrombin time
- APTT: activated Partial Thromboplastin Time
- CMP: calcium, magnesium, phosphate
- ESR: erthyrocyte sedimentation rate
- Amylase:
- D-dimer:
- TFTs: thyroid function tests
- Urine MC&S; for microscopy, culture and sensitivities
- Troponin:
- Blood cultures:
- Cholesterol
- CRP: C-reactive protein
- LFT *
- Lipase *
- Paracetamol *

* Additions to the dataset

Radiology tests:

MRI's
Xray:

- Ribs
- Facial bones
- Sinuses
- Nasal bones
- Skull
- Kub: kidney, ureters, bladder
- Spinal
  - Cervical
  - Thoracic
  - Lumbar
  - lumbosacral)
- AXR: abdominal XRays;

CT scans:

- Abdomen
- CTPA: CT pulmonary angiogram
- Facial bones
- Head

ED Quality Framework

Emergency Care Institute NEW SOUTH WALES

Attachment B: QSO STOP Collated Data Form

Monthly reporting

Emergency Department Name:							
2013	**Pathology**				**Radiology**		
Month	Number of ED presentations	Number of Total Pathology Tests for ED	Number of Pathology tests per presentation	Cost of Pathology	Number of Total Radiology Tests	Number of Radiology Tests per presentation	Total Radiology Cost to ED
Jan							
Feb							
Mar							
Apr							
May							
Jun							
Jul							
Aug							
Sept							
Oct							
Nov							
Dec							

ED Quality Framework

Emergency Care Institute NEW SOUTH WALES

Quarterly reporting

2013 Quarter Ending	March	June	September	December
Pathology tests:				
FBC				
EUC				
Coags				
INR				
APTT				
CMP				
ESR				
Amylase				
D-dimer				
TFTs				
Urine MC&S				
Troponin				
Blood cultures				
Cholesterol				
CRP				
LFT *				
Lipase *				
Paracetamol *				
Radiology tests:				
MRI's				
Xray:				
Ribs				
Facial bones				
Sinuses				
Nasal bones				
Skull				
KUB				
Spinal				
• cervical				
• thoracic				

2013 Quarter Ending	March	June	September	December
• lumbar				
• lumbosacral				
AXR				
CT scans:				
Abdomen				
CTPA				
Facial bones				
Head				

* Additions to the dataset

Please provide summaries of any relevant IIMs reports quarterly