Improving Patient Care and Reducing Health Care Cost: Addressing Utilization of Inpatient Renal US Within 48 Hours of Abdominal CT/MRI

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FIND a Process to Improve

Normal Abdominal CT

Normal Renal US within 24 hours
**CLARIFY Current Knowledge**

Retrospective data analysis (July – December 2016) of 204 inpatient renal US scans performed within 48 hours of Abdominal CT/MRI.

**INDICATIONS**
- Acute Kidney Injury (AKI) (72%)
- Flank pain (7%)
- Infection (4%)
- CT report recommendation (3%)
- Renal calculi (2%)
- Other (12%)

**ADDED VALUE**
- 95.2% US yielded no additional clinical information to alter patient management
- 98.4% US provided no additional information when prior CT/MRI normal
- 100% US for AKI negative for hydronephrosis

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**UNDERSTAND Root Causes**

**Referring Provider Factors**
- Inadequate information about patient
- Requesting imaging before examining patient
- Unaware of practice guidelines
- Lack of definitive diagnosis
- Attempts to improve certainty of diagnosis
- Unaware of prior imaging results
- Unable to implement ACR Appropriateness Criteria
- Patient’s request/satisfaction
- Pre-bundled orders in SCM
- Reduced provider-radiologist interaction
- Practicing defensive medicine
- Lack of access to published guidelines

**Health Care System Factors**

- Overutilization of resources.
- Increased patient discomfort.
- No added value in patient care and management.
**GOAL Statement**

To **reduce** utilization of Inpatient Renal US within 48 hours of Abdominal CT/MRI **by 50% over one year** through a referring provider **“Call Back” program**

**PLAN the Improvement**
DO the Improvement

For a period of 1 year
(January 2017 – December 2017)
Provider “Call Back” program implemented.

STUDY the Results

74 Renal US requests within 48 hours of Abdominal CT/MRI

For 31 (42%), able to contact primary team
For 28 (90.3%), referring provider-radiologist deemed unnecessary
For 3 (9.7%), referring provider-radiologist agreed to proceed
Renal US cancelled
Renal US performed

For 43 (58%), unable to contact primary team


**STUDY the Results**

Number of Inpatient Renal US performed within 48 hours of Abdominal CT/MRI per month

![Graph showing number of Renal US per month](chart.png)

- **Pre-Intervention Period** (July 2016 - Dec 2016): 34
- **Post-Intervention Period** (Jan 2017 - Dec 2017): 6.2

**Next Steps**

- Continue to engage and educate referring providers in utilizing appropriate imaging.
- Promote referring provider-radiologist communication and provide evidence-based imaging decision support at point-of-care.

**Thank You!**