



Physician Feedback Reduces Resource Use in the Emergency Department

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The authors have documented that they have no financial relationships to disclose or Conflicts of Interest (COIs) to resolve

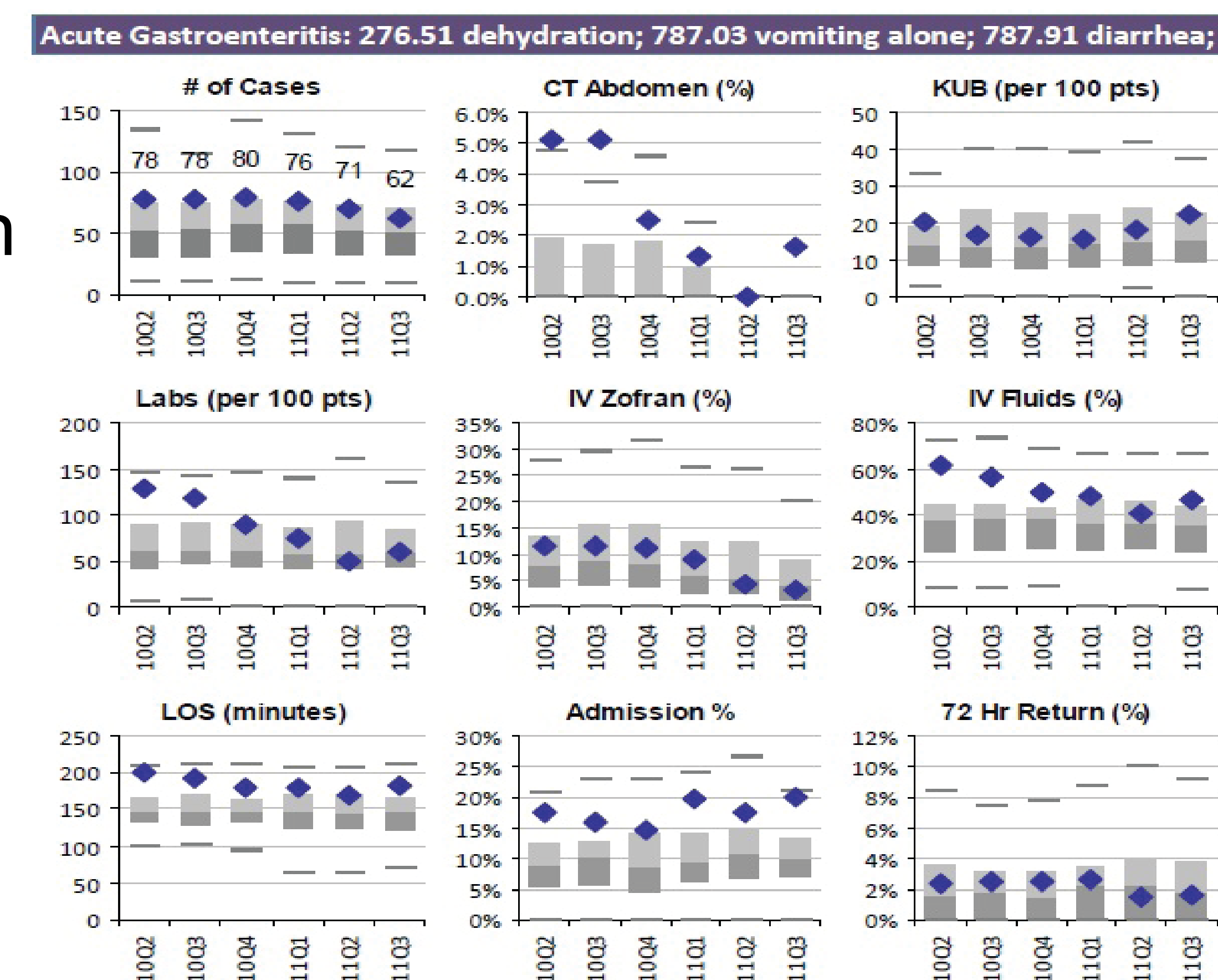
BACKGROUND

- Traditional Emergency Department (ED) quality measurement has included metrics of:
 - Timeliness: LOS, time to antibiotics, boarder time, etc.
 - Productivity: Patients/hour
 - Safety: errors, hand-offs, hand-washing
 - Patient-centeredness: Satisfaction, LWBS (Left Without Being Seen)
- Clinical quality metrics not frequently monitored:
 - Effectiveness metrics:
 - Adherence to evidence-based practice
 - Reducing unnecessary practice variation
 - Efficiency: Efficient use of resources
- Variation in practice:
 - Widely prevalent at institutional and individual provider level
 - Highlights opportunity for quality improvement by benchmarking best practice

PURPOSE

- To develop a comprehensive scorecard for feedback to ED physicians on their practice patterns
- To evaluate the impact of physician feedback (relative to peers) on ED resource use, quality and efficiency

ONE PROVIDER'S SCORECARD



Total eligible patient visits during study period: **48,538**
(38% of all ESI 3 patients seen during study period)

- PRE: **21,612**
- POST: **26,926**

Total # of physicians: **121**

- Mean: **401** patients/physician

METHODS

Study Design: Pre- Post-Intervention analysis

Setting: 2 tertiary pediatric EDs

Data source: EMR and billing data

Scorecards distributed quarterly to ED providers

Intervention Date: Sep 1, 2010

PRE: July 1 2009 – Aug 31, 2010

POST: Sep 1 2010 – Dec 31, 2011

Analysis: Fisher Exact test and Wilcoxon Rank Sum test

INCLUSION CRITERIA

4 common conditions in pediatric ED

Respiratory illness

Head Injury

Gastroenteritis

Fever

ESI 3 – highest potential for practice variation

Used chief complaint at triage

Diagnosis can be biased by physician

METRICS

ED Length of Stay (LOS)

Measure of efficiency

Return Rate (return to ED within 72 hr)

Measures potential unmet needs at first visit

Balancing metric

Resource use

Relevant to condition:

Gastroenteritis

Fever

Labs (lytes, CBC)

Labs (lytes, CBC, blood

culture, CRP) Abdominal X-ray

Chest X-ray

CT Scan Abdomen

Abdominal X-ray

IV Ondansetron

IV Antibiotics

IV Fluids

Respiratory Illness

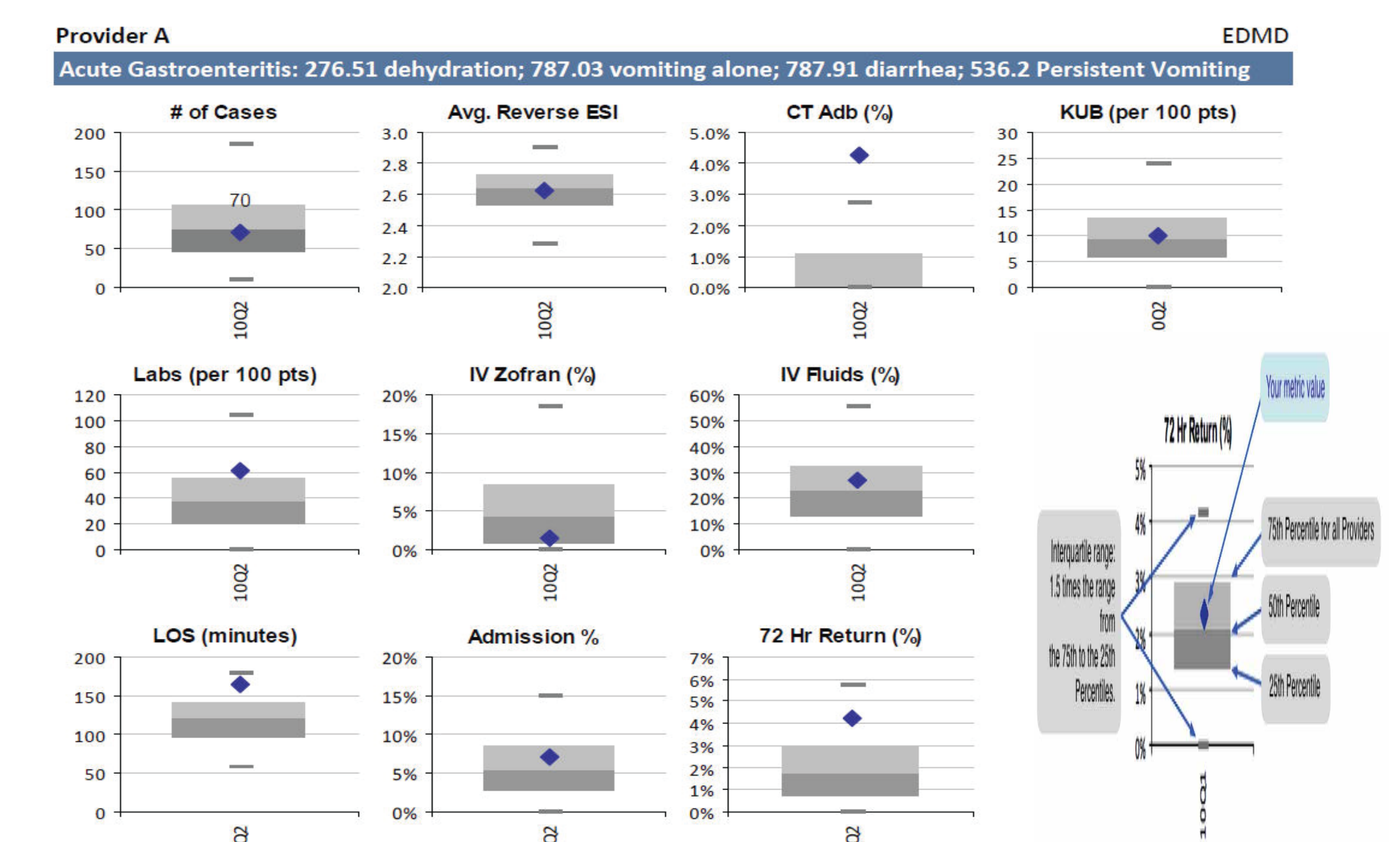
Head Injury

Chest X-ray

CT Scan Head

Admission to hospital monitored for all conditions

SAMPLE SCORECARD



CONCLUSIONS

- Physician feedback on practice patterns, including resource use and quality metrics relative to peers, can influence resource use in the ED
- Reduced resource use did not adversely affect quality of care (LOS or Return rate)

LIMITATIONS

- Severity adjustment is based on triage acuity and chief complaint – may not adjust for all patient-related factors
- Some changes in resource use may reflect temporal trends

RESULTS

Resource/Outcome	PRE	POST	P-Value
Abdomen/Pelvis CT Scan (%)	1.2	0.6	<0.0001
Head CT Scan (%)	26.0	19.1	<0.0001
Chest X-ray (per patient)	31.7	28.1	<0.001
Abdominal X-ray (per patient)	15.7	16.7	ns
Lab Tests (per patient)	71.1	70.4	ns
IV Antibiotics (%)	12.0	10.8	<0.0001
IV Fluids (%)	37.8	38.6	ns
IV Ondansetron (%)	11.6	8.1	<0.0001
Hospital Admission (%)	7.4	6.7	<0.0001
Length of Stay (min)	129	125	<0.0001
72-hr Return Rate (%)	2.2	2.0	ns

REDUCING VARIATION AND MEAN

Overall Composite Metric for all 4 Conditions

