The “ABCs” of Observation Medicine 2015

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Disclosure of Commercial Relationships:

- **Nature of Relationship** | **Name of Commercial Entity**
- Advisory Board | None
- Consultant | None
- Employee | None
- Board Member | None
- Shareholder | None
- Speaker’s Bureau | None
- Patents | None

- **Other Relationships**
  - CMS Technical Advisory Panel: AMI, HF, pneumonia
  - Past CMS APC Advisory Panelist
  - Chair – Visits and Observation Subcommittee
  - Co-chair, Mission Lifeline Atlanta, AHA
  - Co-founder, Board of Directors Society of Cardiovascular Patient Care
Observation Medicine

1. What is it?
2. Why should you do it?
3. How do you do it?
4. Do you get paid?
What is it?

• The principles (or the patient)
• The service
• The setting
• The scope
1. What is it? – the principle

• What defines Emergency Medicine?
  – TIME (acuity)

• What defines Observation Medicine?
  – TIME (acuity)

• What defines Observation Patients?
  – TIME (acuity)
    • ED LOS for admitted patients = 5 hours
    • IP LOS for admitted patients = 5 days
      – Penalties for short IP LOS? < 24 hours
    • What about patients needing **6-24 hours** of care???
What is it? – the service:
OUTPATIENT OBSERVATION SERVICES

• Observation services are those services furnished on a hospital's premises, including use of a bed and periodic monitoring by nursing or other staff, which are reasonable and necessary to evaluate an outpatient's condition or determine the need for a possible admission as an inpatient...

Medicare: Hospital Manual, 3663
NEW “2-Midnight Rule”
INPATIENT DEFINITION

• A 2-midnight **benchmark**: FOR DOCTORS
  – An inpatient is expected to stay in the hospital at least two midnights:
    • 24 hours and 1 minute, or 47 hours and 59 minutes
  – Outpatient time (ED or observation) counts
  – Inpatient stays < 2-MN not paid as an inpatient
    • except death, transfer, AMA, etc

• A 2-midnight **presumption**: FOR REVIEWERS
  – If a patient met benchmark criteria, the admission will not be scrutinized by reviewers (RAC, MAC, etc)
### EXHIBIT 1

#### Hospital Settings In Which Observation Services Are Provided

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
<td>Protocol driven, observation unit</td>
<td>Highest level of evidence for favorable outcomes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Care typically directed by ED</td>
</tr>
<tr>
<td>Type 2</td>
<td>Discretionary care, observation unit</td>
<td>Care directed by a variety of specialists</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unit typically based in ED</td>
</tr>
<tr>
<td>Type 3</td>
<td>Protocol driven, bed in any location</td>
<td>Often called a “virtual observation unit”</td>
</tr>
<tr>
<td>Type 4</td>
<td>Discretionary care, bed in any location</td>
<td>Most common practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unstructured care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor alignment of resources with patients’ needs</td>
</tr>
</tbody>
</table>
How many observation units are there?  
CDC / NHAMCS ED 2007 survey data  
Wiler J, Ginde A, Ross M; Acad Emerg Med 2011

ED dispositions:
- 15% = “Stay”: Admit to hospital or EDOU
  - 2% = EDOU
  - 2% = <48hr hosp. (“Short stay”)
  - 11% = >48 hr hosp.

4/15 = 26% of people who “stay”

ED Obs Unit:
- 47 (40%) total visits
- 1.2 (49%) ED OU visits
- 1,746 (36%) hospitals

Non-ED Obs Unit:
- 12.1 (26%) visits
- 707 (40%) hospitals

ED Obs Unit:
- 31.7 (67%) visits
- 902 (52%) hospitals

Unknown / Blank:
- 3.7 (3%) total visits
- 0.4 (7%) ED OU visits
- 80 (2%) hospitals

NoED Obs Unit:
- 66 (56%) total visits
- 1.1 (4.4%) ED OU visits
- 3,065 (63%) hospitals

Unknown/blank:
- 3.4 (7%) visits
- 137 (8%) hospitals

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What is it? – the scope

• U.S. 2010:
  – 133.9 million ED visits (all payers, HCUP data)
  • 1.4 million observation visits (6.6% of all admits)
  • 19.7 million inpatient admissions
    – 4.5 million (23%) inpatient short stays, eligible for OU
What is it? – the scope

OIG: 2012 Medicare Data
OBS, LOPS, and SIPS

- **OBS:** Observation volumes - 2.1 million:
  - 1.5 million Obs => home
  - 0.6 million Obs => Inpatient
  - 78% began in the ED; 9% from cath lab/OR

- **LOPS:** Non-observation outpatient volumes:
  - 1.4 million Long OP stays

- **SIPS:** Short Inpatient Stays (≤2 nights)
  - 1.1 million SIPs

- Case mix was similar across all three groups!
  - Total = 4.6 million claims
2. Why should you do it?

- Better patient care
- Improved ED and hospital operations
- Economic benefits to patients, hospitals, payers
Why should you do it?
Because it improves patient care!

- “Observation” is part of emergency medicine
- Fewer inappropriate discharges
- Fewer unnecessary admits
- Shorter length of stay
- Decreased cost
- Better patient and physician satisfaction
- Avoided “rework” by another department
- Improve hospital operations
Observation of selected conditions has been found to decrease the rate of missed diagnoses

- Decreased rate of missed MIs (4% to 0.4%) while admitting fewer patients.
  - Evidence – Graff / CHEPER, Pope

![Bar chart showing decrease in missed MIs]

\[ p < 0.001 \]
<table>
<thead>
<tr>
<th>Condition / Year / Author</th>
<th>N</th>
<th>Primary Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Syncope / 14 / Sun</td>
<td>124</td>
<td>↓ admissions and LOS</td>
</tr>
<tr>
<td>2. Chest Pain / 10 / Miller</td>
<td>110</td>
<td>↓ Cost (stress MRI)</td>
</tr>
<tr>
<td>3. Atrial Fib / 08 / Decker</td>
<td>153</td>
<td>↑ conversion to sinus</td>
</tr>
<tr>
<td>4. TIA / 07 / Ross</td>
<td>149</td>
<td>↓ LOS and cost</td>
</tr>
<tr>
<td>5. Syncope / 04 / Shen</td>
<td>103</td>
<td>↑ established diagnosis, ↓ admissions</td>
</tr>
<tr>
<td>6. Asthma / 97 / McDermot</td>
<td>222</td>
<td>↓ admissions, no relapse ↑</td>
</tr>
<tr>
<td>7. Chest Pain / 98 / Farkouh</td>
<td>424</td>
<td>No difference cardiac events</td>
</tr>
<tr>
<td>8. Chest Pain / 97 / Roberts</td>
<td>165</td>
<td>↓ LOS and cost</td>
</tr>
<tr>
<td>9. Chest Pain / 96 / Gomez</td>
<td>100</td>
<td>↓ LOS and cost</td>
</tr>
</tbody>
</table>
**Transient Ischemic Attack** (n=149) – decreased LOS (25 vs 61 hr) and cost ($890 vs $1510), with comparable or better clinical outcomes.

Open an EDOU
- 54,000 visit/yr ED

Before - after study design looking at:
- Patients who left without being seen
- EMS diversion hours

RESULTS - Patients who left without being seen:
- Before = 10.1% of ED
- After = 5.0% of ED census

EMS diversion hours:
- Before = 6.7 hr/100 pts
- After = 2.8 hr/100 pts
Growth in observation services

- 2007 – 2009: Observation Services
  - 34% rise in Medicare ratio of observation to inpatient stays (Feng, Health Affairs, 2012; 31:6 1251-1259)
Trends in observation stays:

  - >24 hours = 50%
  - >48 hours = 10%
Reasons for LOS creep . . .

• Patient selection - A growing pool of patients that did not meet Interqual criteria

• Hospital fears – RAC and readmissions

• Setting – type 4 setting
Protocol-Driven Emergency Department Observation Units Offer Savings, Shorter Stays, And Reduced Admissions

EXHIBIT 3

Observation Visit Lengths-Of-Stay Across Three Study Groups

EXHIBIT 4

Costs Of Selected Types Of Inpatient Admissions In Georgia And The United States, 2010

<table>
<thead>
<tr>
<th>Type of admission</th>
<th>Georgia</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>All</td>
<td>1,057,099</td>
<td>100.0</td>
</tr>
<tr>
<td>Beginning in ED</td>
<td>488,036</td>
<td>46.2</td>
</tr>
<tr>
<td>Beginning in ED and lasting no more than 2 nights</td>
<td>157,602</td>
<td>15.9</td>
</tr>
<tr>
<td>Beginning in ED, lasting no more than 2 nights, only observation-eligible conditions</td>
<td>106,077</td>
<td>10.0</td>
</tr>
</tbody>
</table>
Protocol-Driven Emergency Department Observation Units Offer Savings, Shorter Stays, And Reduced Admissions

• U.S. Savings Potential from Type 1 Units:
  – Observation patients - $950 Million / year
    • 38% shorter stays
    • 44% lower admit rates
  – Short Inpatients - $8.5 Billion / year
    • 11.7% of all admissions
    • Savings potential – ED visits vs ED admissions:
      – Avoided ED visits = $2.3-3.4 Billion/yr
      – Avoided ED admits = $5.5-8.5 Billion/yr
      – Relative savings = 2.4-2.5 times greater
        (avoided: admits vs ED visits)
Does observation cost *Medicare* less?

YES!!! – almost 3 times less

- **Over all:**
  - SIPS = $5.9 BILLION
  - Obs = $2.6 BILLION

- **By case:**
  - SIPS = $5,142 per case
  - Obs = $1,741 per case

- Variation between conditions, however all favor observation over inpatient
Does observation cost *patients* more? **NO!!!**

- Average observation copay is about **half** inpatient copay

- Observation copay is less than inpatient 94% of the time

- Average SIPS copayment = $725
- Average Obs copayment = $401
  - 51% had self admin Rx costs = $528
  - 6% (n=84K) paid more than IP deductible
  - 0.2% (n=3K) paid more than 2X IP deductible
SNF Breakdown:

• 3 days, but less than 3 IP days = 617,702
  – Received SNF services = 25,245 (4%)
    • Medicare paid (inappropriately) = 23,148 (92%)
      – Medicare payment = $255M
      – Ave patient copay = $2,735
    • Medicare did NOT pay = 2,097 (8%)
      – Ave patient copay = $10,503

• Bottom Line:
  – SNF patients at risk represent 0.6% of whole group

BUT . . . IS THIS REALLY TRUE?????
3. How do you do it?

a) Making the case
b) Physical design
c) Protocols, guidelines, and order-sets
d) Critical metrics – utilization, quality, economic
e) Staffing – physician, APP, nurse, tech/sec
f) Ancillary support
g) Financial analysis
**a) Making the case:**

“Hospitalized but Not Admitted”  
Sheehy AM et al. JAMA IM 2013

- Retrospective observational cohort study
- Setting: Type 4 (No type 1 obs unit)  
  - 566 bed Academic Medical Center (U. Wisc)
- Time frame: 36 months
- Population: Hospitalized patients  
  - 43,853 patients
    - 10.4% for “observation”  
      - Mean LOS = 33.3 hours (17% over 48 hours)  
        » Medical patients = 41.1 hours  
        » More medical, elderly, and female patients
      - Hospital Margin = LOSS of $331 per case
- Conclusion: “… observation status”  
  - Are they missing something???
Making the case

• Economic:
  – Cost reduction = $1.5 – 2.0K / case
    = Baugh Health Affairs data - $1,572 / case
    = Emory TIA data - $2,062 / case
  – Revenue enhancement = $3K/case
    • Baugh “options modeling” data - $2,908 / case
  – Soft economics:
    • Risk reduction – Penalties for re-admissions, RAC
    • Decrease ED overcrowding and diversion (1 admit / diversion hour)
• Organizational goals and objectives:
  – Locate your - an OU fits in!
• Quality:
  – Patient satisfaction
  – Less patient financial risk (shorter stays, less SNF risk, faster admit)
  – Lower risk of inappropriate discharge
  – Standardized care – quality compliance
b) Physical design

- **Location** –
  - Proximate to the ED
  - Remote from the ED

- **Features**
  - Outpatient room building code -24 / overnight rule?
  - Cardiac monitoring
  - Privacy, TV, telephone, soft bed
  - Square feet?
b) Operational design

• Pure OU – Only observation patients
• Open vs Closed OU (i.e. one specialty)
  – Anybody can admit (hold to standards)
  – Limited to a single specialty group (like ICUs)
    • Emergency Medicine
    • Hospitalists
    • Both
• Hybrid OU – shared with:
  – Boarders – not ideal, enables system failures
  – Scheduled procedure patients – synergy, maximize use of nurse
Maximizing Use of the Emergency Department Observation Unit: A Novel Hybrid Design

Figure 4.
Scheduled procedure patient length of stay by locations: 15-bed pure scheduled procedure unit (1995); alternative inpatient location (1997); and hybrid unit (1998).

![Graph showing occupancy and patient length of stay](image-url)
Physical design – # beds: COMPLICATED

- Little's law (AEM) – complicated
- Track existing volumes – estimate 1pt/bed/d
  - # observation
  - # Short stays (< 2MN? 3d?)
  - # ED boarders (d/c with LOS over 8 hours?)
  - Scheduled procedure patients (if hybrid unit)
Physical design - # beds: SIMPLE

• Percent ED census – simple, fairly good
  – ~ 1 patient/bed/day
  – Benchmark data:
    • 28% ED – IP admit rate / 8% OU admit rate
    • Adjust up or down by proportions:
      – 32% ED – IP admit rate / 9% obs
      – 11% ED-IP admit rate / 3% obs
    • From this determine patients / day => # beds
c) Protocols, guidelines, and order-sets

• Protocols / guidelines:
  – General and for the unit
  – Condition specific

• Guideline development:
  – Discovery
  – Design
  – Do
  – Data

• Protocols / Order sets – derived from guidelines
Emory Protocols

Observation Medicine Resources

CDU App
- Download from the Google Play Store

iBook
- Download from the iTunes Bookstore

Website

www.obsprotocols.org

all resources are free/CDU manual is for ipad or ipad mini only/ iphone app is coming soon/ feel free to email or ask any of your obs friends (Mike Ross, Matthew Wheatley, Anwar Osborne)
Patient selection

- See CDU guidelines for details
- Limited IS/SI
- Single well defined acute reason
- 70-80% discharge within 15 hours
- No exclusions
- Look at exclusion bar in bed request form
PATIENT SELECTION

#1 Focused goal:  

b. Short Term Therapy

1. High probability (70-80%) of success within observation time frame. . .

2. Conditions requiring limited amount of service, consistent with what is available in unit.

Asthma, dehydration, uncontrolled diabetes, etc.
Short Term Therapy:

Rate of spontaneous conversion of acute onset atrial fibrillation

Patient selection considerations:

- **Single problem principle:**
  - Only one *acute* problem
  - Well defined problem and plan
- **Specific patient issues:**
  - Obstetric patients - fetal monitoring
  - Pediatric patients - nursing issue
  - Patients at risk of self harm:
    - Intoxicated or suicidal patients - unit issue
  - Back pain >65
  - Acute gait disturbance
  - High failure rates – CRF/HD, Pancreatitis, SCA
Patient Selection - Exclusions:

- **Indecision**
  - No clear diagnosis or plan documented
  - “Rounding rule”:  
    - “Would you want to round on this patient”?

- **“Unwanted” patients**
  - **Inpatients** - A patient that clearly needs to be the admitted but a service does not want to admit
  - Drug seeking patients
Example:

• How it happens at Emory . . .
Cardiovascular - Respiratory Exclusion Criteria

Acute Heart Failure

- New onset CHF
- Acute cardiac ischemia (EKG changes, positive cardiac markers, ongoing ischemic chest pain, unstable angina) or new arrhythmias
- Unstable VS after treatment (HR>130, SBP<90 or >180, RR>30, Pco2<60 or O2 by NC)
- Acute co-morbidities - sepsis, pneumonia, new murmur, confusion
- Abnormal labs - Severe anemia (Hgb<8), renal failure (SUN>40 or Cr>3), Na<135
- Patient requiring vasopressive drugs, invasive or noninvasive ventilation (in hosp)
- Evidence of poor perfusion (confusion, cool extremity, weakness, N/V)

Asthma

- Unstable VS or clinical condition - severe dyspnea, confusion, drowsiness
- Poor response to initial ED treatment:
  - Persistent use of accessory muscles, RR>40, or excessive effort
  - Elevated pCO2 (>50) plus decreased pH if ABG done
  - O2Sat < 92% on room air, unless documented chronic hypoxia
  - PEFR* < 40% predicted or personal best
- Susception of ACS, new onset CHF, pneumonia

Atrial Fibrillation (Acute Onset)

- HR not controlled under 110 with ED meds
- IV vasopressor or press required (ie dobutamine)
- Hemodynamically unstable - i.e. BP
- Ongoing ischemic chest pain after rate control
- Acute co-morbidities - Evidence of acute MI, CHF, PE, Sepsis, CVA / embolic event
- Recent co-morbidities - Stroke/TIA within 3 months, Acute MI within 4 weeks

Chest Pain (Possible ACS)

- Moderate to high risk criteria by Reilly / Goldman criteria (Pain worse than usual angina or like prior MI), recent revascularization, SBP<110, rate above both bases
- New EKG changes consistent with ischemia
- Positive troponin (>0.15) not known to be chronic
- Stress test or cardiac imaging needed - but NOT available while in the ED
- Chest pain is clearly not cardiac ischemia
- Recent normal cardiac catheterization (no coronary stenoses)
- Private attending chooses hospital admission

COPD Exacerbation

- Acute co-morbidities - Pneumonia, CHF, cardiac ischemia
- Unstable VS or clinical condition
- Acute confusion / Altered, elevated pCO2 (if drawn) or evidence of CO2 narcosis
- Poor response to initial therapy
- O2 sat < 85 on 2 L O2 after 5 mg aerosolized Albuterol
- Persistent use of accessory muscles, RR>20 after initial treatment
- Estimated likelihood of discharge from observation unit is less than 70%
### CDU Chest Pain (Initiated Pending)

**EXCLUSION CRITERIA:**
- Moderate to high risk criteria by Reilly / Goldman criteria (pain worse than usual angina or like prior MI, recent revascularization, SBP > 110, rates above both bases)
- New ECG changes consistent with ischemia
- Positive troponin (>0.15) not known to be chronic
- Stress test or cardiac imaging needed but NCT available while in the CDU
- Chest pain is clearly not cardiac ischemia
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- Private attending chooses hospital admission

<table>
<thead>
<tr>
<th>Check</th>
<th>Status</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDU Admit - ED</td>
<td>Observation, Chest Pain</td>
<td></td>
</tr>
<tr>
<td>Code Status</td>
<td>Full Code</td>
<td></td>
</tr>
<tr>
<td>Hypoosmolar Protocol</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Vital Signs**
- Vital Signs [Vital Signs with Pulse Oximetry] (qhrs, 24 hrs). Contact MD if temp < 38.1, HR > 120, RR > 24, SBP < 95, Pulse Ox < 93%. Perform Puls...

**Nutrition**
- NPO Diet
- Fat Controlled Low Chol Diet (Low Chol Fat Controlled)
- Communication Under
- For patients with hypertension or heart failure
- Sodium Restricted Diet 2000 mg
- For Diabetic Patients
- Calorie Controlled Diet 1300 cal

**Patient Care**
- ED Cardiac Monitoring
- Communication Under
- Patient Education
- Blood Glucose POCT

**Continuous Infusions**
- Sodium Chloride 0.9% (NS)
- Peripheral IV

**Medications**

**Details**

**Orders For Signature**
Order observation:
“ADMIT TO EC OBSERVATION”

EDOU protocols:
1. Derived from guideline
2. Simplify work
3. Avoid delays & errors of omission
Observation documentation: & transfer of care

- **Document emergency H&P**
  - Include family history (forced at EHC)
  - Document closer to a level 5 (ie ROS, etc)

- **Bed request form:**
  - SELECT THE CORRECT DIAGNOSIS FROM LIST
  - CDU synopsis – brief, include “IF-THEN” logic

- **NOTIFY THE CDU PROVIDER**
  - Similar to sign out our admission (light)
  - EHC sites – AP on days, EP on nights
  - Grady – Blue zone doc covering CDU

- **Discharge summary (follow CPT):**
  - Course in the unit
  - A final exam
  - Preparation of discharge records
  - Arrangement for continuing care
d) Critical metrics – utilization, quality

• Utilization – data source?
  – Electronic
  – Paper?

• Critical metrics:
  – Patient identifier
    • Gender and age (DOB)
  – Condition – reason for observation
  – Times:
    • ED arrival
    • OU arrival
      – OU admit order – boarding report?
    • OU departure
      – Departure order – D2D report?
  – Disposition
    • Admit / Discharge
Critical Metrics:

- Volumes – 0.9 – 1.1 pt/bed/day
  - Can not use 24/LOS due to variations in census by day and hour
- LOS – 15-18 hours
- Percent discharge – 70-90%
  - Under 70% - observing patients that should be admitted from the ED?
  - Over 90% - observing patients that should be discharged from the ED?
Critical metrics – utilization, quality

- Utilization – data source?
  - Electronic
  - Paper?

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  - Patient identifier
    - Gender and age (DOB)
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  - Times:
    - ED arrival
    - OU arrival
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  – Over 90% - observing patients that should be discharged from the ED?
# EUH FY14 Q1 + Q2 (September 2013 - February 2014)

<table>
<thead>
<tr>
<th>CDU Protocol Diagnosis</th>
<th>Total Count</th>
<th>% Discharge</th>
<th>Average ED LOS (hours)</th>
<th>Average CDU LOS (hours)</th>
<th>Average Time from CDU Request to CDU Arrival (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Total</td>
<td>1328</td>
<td>82%</td>
<td>5.8</td>
<td>15.1</td>
<td>70.7</td>
</tr>
<tr>
<td>Chest Pain</td>
<td>462</td>
<td>85%</td>
<td>5.2</td>
<td>16.7</td>
<td>69</td>
</tr>
<tr>
<td>Dehydration/vomiting</td>
<td>115</td>
<td>83%</td>
<td>6.4</td>
<td>12.8</td>
<td>73</td>
</tr>
<tr>
<td>Abd pain</td>
<td>111</td>
<td>77%</td>
<td>7.1</td>
<td>19.0</td>
<td>75</td>
</tr>
<tr>
<td>Other</td>
<td>109</td>
<td>75%</td>
<td>6.5</td>
<td>13.2</td>
<td>78</td>
</tr>
<tr>
<td>TIa</td>
<td>94</td>
<td>83%</td>
<td>5.5</td>
<td>12.5</td>
<td>77</td>
</tr>
<tr>
<td>Syncope</td>
<td>66</td>
<td>86%</td>
<td>5.4</td>
<td>15.2</td>
<td>89</td>
</tr>
<tr>
<td>Cellulitis</td>
<td>52</td>
<td>85%</td>
<td>5.0</td>
<td>16.4</td>
<td>68</td>
</tr>
<tr>
<td>CHF</td>
<td>34</td>
<td>82%</td>
<td>5.8</td>
<td>15.6</td>
<td>95</td>
</tr>
<tr>
<td>Back pain</td>
<td>28</td>
<td>89%</td>
<td>6.1</td>
<td>10.9</td>
<td>72</td>
</tr>
<tr>
<td>Hyperglycemia</td>
<td>27</td>
<td>85%</td>
<td>6.2</td>
<td>14.2</td>
<td>84</td>
</tr>
<tr>
<td>Pyelonephritis</td>
<td>27</td>
<td>81%</td>
<td>6.8</td>
<td>14.7</td>
<td>81</td>
</tr>
<tr>
<td>Electrolyte abnormality</td>
<td>26</td>
<td>77%</td>
<td>5.9</td>
<td>15.4</td>
<td>30</td>
</tr>
<tr>
<td>Transfusion of blood/products</td>
<td>23</td>
<td>78%</td>
<td>5.5</td>
<td>12.6</td>
<td>89</td>
</tr>
<tr>
<td>Asthma</td>
<td>19</td>
<td>68%</td>
<td>5.6</td>
<td>12.4</td>
<td>63</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>19</td>
<td>74%</td>
<td>5.5</td>
<td>14.7</td>
<td>80</td>
</tr>
<tr>
<td>Headache</td>
<td>17</td>
<td>88%</td>
<td>8.1</td>
<td>15.1</td>
<td>82</td>
</tr>
<tr>
<td>Vertigo</td>
<td>16</td>
<td>88%</td>
<td>5.8</td>
<td>13.0</td>
<td>74</td>
</tr>
<tr>
<td>GI bleed</td>
<td>14</td>
<td>71%</td>
<td>5.2</td>
<td>15.6</td>
<td>55</td>
</tr>
<tr>
<td>Renal colic</td>
<td>12</td>
<td>92%</td>
<td>5.1</td>
<td>12.2</td>
<td>67</td>
</tr>
<tr>
<td>COPD exacerbation</td>
<td>10</td>
<td>60%</td>
<td>4.6</td>
<td>15.5</td>
<td>68</td>
</tr>
</tbody>
</table>
Critical Metrics
Advanced Utilization and Quality

• Ancillary testing –
  – Stress imaging, MRI, echo, etc
  – Allows tracking of LOS by test to detect delays
• ED boarding time: OU order to OU arrival
• D2D (discharge to departure) time: admit/discharge delays
• Recidivism –
  – What timeframe - 7, 14, or 30 day?
  – What type - ED, Obs, Inpatient?
  – How many visits? – 1, 2, 3+?
• Major outcomes:
  – ICU admissions
  – Death
EDOU Arrival / Departure patterns

![Graph showing EDOU Arrival and Departure patterns with data points for Hospitals A, B, and C.](image-url)
EDOU LOS patterns

![Graph showing EDOU LOS patterns for Hospitals A, B, and C over different EDOU arrival hours.](image-url)
CDU Length of Stay (CLH, EUH, from February 2009 to January 2010)
e) Staffing – Physician

- Two physician model
  - “Physician” defined by specialty and group (tax ID #)
  - Same as admitting to hospitalist – second H/P

- One physician model - Rounds before shift:
  - Same as structured sign-out
  - Staffing:
    - Morning – heavy (~6min/patient if with an APP)
    - Afternoon – light, lowest census
    - Midnights – verbal sign out
Staffing our Obs Units

• “Closed” unit – the buck stops with you

★ Dedicated attending (by shift) coverage

★ Rounds at beginning of shift (with nurse/ML)
  • Review chart, examine patient, discuss plan
  • Mostly mornings, afternoons brief, MN – signout sheet

• “Close the loop” . . . a final diagnosis please
What to do:
A structured “sign out”

• **Days**
  – Take report from AP, review chart, examine everybody, sign AP note

• **Afternoons**
  – Only see patients not actively leaving (admit/discharge). Same as above.

• **Nights**
  – Take signout. Be available to cover issues.
## CDU Rounds

<table>
<thead>
<tr>
<th>Time/Hospitals</th>
<th>Grady Memorial 404-616-6448</th>
<th>Emory Midtown 404-686-3154</th>
<th>Emory University 404-712-2908</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Morning Shifts</strong></td>
<td>9am – 5pm Blue Zone attending. (12-8 attending when applicable) Round with CDU nurse.</td>
<td>7:30am – 3:30pm attending. Round with 6am – 6pm AP and CDU nurse. (1st 45 min of shift)</td>
<td>8am – 4pm attending. Round with 6am – 6pm AP and CDU nurse. (1st 45 min of shift)</td>
</tr>
<tr>
<td><strong>Afternoon Shifts</strong></td>
<td>5pm - 1am Blue Zone attending. Round with CDU nurse and get sign-out from prior attending.</td>
<td>3:30pm – 11:30pm attending. Round with 6am – 6pm AP at 3:30pm and AP sign-out before leaving.</td>
<td>4pm – 12am attending. Round with 6am – 6pm AP at 3:30pm and AP sign-out before leaving.</td>
</tr>
<tr>
<td><strong>Night Shifts</strong></td>
<td>11pm-7am Blue Zone attending. (After sign-out from the 5P-1A blue zone attending and CDU nurses. Sign out to the 7am Blue Zone doctor the next morning, who will cover until the arrival of the 9am doctor</td>
<td>11.30pm – 7.30am night attending to get sign-out from 3:30P-11:30P attending.</td>
<td>12am – 8am night attending to get sign-out from 3:30P-11:30P attending. Sign out to the 7:30am attending and AP.</td>
</tr>
</tbody>
</table>
Staffing – Leadership

• Physician – develop protocols, educate faculty, maintain utilization and quality, interface with other departments, monitor finance, run monthly meetings.

• APP – assist physician director with other APPs and unit monitors and operations.

• Nursing director – train staff, maintain staffing, implement protocols.
Staffing – APP

• Benchmark estimates – 45-60 minutes/patient
• Staff:
  – heavy in the morning
  – Light in afternoon
  – Brief heavy in late afternoon / early evening
• Dual function roles?
  – Administrative duties (call backs)
  – Fast track
  – Triage
  – Main ED
Staffing – Nursing, tech, sec

- RN – benchmark data:
  - 4-5 patient / nurse
  - May maximize use of nurse in afternoon with hybrid model (scheduled procedure patients)
f) Ancillary support

• Cardiac imaging
  – Stress lab
  – cCTA
  – Echo

• MRI

• Consultants –
  – Cardiology
  – Neurology
4. Do you get paid???
or - g). Financials . . .

• Physician staffing models
• Coding and billing
• Equity analysis
• Cost sharing opportunities
Physician staffing models

• CPT: A “physician” cannot bill 2 separate E/M codes on the same calendar day

• A “physician” is defined by:
  – Group (tax ID #)
  – Specialty (designated recognized codes)
Physician staffing models

• Two “physician” model (like admitting to a hospitalist)
  – Pro – more RVUs
  – Con – legal / compliance hurdles, questionable medical necessity, 2 H/Ps for somebody going home in 15 hours?, need volume to support if solo (15-20), interest levels

• One “physician” model (like a structured sign-out)
  – Pro – simpler, lower staffing cost, intuitively fits model, only one H/P and one discharge summary, less compliance risk.
  – Less revenue (cost share midlevel with hospital?), dependant on the discharge code to support
CODING / BILLING ISSUES

5 EMERGENCY CPT CODES:

- 99281-99285
- Independent of time of day or length of stay
- No separate payment for the work of “discharging” a patient
  - Observation and Inpatient CPT codes recognize the work of discharging a patient
    - “Discharge” work is over and above the work of the initial “H&P” (or initial evaluation and management)
    - Initial evaluation and management (or “H&P”) documentation requirements and payment levels are similar for emergency, observation, and inpatient CPT codes.
Billing **Observation** professional services

7 OBSERVATION CPT CODES:

- **Two day case:**
  - 99218 - 20 Initial day of observation care
  - 99217 - Observation care discharge day management

- **One day case:**
  - 99234 - 36 Observation or inpatient hospital care, for the evaluation and management of a patient including admission and discharge on the same date:

  *These codes basically combine discharge (99217) and initial observation care (99218 - 20) into one code (99234 - 36) for cases which come and go on the same day.*
## Emergency & Observation

### CPT E&M Codes:

<table>
<thead>
<tr>
<th>Service</th>
<th>CPT codes</th>
<th>Required Documentation **</th>
<th>2014 Total RVUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency level 1</td>
<td>99281</td>
<td>PF PF S</td>
<td>0.61</td>
</tr>
<tr>
<td>Emergency level 2</td>
<td>99282</td>
<td>EPF EPF L</td>
<td>1.19</td>
</tr>
<tr>
<td>Emergency level 3</td>
<td>99283</td>
<td>EPF EPF M</td>
<td>1.73</td>
</tr>
<tr>
<td>Emergency level 4</td>
<td>99284</td>
<td>D D M</td>
<td>3.30</td>
</tr>
<tr>
<td>Emergency level 5</td>
<td>99285</td>
<td>C C H</td>
<td>4.85</td>
</tr>
<tr>
<td>Observation Discharge</td>
<td>99217</td>
<td>+ + +</td>
<td>2.03</td>
</tr>
<tr>
<td>Observation level 1</td>
<td>99218</td>
<td>D or C D or C S or L</td>
<td>2.78</td>
</tr>
<tr>
<td>Observation level 2</td>
<td>99219</td>
<td>C C M</td>
<td>3.80</td>
</tr>
<tr>
<td>Observation level 3</td>
<td>99220</td>
<td>C C H</td>
<td>5.20</td>
</tr>
<tr>
<td>Same Day Obs / dschg 1</td>
<td>99234</td>
<td>D or C D or C S or L</td>
<td>3.79</td>
</tr>
<tr>
<td>Same Day Obs / dschg 2</td>
<td>99235</td>
<td>C C M</td>
<td>4.74</td>
</tr>
<tr>
<td>Same Day Obs / dschg 3</td>
<td>99236</td>
<td>C C H</td>
<td>6.12</td>
</tr>
</tbody>
</table>
Two scenarios – 1 vs 2 days

**ONE DAY SCENARIO:**

12A

ED ➔ Obs ➔ D/C

One day “combo” codes (initial E/M + d/c)

99234, 35, 36

**TWO DAY SCENARIO:**

12A

ED ➔ Obs ➔ D/C

Initial E/M

99218, 19, 20

12A

Obs discharge code - 99217
Financial analysis - Professional

• Meet with your coding company to clarify observation coding and rules

• Physician CPT code accounting
  – CDU census = 2day + 1day code volumes
    • Do not count 99217
  – 99217 volume = [99218+99219+99220] volumes
  – Case mix distribution (2-day and 1day cases)
Equity analysis and cost sharing

• Cost per case:
  – Physician time
  – APP time
• Incremental revenue per case - ~2.5 tRVU/case
  – Initial E/M (or “H/P”) – ~0.5 – 1.0 tRVU
  – Discharge code (99217 or combined) ~2.0 tRVU
• Negative equity? Cost share APP with hospital
  – They do not practicing independently
  – The hospitals profits from this investment:
    • Cost savings - $1-2K/case
    • Revenue enhancement – backfill admissions $2-3K/case
    • Indirect benefits – RAC, readmissions, malpractice risk
  – APP cost /case is minimal by comparison
Summary

• Well run Type 1 Observation Units provide a "win-win" for patients, hospitals, providers, and hospitals

• Applying key principles to type 1 observation units provide favorable clinical outcomes

• Type 1 Observation Units decrease patient and hospital financial risk
Questions???
References:

- Feng Z, Jung HY, Wright B, Mor V. The origin and disposition of Medicare observation stays; Medical Care; 2014, article in press