

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)

What is it? – the setting

EXHIBIT 1

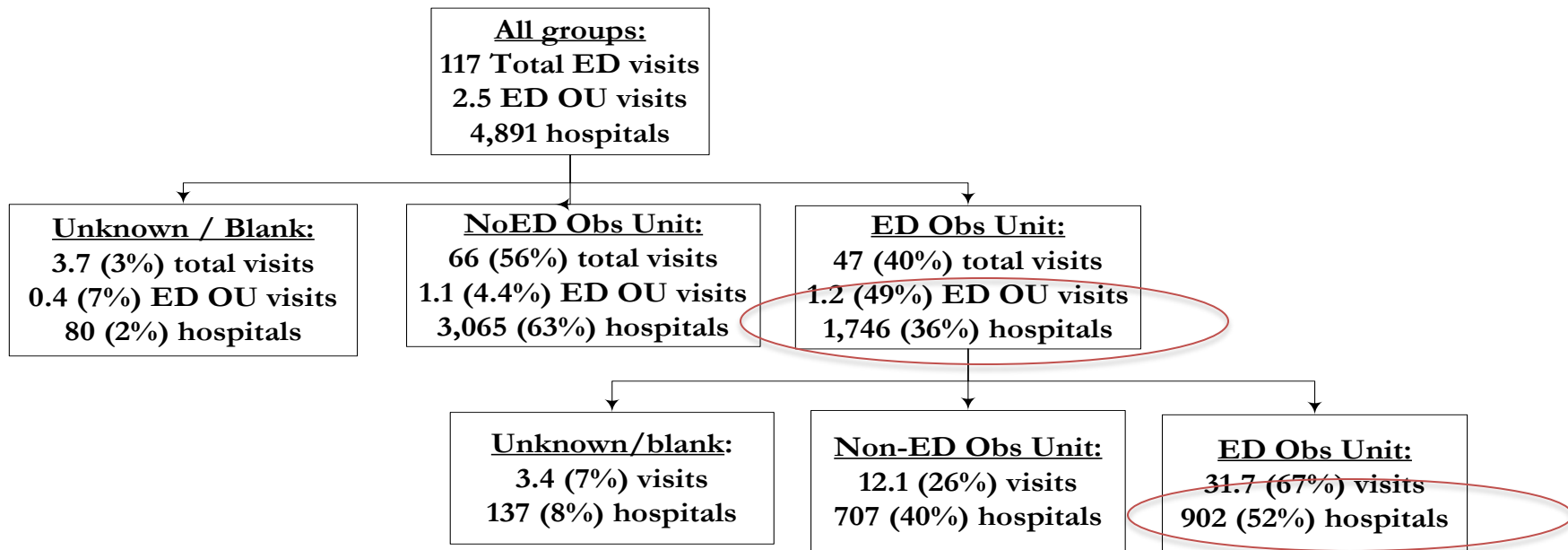
Hospital Settings In Which Observation Services Are Provided

Setting	Description	Characteristics
Type 1	Protocol driven, observation unit	Highest level of evidence for favorable outcomes Care typically directed by ED
Type 2	Discretionary care, observation unit	Care directed by a variety of specialists Unit typically based in ED
Type 3	Protocol driven, bed in any location	Often called a “virtual observation unit”
Type 4	Discretionary care, bed in any location	Most common practice Unstructured care Poor alignment of resources with patients’ needs

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

4/15 = 26%
of people who
“stay”

- 2% = EDOU
- 2% = <48hr hosp. (“Short stay”)
- 11% = >48 hr hosp.

13 % IP “admit”

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

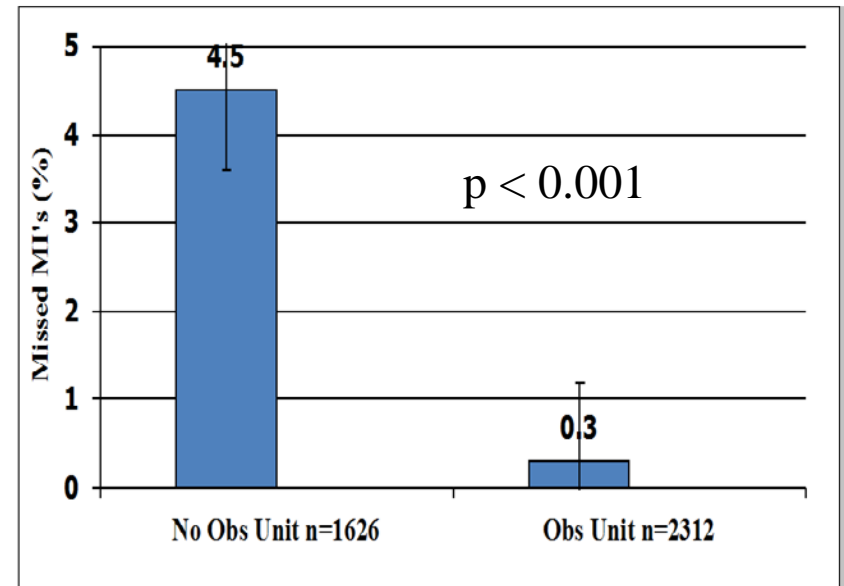
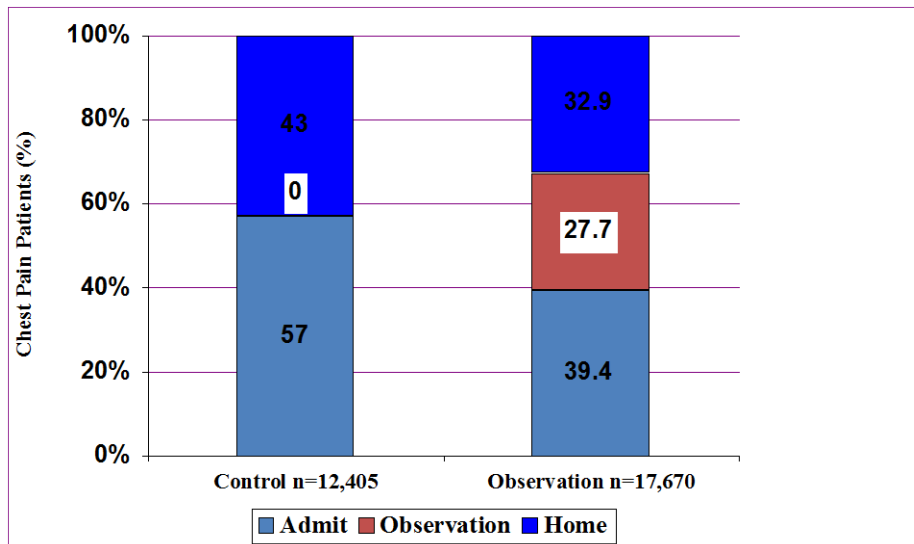


Why should you do it?
Because it improves patient care!

- ▶ “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



State of the Art: Emergency
Department Observation Units

Michael A. Ross, MD,* Taruna Aurora, MD,† Louis Graff, MD,‡ Pawan Suri, MD,†
Rachel O'Malley, MD,§ Aderonke Ojo, MD,¶ Steve Bohan, MD, and Carol Clark, MD**

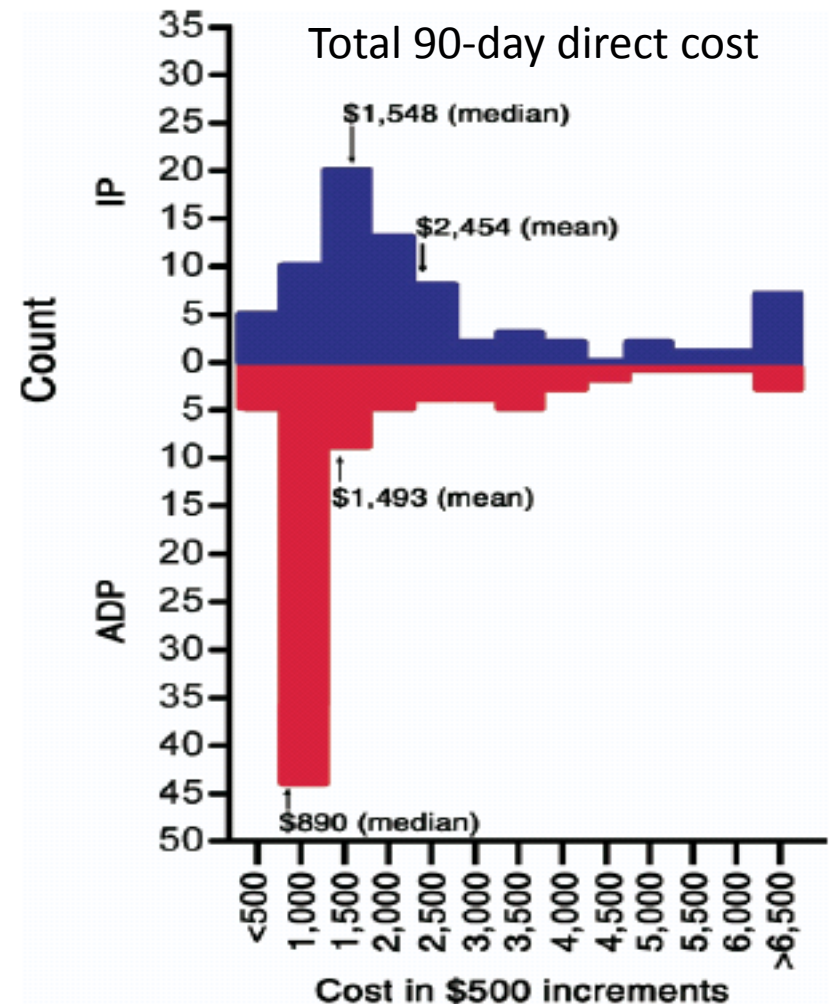
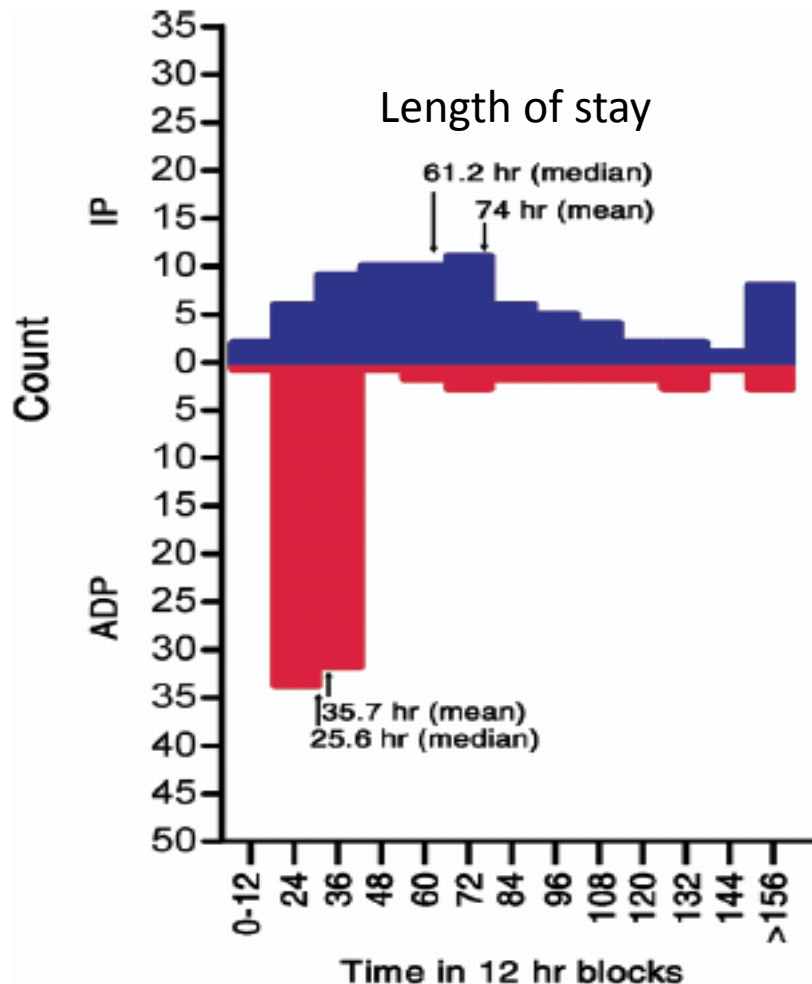
<u>Condition / Year / Author</u>	<u>N</u>	<u>Primary Outcome</u>
1. Syncope / 14 / Sun *	124	↓ admissions and LOS
2. Chest Pain / 10 / Miller *	110	↓ Cost (stress MRI)
3. Atrial Fib / 08 / Decker	153	↑ conversion to sinus
4. TIA / 07 / Ross	149	↓ LOS and cost
5. Syncope / 04 / Shen	103	↑ established diagnosis, ↓ admissions
6. Asthma / 97 / McDermot	222	↓ admissions, no relapse ↑
7. Chest Pain / 98 / Farkouh	424	No difference cardiac events
8. Chest Pain / 97 / Roberts	165	↓ LOS and cost
9. Chest Pain / 96 / Gomez	100	↓ LOS and cost

(*Crit Pathways in Cardiol* 2012;11: 128–138)

*Added since published after this review

Transient Ischemic Attack (n=149) –
 decreased LOS (25vs 61 hr) and cost (\$890 vs \$1510),
 with comparable or better clinical outcomes.

Ross MA, et al. An Emergency Department Diagnostic Protocol for Patients With Transient Ischemic Attack: A Randomized Controlled Trial. Ann Emerg Med 2007.

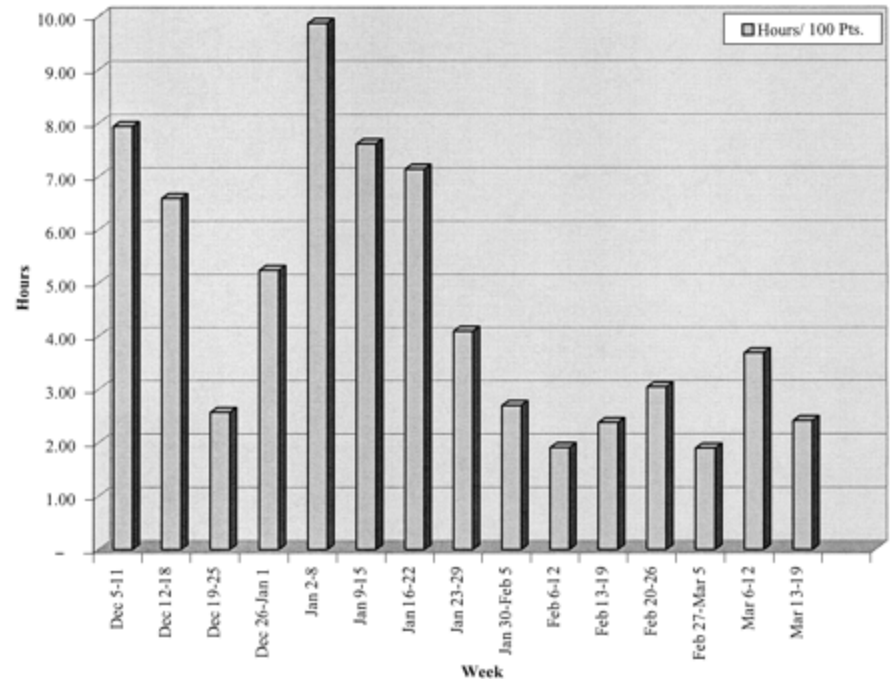


Effect of an ED managed acute care unit on ED overcrowding and EMS diversion

Kellen et al, Acad Emerg Med 2001;8:1095-1100

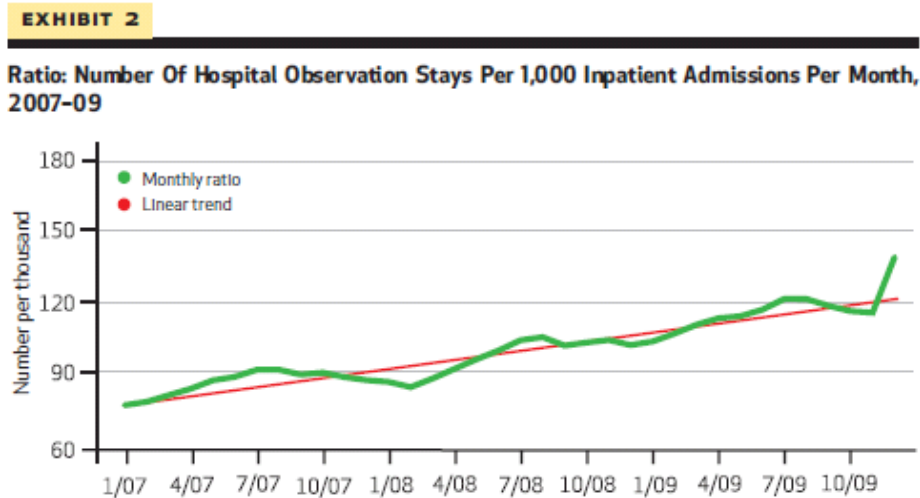
- ▶ Opened an EDOU
 - 54,000 visit/yr ED
- ▶ Before - after study design looking at:
 - Patients who left without being seen
 - EMS diversion hours
- ▶ RESULTS - Patients who left without being seen:
 - **Before = 10.1% of ED**
 - **After = 5.0% of ED census**

- **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)



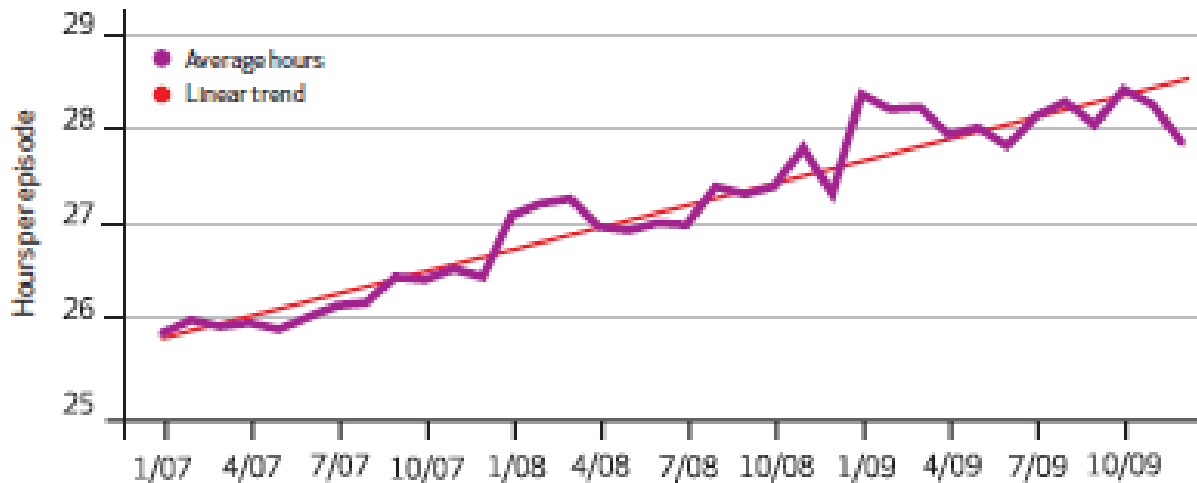
SOURCES Centers for Medicare and Medicaid Services, 100 percent Medicare (Part A) inpatient and outpatient claims data, 2007-09. **NOTE** The trends shown are statistically significant ($p < 0.01$) according to t-tests using linear regression.

Trends in observation stays:

- 2007 – 2009: length of stay creep (Feng, Health Affairs, 2012; 31:6 1251-1259)
 - >24 hours = 50%
 - >48 hours = 10%

EXHIBIT 3

Duration Of Hospital Observation Stays: Average Number Of Hours Per Observation Episode Per Month, 2007-09



SOURCE Centers for Medicare and Medicaid Services, Medicare (Part A) outpatient claims data, 2007-09. **NOTE** The trends shown are statistically significant ($p < 0.01$) according to t-tests using linear regression.

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

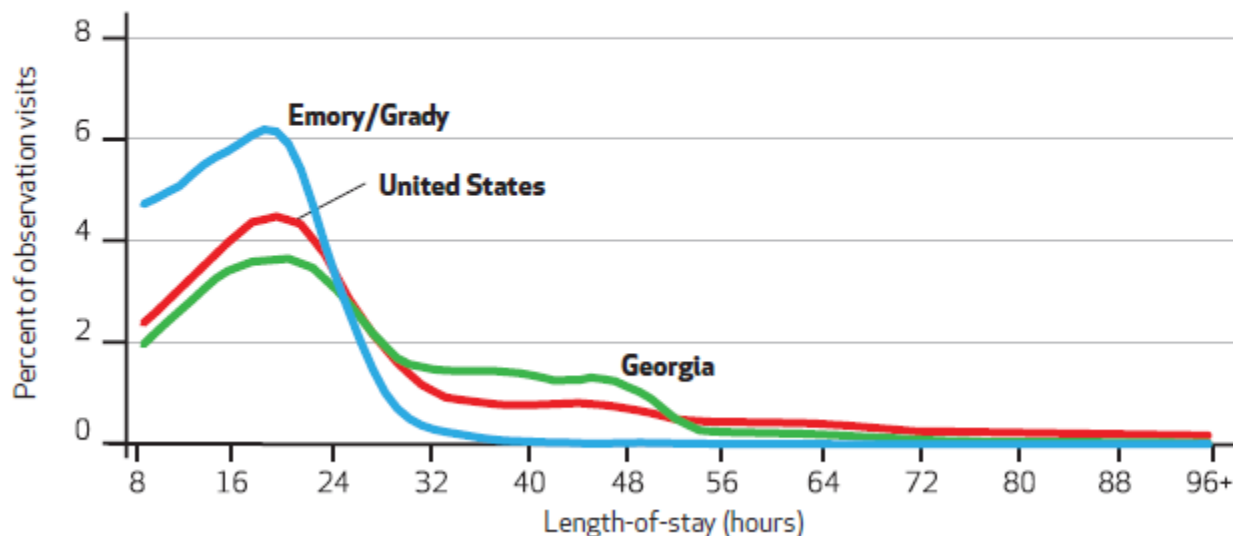


EXHIBIT 4

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

Type of admission	Georgia			US		
	Number	Percent	Cost (\$ millions)	Number	Percent	Cost (\$ millions)
All	1,057,099	100.0	9,787	39,008,298	100.0	392,677
Beginning in ED	488,036	46.2	4,833	19,733,528	50.6	202,203
Beginning in ED and lasting no more than 2 nights	167,602	15.9	765	7,340,408	18.8	34,346
Beginning in ED, lasting no more than 2 nights, only observation-eligible conditions	106,077	100	459	4,544,836	11.7	20,229

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

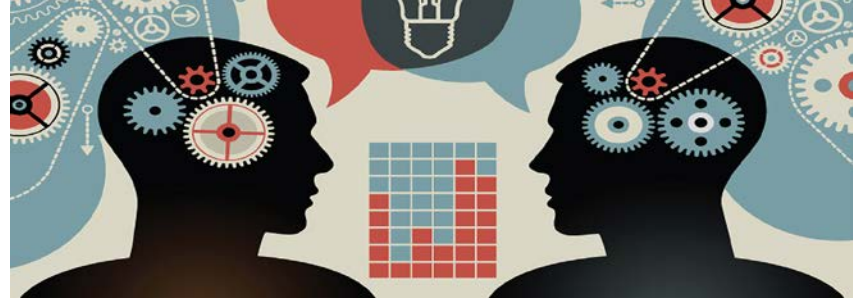
a) Making the case:

“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:
 - Borders – 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

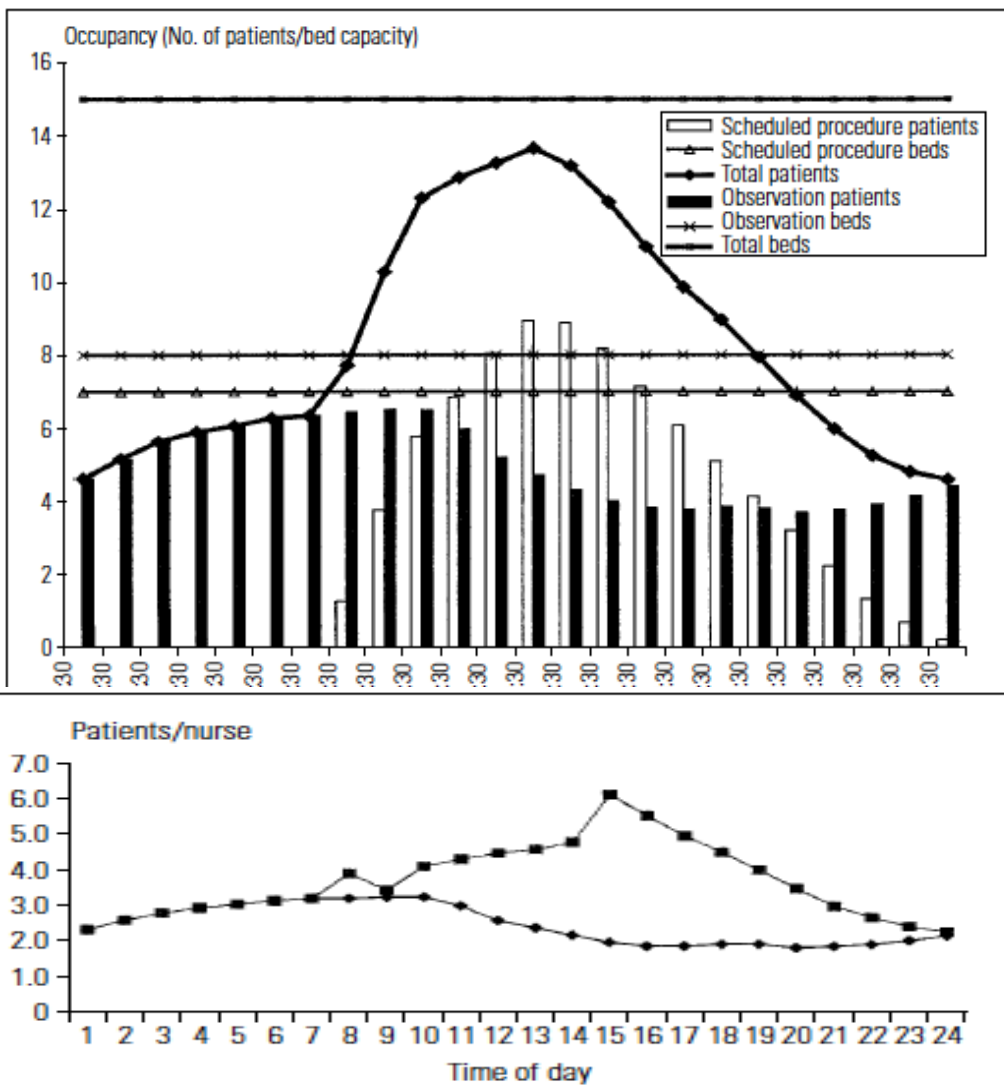
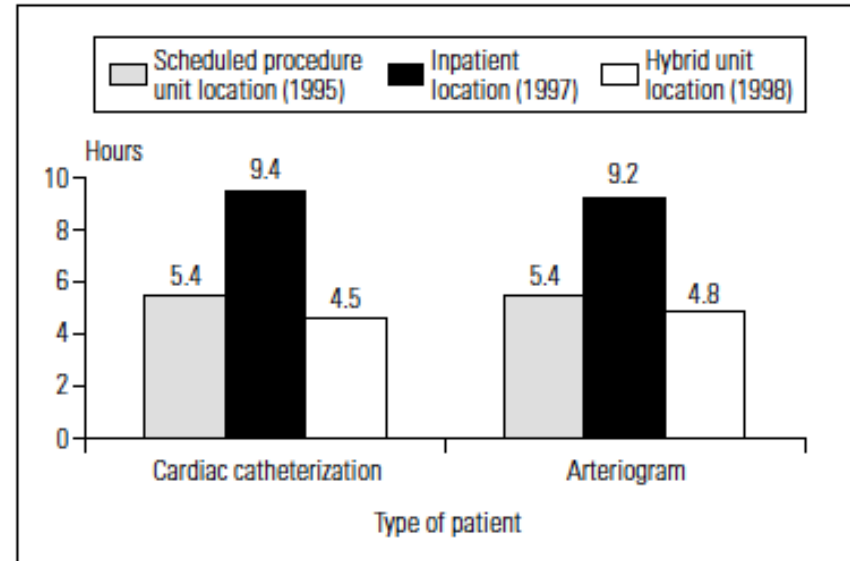


Figure 4.

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



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
 - ~ 1patient/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

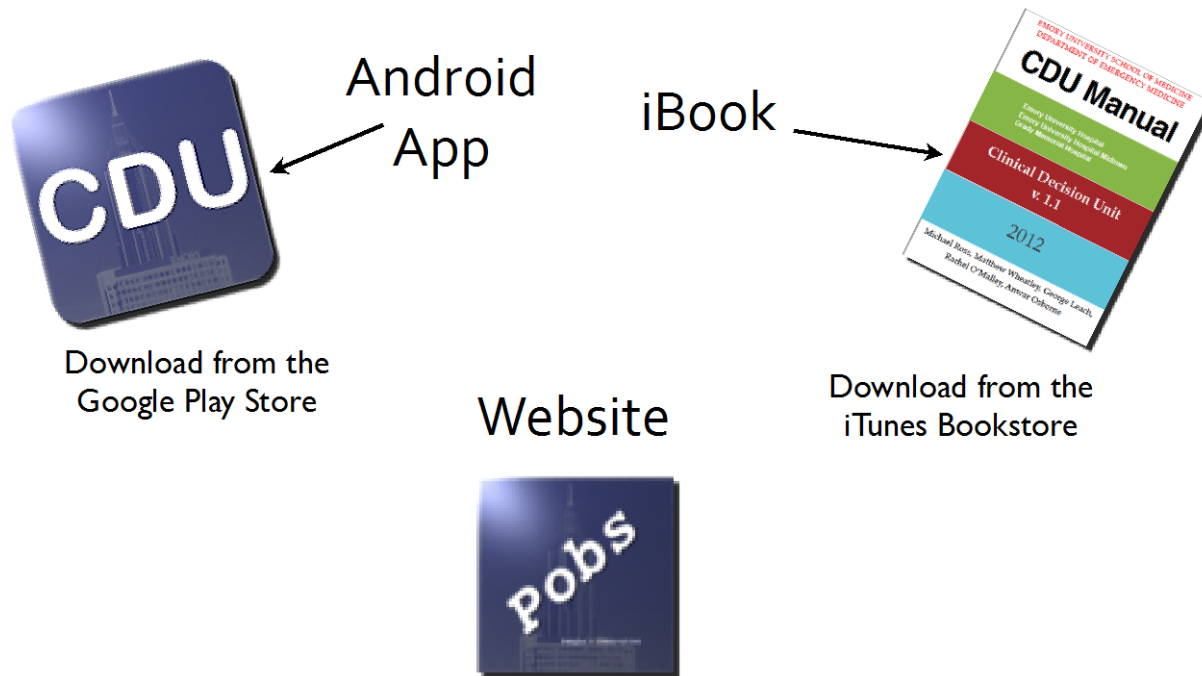
c) Protocols, guidelines, and order-sets



- 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



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*

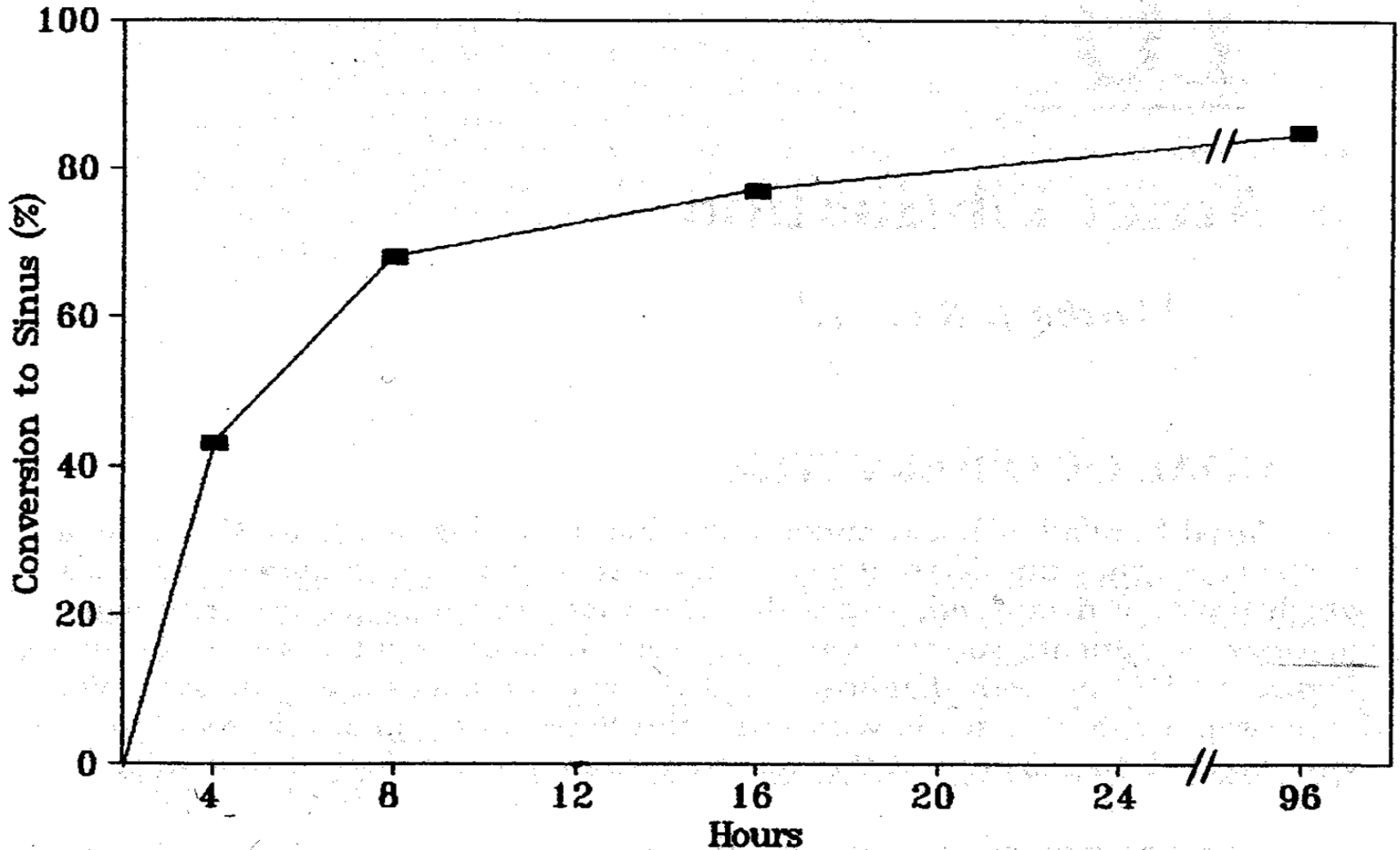
1. High probability (70-80%) of success within observation time frame. . .
2. Conditions requiring limited amount of service, consistent with what is available in unit.

Asthma, dehydration, uncontrolled diabetes, etc.

Short Term Therapy:

Rate of spontaneous conversion of acute onset atrial fibrillation

Am J Cardiol 1991;67:437-439.



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 . . .

- Core/Quality Me
- Cardiovascular-F
- Gastrointestinal E
- General Medicin
- Infection Exclusi
- Non-Traumatic M
- Neurologic Exclu
- Obstetric/Gyne/I
- Toxicology Exclu
- Trauma Excl

ED Hospital Bed Request Order EUH

Admission Type

Observation
 Inpatient
 ICU
 Hospice
 Planned Admission

Bed Type

Cardiac tele
 Floor
 ICU
 Medical tele
 OR

Stepdown - Medical
 Stepdown - NCCI
 Uppergate

CDU Protocol

Atrial fibrillation
 Chest Pain
 CHF
 COPD exacerbation
 Asthma
 Cellulitis
 Abd injury
 Allergic rxn
 Abd pain
 Back pain
 Chest injury
 DVT
 Dehydration/vomiting
 Electrolyte abnormality
 GI bleed
 Headache
 Head injury
 Hyperemesis gravidarium

Hypertensive urgency
 Hypoglycemia
 Hyperglycemia
 Overdose
 Pneumonia
 Pyelonephritis
 Renal colic
 Rib fractures
 Seizures
 Social admission
 Supraventricular tachycardia
 Syncope
 TIA
 Transfusion of blood/products
 Vaginal bleeding
 Vertigo
 Other:

Admitting Diagnosis

Admitting Physician

ICU Units

CCU
 CTICU
 MICU

Neuro ICU
 SICU

Decision to Admit (Date/Time)

see your process

Room Preference

>20 wks preg
 AMS
 CF patients
 Dialysis, Hemo
 Dialysis, Peritoneal
 Flolan/Remodulin infusion
 Isolation - Airborne
 Isolation - Contact
 Isolation - Droplet

Long term video monitoring
 None
 Obesity >350 lbs
 Organ Transplant:
 Rollins
 Suicidal - 1013/sitter
 Vasoactive Drip
 Vasoactive Drip Titrated
 Ventricular assist device

Airborne- (SARS, chicken pox, TB)
 Contact- (MRSA, C diff, Gastroenteritis, Infected Decubiti)
 Droplet- (Influenza, Pertussis, Meningitis)

Family History

Coronary Artery Disease
 Diabetes mellitus
 Hypertension
 CVA

PE/DVT
 None
 Other:

EUH Hospitalist Team

Team A
 Team B
 Team C
 Team Paullin

Team Seavey
 Team Stone
 Other:

Central or Arterial Line

Yes
 No

CDU Synopsis

Primary Care Physician

Other PCP Dickens

Specialty Physician 1

Specialty Physician 2

Does this patient have an admitting diagnosis of?

Pneumonia
 STEMI
 NSTEMI
 CVA
 Sepsis
 None of the above

- Hospital Bed Re...
- Core/Quality Me...
- Cardiovascular-F**
- Gastrointestinal E
- General Medicin
- Infection Exclusi
- Non-Traumatic In
- Neurologic Excl
- Obstetric/Gyne/L
- Toxicology Excl
- Trauma Excl

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<85 or >180, RR>32, Pox<92 on O2 by NC)
- Acute co-morbidities - sepsis, pneumonia, new murmur, confusion
- Abnormal labs - Severe anemia (Hb<8), renal failure (BUN>40 or Cr>3), Na<135
- Patient requiring vasoactive drips, invasive or noninvasive ventilation (bipap)
- 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
- Suspicion of ACS, new onset CHF, pneumonia

Atrial Fibrillation (Acute Onset)

- HR not controlled under 110 with ED meds
- IV vasoactive drips required (ie diltiazem)
- Hemodynamically unstable - i.e. BP
- Ongoing ischemic chest pain after rate control
- Acute comorbidities - Evidence of Acute MI, CHF, PE, Sepsis, CVA / embolic event,
- Recent comorbidities - 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, rales 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 NOT available while in the CDU
- Chest pain is clearly not cardiac ischemia
- Recent normal cardiac catheterization (no coronary stenosis)
- Private attending chooses hospital admission

COPD Exacerbation

- Acute co-morbidities - Pneumonia, CHF, cardiac ischemia
- Unstable VS or clinical condition
- Acute confusion / lethargy, 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>28 after initial treatment
- Estimated likelihood of discharge from observation unit is less than 70%

Orders

Add Document Medication by Hx Reconciliation Check Interactions External Rx History Rx Plans (0): No Benefit Found

Status Meds History Adm. Meds Rec Disch. Meds Rec

Medication List

08/05/2012 13:44

Add to Phase Start: Now Duration: None

	Component	Status	Dose A...	Details
CDU Chest Pain (Initiated Pending)				
Admit Transfer Discharge				
	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 NOT available while in the CDU			
	Chest pain is clearly not cardiac ischemia			
	Recent normal cardiac catheterization (no coronary stenosis)			
	Private attending chooses hospital admission			
<input checked="" type="checkbox"/>	CDU Admit - ED		Observation, Chest Pain	
<input checked="" type="checkbox"/>	Code Status		Full Code	
<input checked="" type="checkbox"/>	Hypoglycemia Protocol			
Vital Signs				
<input checked="" type="checkbox"/>	Vital Signs (Vital Signs with Pulse Oximetry)		q4hr, 24 hr(s), Contact MD if temp > 38.1, HR > 120, RR > 24, SBP < 85, Pulse O ₂ < 93%. Perform Puls...	
<input type="checkbox"/>	Consult Physician - Notification (ED Consult)			
Nutrition				
<input checked="" type="checkbox"/>	NPO Diet		NPO except medications for 6 hours prior to Cardiac Diagnostic	
<input checked="" type="checkbox"/>	Fat Controlled Low Chol Diet (Low Chol Fat Controlled)		2000 mg/2 gm Sodium	
<input checked="" type="checkbox"/>	Communication Order		No Caffeine prior to Cardiac Diagnostics	
	For patients with hypertension or heart failure:			
<input type="checkbox"/>	Sodium Restricted Diet 2000 mg			
	For Diabetic Patients			
<input type="checkbox"/>	Calorie Controlled Diet 1800 cal			
Patient Care				
<input checked="" type="checkbox"/>	ED Cardiac Monitoring		12 lead monitoring, for Chest Pain, convert to 5 lead after negative serial cardiac markers	
<input checked="" type="checkbox"/>	Communication Order		May remove cardiac monitor during transport if serial cardiac markers negative x 2	
<input checked="" type="checkbox"/>	Patient Education		Provide patient educational materials "Angina Pectoris"	
<input type="checkbox"/>	Blood Glucose POCT		AC+HS	
Continuous Infusions				
<input type="checkbox"/>	Sodium Chloride 0.9% (NS)		100 mL/hr, 1,000 mL, IV	
<input checked="" type="checkbox"/>	Peripheral IV		Maintain	
Medications				

Details

Orders For Signature

Order observation:
"ADMIT TO EC OBSERVATION"

Component	Order Details
VITAL SIGNS	
<input checked="" type="checkbox"/> Vital Signs	T;N, q4hr, 24, hr(s), Contact MD if temp > 38.1, HR > 120, RR > 24, SBP < 85
<input checked="" type="checkbox"/> Pulse Oximetry per Nursing	T;N, Once, 24, hr(s), and continuous
PATIENT CARE	
<input checked="" type="checkbox"/> Communication Order	T;N, Admit to CDU under Observation status
<input checked="" type="checkbox"/> Communication Order	T;N, Print dictation ASAP
<input checked="" type="checkbox"/> Communication Order	T;N, Review home medications with patient and document
<input type="checkbox"/> Communication Order	T;N, Diabetic monitoring and sliding scale insulin as per protocol

Component	Status	Details
Diagnostic Tests		
<input type="checkbox"/> <input checked="" type="checkbox"/> ECHO CARD		Stat, Reason: Chest Pain Moderate risk of ACS, no active wheezing, unable to exercise. BMI >35, no other stress imaging available (weekends)
<input type="checkbox"/> <input checked="" type="checkbox"/> NC Myocard Perf Rest +Stress SPECT Multi		PET Dept - M-F 8am-3pm
<input type="checkbox"/> <input checked="" type="checkbox"/> PET Cardiovascular Stress Test		Stat, Reason: Chest Pain Moderate risk of ACS, unable to exercise, (+) history of asthma/wheezing
<input type="checkbox"/> <input checked="" type="checkbox"/> ECHO Stress w Dobutamine CARD		Stat, Reason: Chest Pain, HISTORY OF ASTHMA/COPD ECHO Dept - M-F 9am-3pm - To schedule outpatient echo on weekend call Transfer Service 8-4930
<input type="checkbox"/> <input checked="" type="checkbox"/> NC Myocard Perf Rest +Stress SPECT Multi (NC Cardiovasc...		Low risk, able to exercise, controlled hypertension, no aortic stenosis, no active heart failure
<input type="checkbox"/> <input checked="" type="checkbox"/> ECHO Stress w Exercise CARD		Stat, Reason: Chest Pain
<input type="checkbox"/> <input checked="" type="checkbox"/> CT Cardiac Dept - M-F 8am-3pm ****PHONE CALL Required for CTA**** Call 8-4591 to arrange for CTA Procedures.		For Triple R/D, MUST be noted in the order and clinical exclusion criteria should be followed
<input type="checkbox"/> <input checked="" type="checkbox"/> CT Cardiac CTA Coron w/Calc Scor		
<input type="checkbox"/> <input checked="" type="checkbox"/> CT Cardiac CTA Coron w/o Calc Scor		
Return to CDU Chest Pain		

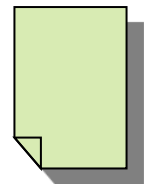
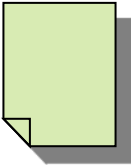
EDOU protocols:

- 1. Derived from guideline**
- 2. Simplify work**
- 3. Avoid delays & errors of omission**

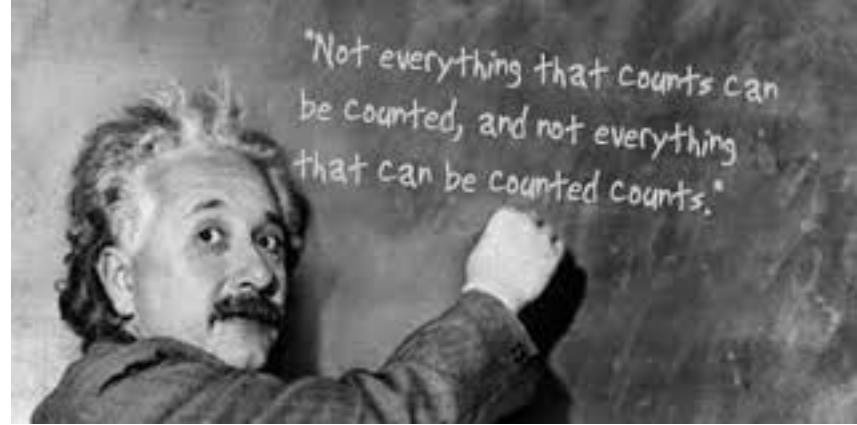
Observation documentation: & transfer of care



- 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

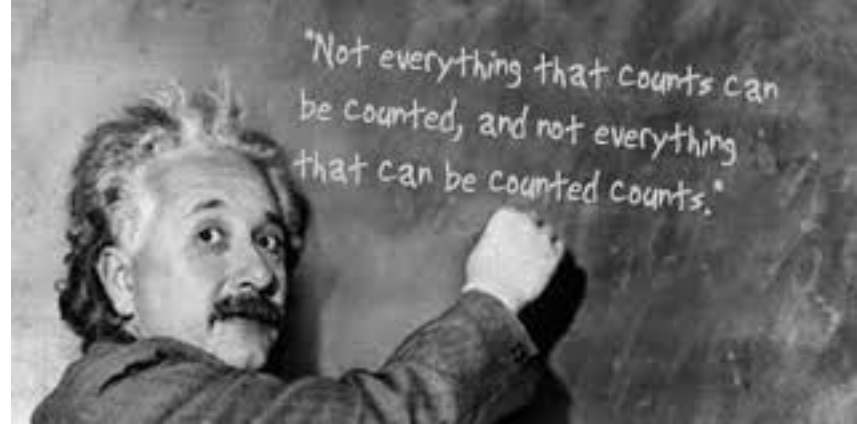


- Utilization – data source?
 - Electronic
 - Paper?
- Critical metrics:
 - Patient identifier
 - Gender and age (DOB)
 - Condition – reason for observation
 - Times:
 - ED arrival
 - OU arrival
 - OU admit order – boarding report?
 - OU departure
 - Departure order – D2D report?
 - Disposition
 - Admit / 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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Sample report

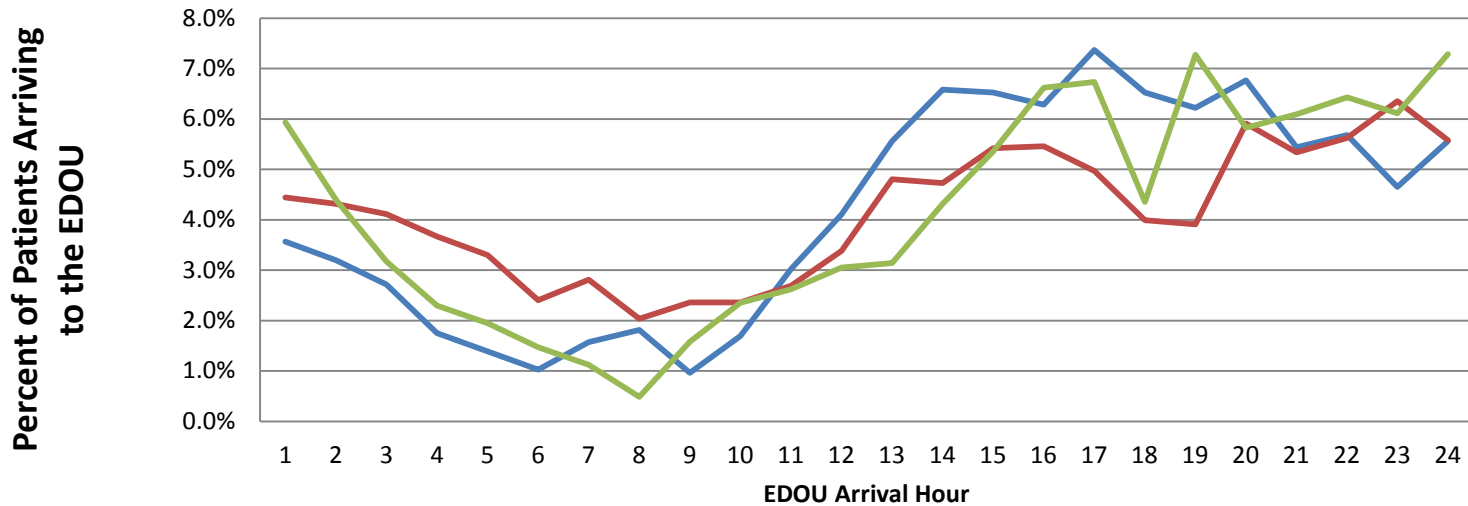
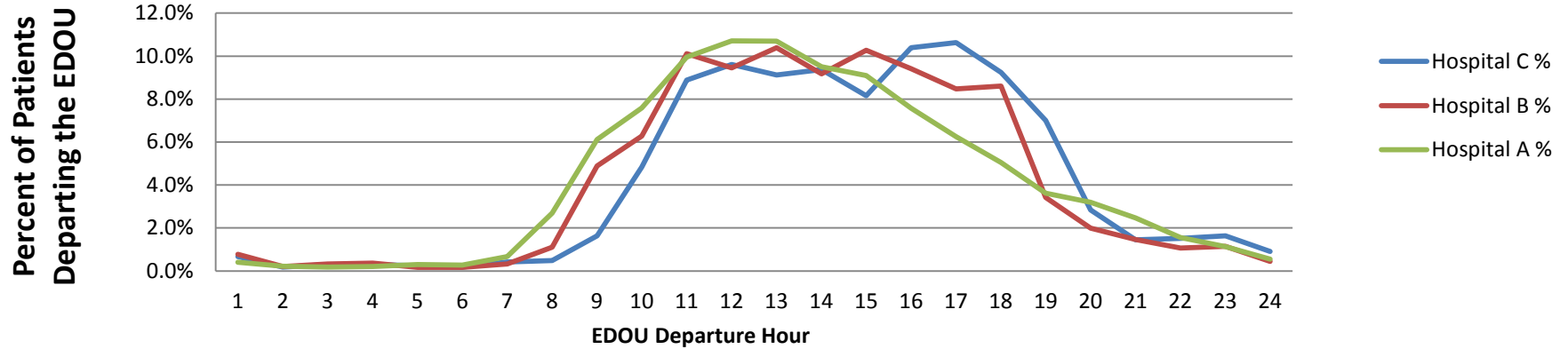
EUH FY14 Q1 + Q2 (September 2013 - February 2014)					
CDU Protocol Diagnosis	Total Count	% Discharge	Average ED LOS (hours)	Average CDU LOS (hours)	Average Time from CDU Request to CDU Arrival (minutes)
Grand Total	1328	82%	5.8	15.1	70.7
Chest Pain	462	85%	5.2	16.7	69
Dehydration/vomiting	115	83%	6.4	12.8	73
Abd pain	111	77%	7.1	19.0	75
Other	109	75%	6.5	13.2	78
TIA	94	83%	5.5	12.5	77
Syncope	66	86%	5.4	15.2	89
Cellulitis	52	85%	5.0	16.4	68
CHF	34	82%	5.8	15.6	95
Back pain	28	89%	6.1	10.9	72
Hyperglycemia	27	85%	6.2	14.2	84
Pyelonephritis	27	81%	6.8	14.7	81
Electrolyte abnormality	26	77%	5.9	15.4	30
Transfusion of blood/products	23	78%	5.5	12.6	89
Asthma	19	68%	5.6	12.4	63
Pneumonia	19	74%	5.5	14.7	80
Headache	17	88%	8.1	15.1	82
Vertigo	16	88%	5.8	13.0	74
GI bleed	14	71%	5.2	15.6	55
Renal colic	12	92%	5.1	12.2	67
COPD exacerbation	10	60%	4.6	15.5	68

Critical Metrics

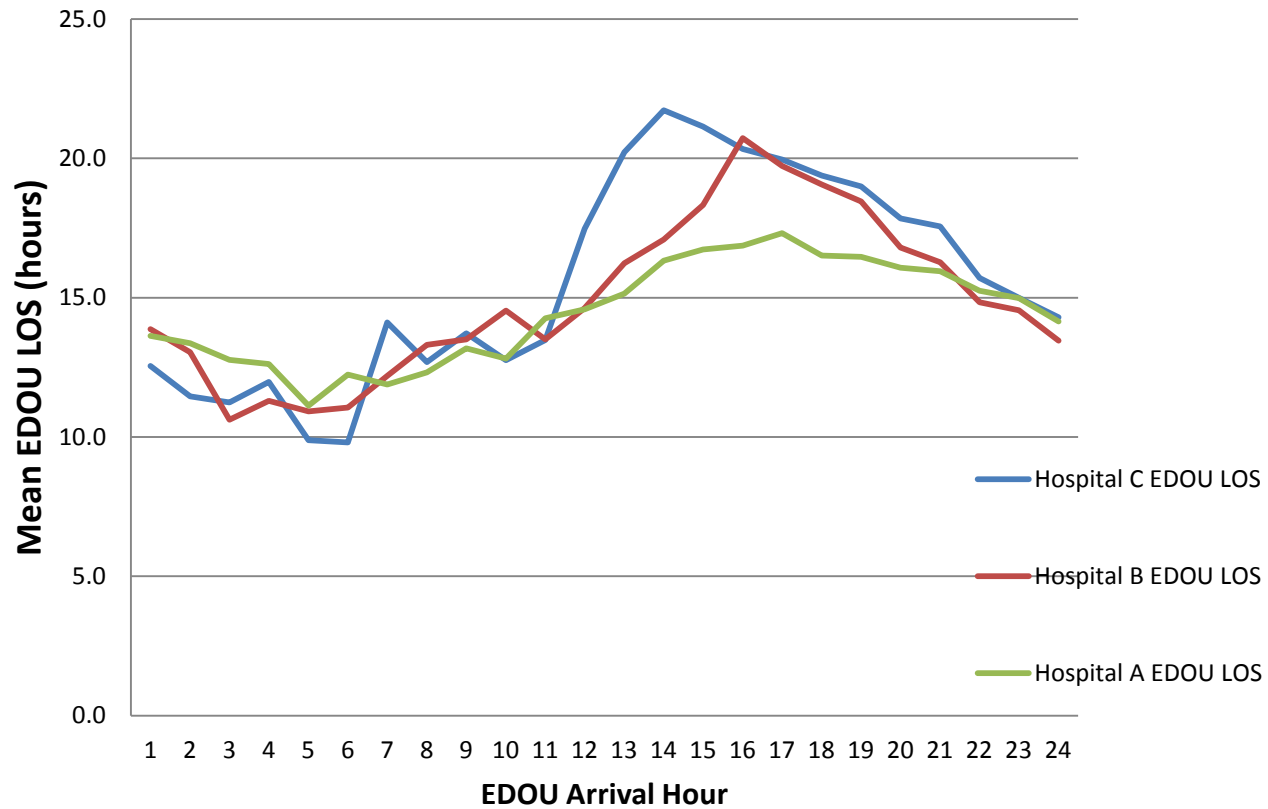
Advanced Utilization and Quality

- 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

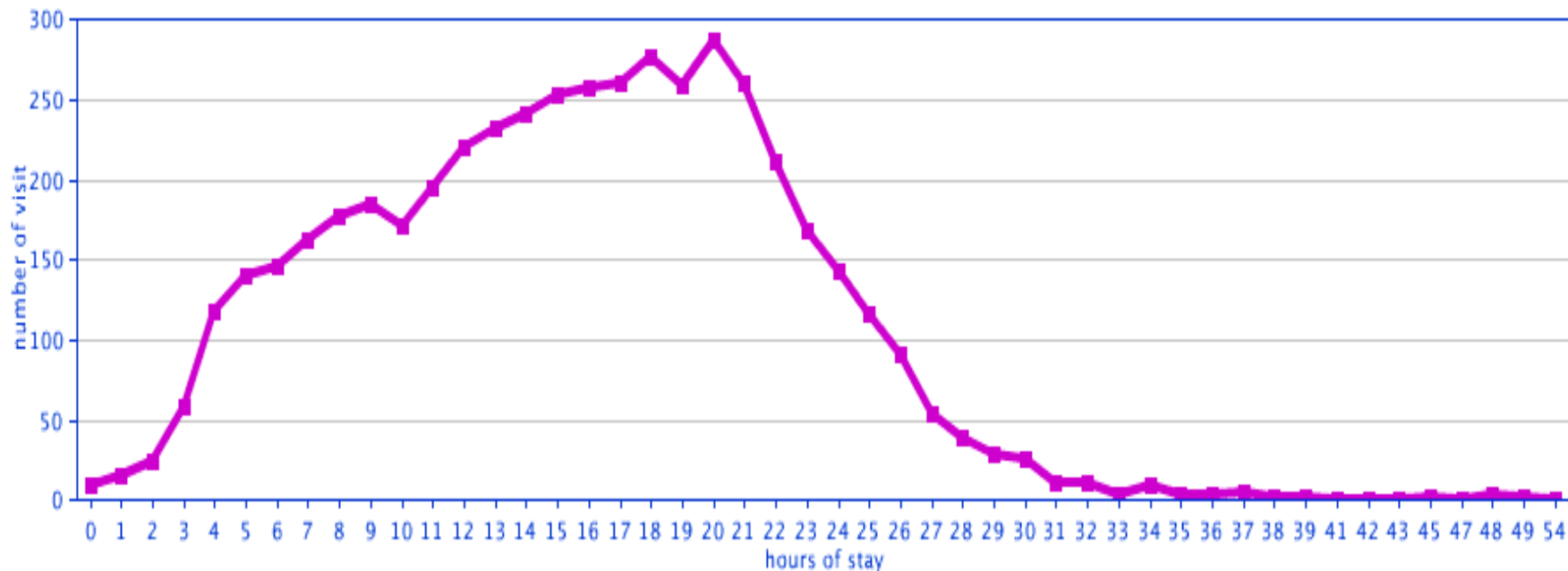
EDOU Arrival / Departure patterns



EDOU LOS patterns



CDU Length of Stay (CLH,EUH, from February 2009 to January 2010)



hours	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	41	42	43	45	47	48	49	54
count	9	15	24	59	118	141	146	163	178	185	172	196	220	232	241	253	257	260	277	259	288	260	211	169	143	117	91	54	40	29	26	11	11	3	10	3	4	5	2	2	1	1	1	2	1	3	2	1

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

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

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

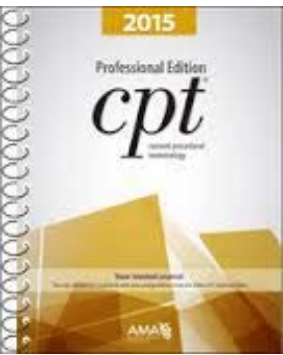


4. Do you get paid???
or - g). Financials . . .

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

Physician staffing models

- CPT: A “physician” can not bill 2 separate E/M codes on the same calendar day
- A “physician” is defined by:
 - Group (tax ID #)
 - Specialty (designated recognized codes)



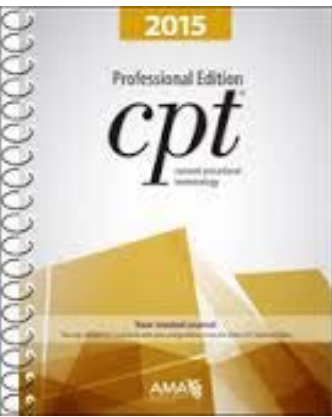
Physician staffing models

- 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.

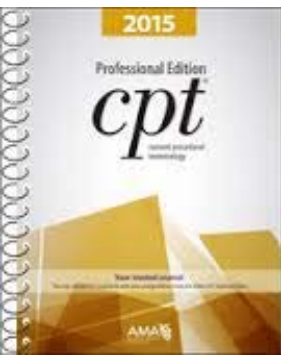


Billing Observation professional services

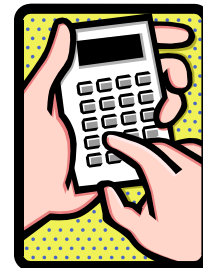
7 OBSERVATION CPT CODES:

- **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 .



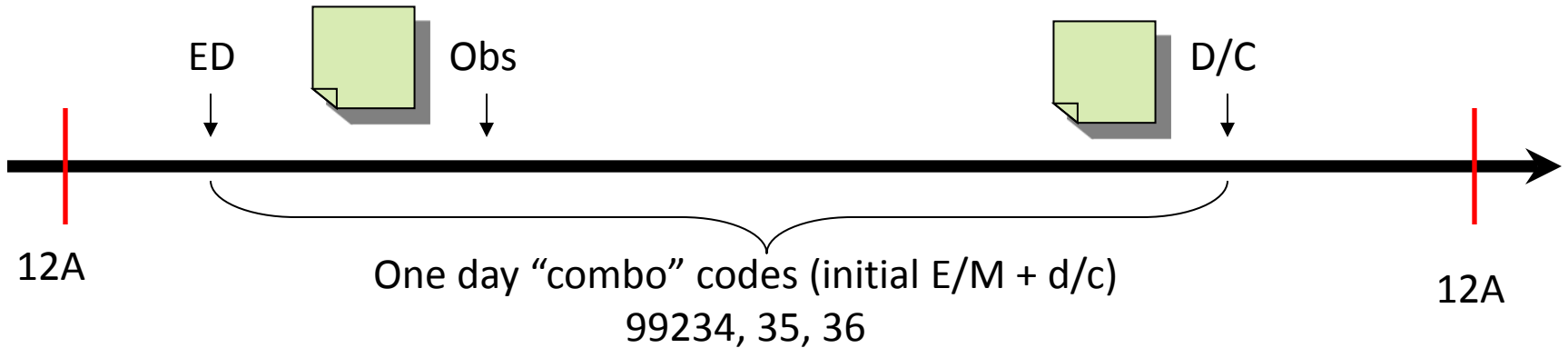
Emergency & Observation CPT E&M Codes:



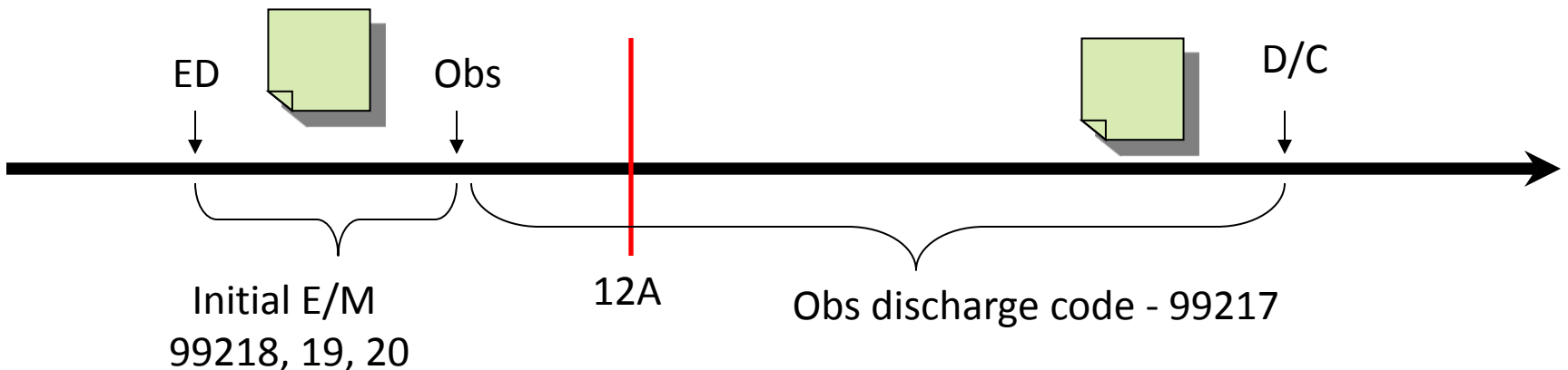
Service	CPT codes	Required Documentation **			2014 Total RVUs
		<u>History</u>	<u>Physical</u>	<u>M.D.M.</u>	
Emergency level 1	99281	PF	PF	S	0.61
Emergency level 2	99282	EPF	EPF	L	1.19
Emergency level 3	99283	EPF	EPF	M	1.73
Emergency level 4	99284	D	D	M	3.30
Emergency level 5	99285	C	C	H	4.85
Observation Discharge	99217	+	+	+	2.03
Observation level 1	99218	D or C	D or C	S or L	2.78
Observation level 2	99219	C	C	M	3.80
Observation level 3	99220	C	C	H	5.20
Same Day Obs / dschg 1	99234	D or C	D or C	S or L	3.79
Same Day Obs / dschg 2	99235	C	C	M	4.74
Same Day Obs / dschg 3	99236	C	C	H	6.12

Two scenarios – 1 vs 2 days

ONE DAY SCENARIO:



TWO DAY SCENARIO:



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:

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