

Observation Medicine 2014
Science & Solutions

OBSERVATION UNIT DASHBOARDS: DEFINING AND FOLLOWING YOUR METRICS FOR SUCCESS

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AGENDA

- “ Planning for a new observation unit
 - “ Dashboard background
 - “ Dashboard use in observation units
 - “ How to develop a dashboard
-

CONGRATULATIONS, YOU ARE STARTING AN OBS UNIT!

- “ How much time do I have?
- “ Where will it be?
- “ How many beds?
- “ What is the staffing model?
- “ Open or closed unit?
- “ Who are the key stakeholders?
- “ Who is the target patient population?
- “ Will we need IS resources?
- “ Will we need DPH approval?

KNOW YOUR FINANCIAL PLAN

- “ Revenue and cost projections
- “ Financial implications of the staffing model
 - “ Are ED E&M codes for observation patients left on the table?
- “ Who is paying for what?
 - “ Most NP/PA staff in an observation unit are paid by the hospital, not department
- “ What is my breakeven volume?
 - “ If the attending spends about 4 hours/day with the observation unit, how many patients/day do we need to turn over?

SETTING YOUR TIMELINE

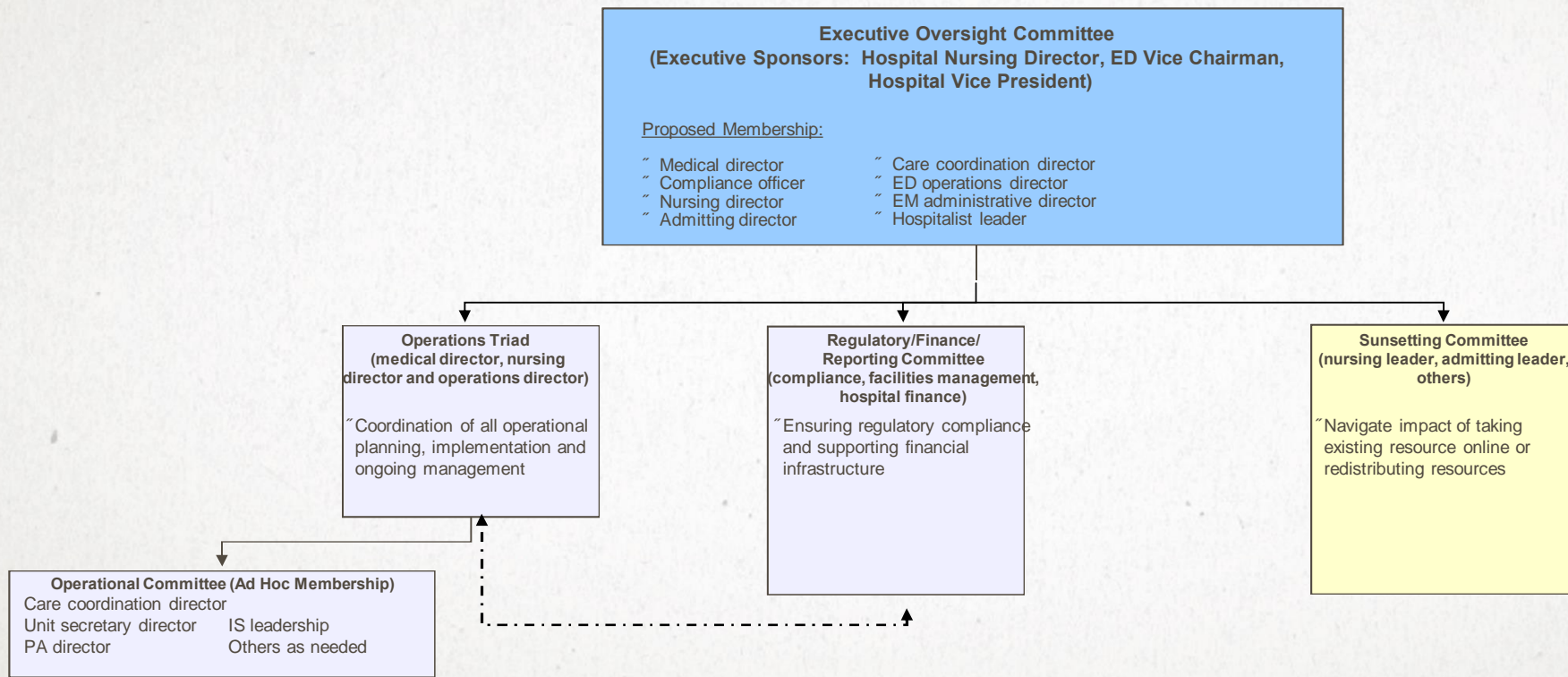
- “ Ideally, you need at least 9 months to start an observation unit
 - “ Hiring new PA/NP or MD staff takes at least 6 months
 - “ DPH approval can take anywhere between 3 and 6 months
 - “ New protocol development takes at least 3 months
 - “ IS development time is highly variable
 - “ You likely will have little influence around the length of your timeline
 - “ If the space is already vacant, you may be told to start “yesterday”
-

THE TRIAD

- “ **Medical Director**
 - “ **Nurse Director**
 - “ **Operations Director**

 - “ Weekly workgroup meetings/calls
 - “ Executive sponsorship with monthly meetings
 - “ Hospital VP
 - “ Department Vice Chair or Chair
 - “ Chief Nursing Officer or Nurse Leader
 - “ Chief Compliance Officer
-

PROPOSED COMMITTEE STRUCTURE



LEVERAGING LIAISONS

Service	ED Liaison	Consult Liaison	Consulting Service Updated?	Update e-mail for May 5th opening?	12D consultant same as ED consultant?	New Protocols?	If NO, who will be contact for 12D consults
Medicine	C. Baugh	A. Schaffer	Yes	Yes	Yes (Medicine Senior)		
Cardiology (General)	Baugh/Kosowsky	B. Scirica	Yes	Yes	Yes (Inpatient Consult Fellow)		
Cardiology (EP)	No ED Liaison	No Contact Assigned	Yes	Not needed	Yes		
Cardiology (Cath Lab)	Kosowsky	B. Shah	Yes	Yes	Yes (14AMI and Code STEMI)		
Cardiology (Heart Failure)	E. Platz	A. Desai	Yes	Yes	Yes	Revised CHF	
Oncology	K. O'Laughlin	B. Glotzbecker/E. Alyes	Yes	Yes	Yes	Pneumonia, PE	
Neurology	R. Patel	J. Klein	Yes	Yes	Yes		
Gastroenterology	M. Wilson	J. Saltzman	Yes	Yes	Yes		
Gynecology	K. Wittels	D. Carusi	Yes	Yes	Yes		
Acute Pain Management	C. Baugh	E. Ross	Yes	Yes	Yes		
Psychiatry	N. Huanhuri	S. Shah	Yes	Yes	Yes		
Infectious Disease	S. Takhar	D. Kuritzkes/P. Sax	Yes	Yes	Yes		
Endocrine	S. Rouhani	R. Arky	Yes	Yes	Yes		
Renal	J. Rempell	David Mount	Yes	Yes	Yes		
Pulmonary	No ED Liaison	Ann Fuhriotte	N/A	Not needed	Yes		
Hematology	R. Marsh	Nancy Berliner	Yes	Yes	Yes		
Ophthalmology	Stephanie Kayden	No Contact Assigned	N/A	Not needed	Yes		
Dermatology	No ED Liaison	No Contact Assigned	N/A	Not needed	Yes		
Burn/Trauma Surgery	R. Seethala	J. Gates	Yes	Yes	No		Surgical senior (p16311) to initiate consult in ED, inpatient trauma/emergency s
General Surgery	H. Kimberly	D. Smink	Yes	Yes	No		Surgical senior (p16311) to initiate consult in ED, inpatient Colorectal consultant
Surgical Oncology	H. Kimberly	D. Smink	Yes	Yes	No		Surgical senior (p16311) to initiate consult in ED, inpatient Surgical Oncology co
Vascular Surgery	A. Rajb	M. Beklin	Yes	Yes	No		Surgical senior (p16311) to initiate consult in ED, Vascular fellow (Mannick p119
Bariatric Surgery	J. Welch	S. Shihora	Yes	Yes	No		Surgical senior (p16311) and Bariatrics fellow see patient in ED; surgical senior n
Neurosurgery	I. Aisiku	E. Antonio Chiocca	Yes	Yes	Yes		
Plastic Surgery	Z. Obermeyer	E. Eriksson	Yes	Yes	Yes		
Orthopedic Surgery	D. Megeurdielen	M. Harris	Yes	Yes	Yes		
Cardiac Surgery	G. Greenough	J. Byrne	Yes	Yes	Yes		
Thoracic Surgery	G. Greenough	P. Camp	Yes	Yes	Yes		
Urology	P. Farnar	A. Kibel	Yes	Yes	Yes		
ENT	P. Hou	Jo Shapiro	Yes	Yes			
Ancillary							
IS			Yes	Yes			
Facilities			Yes	Yes			
Biomed			Yes	Yes			
Pharmacy	E. Gorainick	Bill Churchill	Yes	Yes	Yes		
Radiology	M. Stone	A. Sodickson	Yes	Yes	Yes		
Communications			Yes	Yes	Yes		
Endoscopy	C. Baugh	J. Saltzman	Yes	Yes	Yes		
Security/Parking	ED operations leadership	Bob Chiacarello	Yes	Yes	No		One guard for the whole tower; code gray button installed on 12D at business s
Interpreter services	ED operations leadership	Yilu Ma	Yes	Yes	No		Tower interpreter (p11800)
Transport	ED operations leadership	Luis Soto	Yes	Yes	Yes		
Environmental services	ED operations leadership	Luis Soto	Yes	Yes	No		Dedicated staff during the day; cross coverage overnight
Physical therapy	ED operations leadership	Linda Arslanian	Yes	Yes	Yes		
Respiratory therapy	ED operations leadership	Paul Nuccio	Yes	Yes	Yes		
Social work	ED operations leadership	Elaine Devine	Yes	Yes	Yes		
Care Facilitation	ED operations leadership	Chris Dutkiewicz	Yes	Yes	No		Dedicated 12D Care Facilitator 7a-11p Mon-Fri, 7a-4p Sat-Sun; ED staff cross coi
Volunteer Services			Yes	Yes	Yes		
Pathology/Lab			Yes	Yes	Yes		
Nutrition			Yes	Yes	Yes		

COMMUNICATION

- “ Opening a new observation unit will impact many relationships – it is much easier to work out the implications in advance
- “ Know your audience; seek out leaders to explain the rationale for the observation unit and how it can help their service
- “ Set expectations and increase awareness; the best way to solve a problem is to avoid one
- “ Tell them several times; start with a mass e-mail at t-6 months, follow up with a town hall meeting with Q&A, then individual meetings by service at t-3 months, then another mass e-mail just prior to the open

WORK-TO-DATE SUMMARY

Area of Work	Sub-category	Accomplishments to-date	Next Steps
Oversight	Executive		<ul style="list-style-type: none"> . Begin drafting communication plan
Staffing	PA	<ul style="list-style-type: none"> . Regular meetings with PA leadership ~ High-level hiring strategy with timeline ~ Draft Job Descriptions ~ Draft schedule templates 	<ul style="list-style-type: none"> . Vet process/hiring logistics with HR ~ Determine if leadership role is needed
	RN	<ul style="list-style-type: none"> . High-level hiring strategy with timeline 	<ul style="list-style-type: none"> . Obtain position control numbers ~ Determine if unit will be a unique cost center
	Care Coordination		Meet to discuss hiring strategy
IS	Operational Infrastructure	<ul style="list-style-type: none"> . Operational needs assessment . Proposal 	<ul style="list-style-type: none"> . Obtain approval to move forward with build out . Work with IS to scope out project
	Financial Infrastructure		<ul style="list-style-type: none"> . Work with Finance to reconcile operational needs with financial processes
Facilities	Physical Plant	<ul style="list-style-type: none"> . Walk-through of 12D ~ Determined no renovations necessary 	<ul style="list-style-type: none"> . Conduct walk-through with Engineering to address minor maintenance requests
	Equipment	<ul style="list-style-type: none"> . Walk-through of 12D ~ Determined existing equipment meets needs 	<ul style="list-style-type: none"> . Verify computer workstation supply/WOWs will meet demand . Verify specialty cart needs

WORK-TO-DATE

Area of Work	Sub-category	Accomplishments to-date	Next Steps
Regulatory	Operations	<ul style="list-style-type: none"> . Determination that DPH approval is necessary . Next steps identified 	<ul style="list-style-type: none"> . Complete DPH waivers, scope of practice, staffing plans . Submit request and acquire DPH approval
	Billing		<ul style="list-style-type: none"> . Begin discussions with Jim Bryant regarding billing/documentation . Convene Regulatory/Finance/Reporting Committee
Operations	High-level	<ul style="list-style-type: none"> . Consulting and ancillary services involved in observation operations notified . Scheduled Info Session for stakeholders 	<ul style="list-style-type: none"> . Begin discussions regarding operational metrics . Schedule meetings with Consulting and Ancillary Services <ul style="list-style-type: none"> ~ Begin documenting current and future operational workflows ~ Begin scoping appropriate patient population

BACK TO DASHBOARDS

Create your dashboard during the planning process, not after you have opened

” Ensure that the data is available and reports are created – this takes time!

WHAT IS A “DASHBOARD”

“A graphical user interface that organizes and presents information in a format that is easy to read and interpret”

Basic concept

- “ Visual representation of key performance indicators (metrics)
 - “ Pulls data from multiple sources
 - “ Manipulates data to make it more accessible
-

THE IDEAL DASHBOARD

Ideal properties

- “ Contains important data
- “ Thoughtfully laid-out and easy to navigate
- “ Easily updated
 - “ Real-time interface with IS system

WHY DO WE NEED A DASHBOARD

“ **Visibility**

“ Know exactly what’s going on; provides valuable insight

“ **Time savings**

“ Pull key data from multiple systems into one place

“ **Track ongoing improvements**

“ Peter Drucker: “if you can’t measure it, you can’t improve it.”

“ Visualize goals and judge performance against plan

KEY CHALLENGES

“ **Choosing the metrics to track**

- “ What is your most important outcome?
- “ Which processes most influence that outcome?

“ **Building the dashboard**

- “ How to link data systems (or develop a manual process)
 - “ Create a user-friendly interface (streamline the design)
-

ORIGINS OF THE “DASHBOARD”



CREATING REPORTS – START EARLY!

- “ Is the data already captured somewhere?
 - “ If so, do you or your administrator have access to it?
- “ If the data request is new, is it technically feasible?
 - “ If so, who needs to approve, how long will it take and how much effort is needed?
 - “ Will it be delivered in a timely and useful format?
 - “ Are there others in the organization interested in the data?
 - “ Leverage your ask!

DATA CHALLENGES

- “ Inaccurate data
 - “ Missing data
 - “ Data definitions
 - “ Late data
-

DEFINING YOUR METRICS

- “ Accurate
- “ Up to date
- “ Important
- “ Actionable

- “ Volume
- “ LOS
- “ Quality
- “ Inpatient conversion rate
- “ Other

INVOLVE ALL STAKEHOLDERS

“ Administrators

- “ OU leaders
- “ Department leaders
 - “ Intra-departmental
 - “ Inter-departmental
- “ Hospital leaders

“ Clinicians

- “ Physicians
 - “ Intra-departmental
 - “ Inter-departmental
- “ PAs/NPs
- “ Residents
- “ Nurses

Know your audience!

- “ Structured interviews and draft feedback
- “ You may need to maintain multiple versions

Tailor the message

- “ What they need to know
- “ What they want to know
- “ Show the data the “right” way to tell the story

VOLUME

- “ Daily/Monthly/Annual visits
 - “ Percentage of all ED visits overall
 - “ Percentage of ED visits by attending
 - “ Volume by protocol/complaint/diagnosis
 - “ Chest pain most common (~20%)
 - “ Volume of resource use (i.e., consultants, diagnostics)
-

LENGTH OF STAY (LOS)

- “ National benchmark mean ~15h
 - “ Median often more useful than mean
 - “ Track outliers (LOS<6h, LOS>24h, LOS>36h)
 - “ LOS by attending
 - “ LOS by protocol/complaint/diagnosis
-

INPATIENT CONVERSION RATE

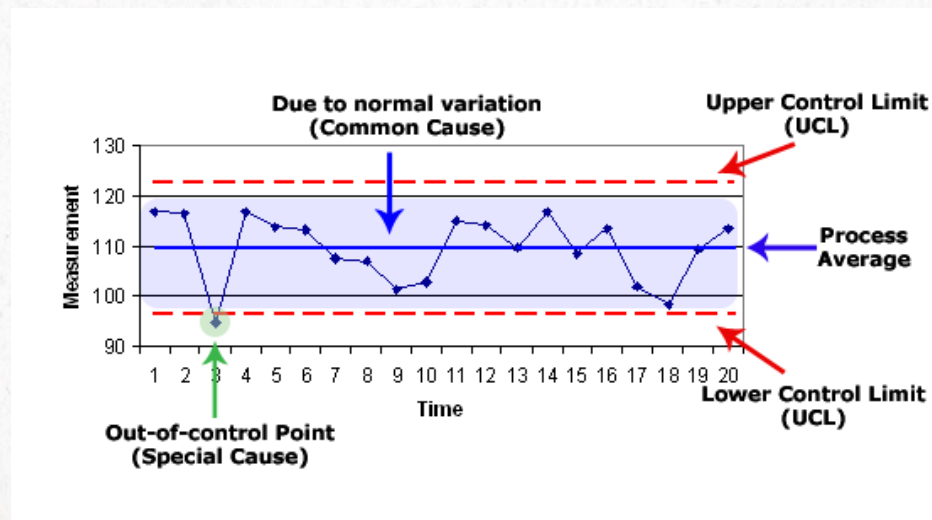
- “ National benchmark ~15-20%
 - “ Rate may vary by protocol
 - “ CHF typically 30-50%
 - “ Rate<15%: patient mix not acute/complicated enough
 - “ Rate>20%: patient mix too acute/complicated
 - “ Track rate by attending
 - “ Involve case management early in ED course to help direct patients to appropriate setting
 - “ Financial/Operational impact on hospital (if possible to measure)
-

QUALITY

- “ Repeat ED visits
 - “ 3 days
 - “ 7 days
 - “ 14 days
- “ Patient complaints & comments
 - “ Patient satisfaction survey (e.g., Press Ganey)
 - “ Mean score percentile versus peers most typical single metric
- “ Staff concerns/complaints
 - “ Encourage open communication
- “ Critical events
 - “ Codes
 - “ Upgrade directly to ICU
 - “ M&M cases
 - “ Safety reports

KNOWING WHEN TO ACT

“ Consider the use of a process control chart



CAUTION: INFORMATION OVERLOAD



DASHBOARD EXAMPLE: BWH OBSERVATION

	2013	FY2014					Variance
		May-14	Jun-14	Jul-14	Aug-14	FY14 YTD	YTD FY13 Vs. FY14
VOLUME							
ED Obs Visits	1,688	660	661	733	677	2,731	62%
EDOU	1,688	445	410	454	422	1,731	3%
Tower Obs	N/A	215	251	279	255	1,000	N/A
Budgeted Visits	2,215	697	679	713	712	2,801	
EDOU	2,215	449	439	465	464	1,817	
Tower Obs	N/A	248	240	248	248	984	N/A
% Variance from Budget	-24%	-5%	-3%	3%	-5%	-2%	
EDOU	-24%	-1%	-7%	-2%	-9%	-5%	
Tower Obs	N/A	-13%	5%	13%	3%	2%	
LENGTH OF STAY							
% Short Stay OBS Patients (<6 Hours)	26%	18%	21%	18%	22%	14%	-4%
% Long Stay OBS Patients (>36 hours)	1%	3%	4%	3%	4%	3%	N/A
Average Overall LOS	12:01	14:00	13:53	13:59	13:48	13:55	16%
EDOU	13:15	12:12	12:12	12:33	12:08	12:16	-7%
Tower Obs	N/A	19:17	18:36	17:57	18:45	18:39	N/A
Stay in Bed	7:49	7:29	7:13	8:01	7:15	7:29	-1%
Median Overall LOS	10:48	12:16	13:00	12:15	12:11	12:25	15%
EDOU	12:31	10:22	10:31	10:22	10:11	10:21	-17%
Tower Obs	N/A	17:34	17:32	17:32	17:46	17:36	N/A
Stay in Bed	6:42	3:47	5:49	5:49	5:06	7:46	16%
Lower Quartile (1/4 into dataset)	4:11	4:37	4:33	4:34	4:25	4:35	10%
Upper Quartile (1/4 top of dataset)	21:56	26:31	25:52	26:47	26:14	26:22	20%
HOSPITAL ADMISSIONS							
Total PIO from ED	1,058	175	183	181	217	756	-29%
Total Placed in IP Bed from Obs	349	95	130	125	124	474	36%
Total OBS Inpatient Admissions	349	95	123	124	122	464	33%
EDOU	274	54	45	53	56	208	-24%
Tower Obs	N/A	27	59	39	51	176	N/A
Stay in Bed	75	14	19	32	15	80	7%
Total PIO from Tower Obs	N/A	0	7	1	2	10	N/A
Inpatient Admission Rate from Obs	21%	14%	19%	17%	18%	17%	-18%
EDOU	12%	12%	11%	12%	13%	12%	-3%
Tower Obs	N/A	13%	24%	14%	20%	18%	N/A
PIO Rate	N/A	0.0%	1.1%	0.1%	0.3%	0.4%	N/A
Median LOS for admitted	13:18	14:12	13:45	14:02	Not Available	13:50	4%
Median LOS for PIO	N/A	0:00	34:36	35:34	Not Available	35:05	N/A
OBSERVATION EFFICIENCY							
Tower Obs Average Daily Census	N/A	7.6	7.5	7.2	7.4	7.4	N/A
EDOBs Average Daily Census	9	13.0	12.0	14.0	7.0	13.0	44%
Percent Boarders of Admissions from Tower Obs	N/A	15%	23%	14%	18%	18%	N/A
Median LOS of Boarders on Tower Obs	N/A	16:41	22:02	22:39	17:19	20:11	N/A
QUALITY							
ED Revisits from Tower Obs							
Within 72 Hours	N/A	5.26%	5.18%	9.32%	8.59%	7.24%	N/A
Within 7 days	N/A	2.87%	5.58%	3.23%	3.91%	3.92%	N/A
Within 14 days	N/A	5.26%	3.59%	2.15%	1.95%	3.12%	N/A

Q&A



APPENDIX
