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The Role of Observation Care in the Evaluation and Management of Cancer Emergencies

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Memorial Sloan Kettering
Cancer Center





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FACULTY DISCLOSURE

Nothing to disclose





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- What is Observation Care
- Operational Details and Metrics
- Observation Care and Cancer
- OBS or Crazy



What is Observation Care?

- Alternative to hospital admission for patients who do not meet admission criteria at initial evaluation
 1. additional monitoring
 2. short-term treatment
- Inform the decision regarding whether a patient will require a hospital admission or can be discharged
- Time frame
- Nomenclature: Clinical Decision Unit, Observation Unit, ED Short Stay Unit
- Dedicated versus Virtual



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Background

- First units for chest pain 30 years ago
- Approximately one third of emergency departments in the United States have an observation unit or clinical decision unit.
- International trends
- Driving factors
 - advances in diagnostics and treatments
 - improved understanding of pathophysiology
 - Emergency Department and inpatient crowding
 - payer policy changes



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Benefits of Observation Care

- Reduce hospital length of stay
- Reduce cost
- Outcome and safety data comparable to inpatient hospitalization
- Improved patient satisfaction and protocol compliance

Drawbacks of Observation Care

- Cost shifting- billed as an outpatient encounter rather than inpatient service



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Key Observation Metrics

- US National benchmark LOS mean for OUs is 15 hours
- Discharge to home 80 % and inpatient conversion 20%
- ED revisit rate within one week less than 1%
- Observation Unit volume should be 4-10% of ED annual volume
- The midnight census should nearly always be 100% occupancy for an OU operating at peak efficiency
- *Fewer than 5 % of hospital admissions originating from the Emergency Department with <24 hour LOS*



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Is there a role for Observation Care in Evaluation and Management of Cancer Emergencies?

MSK Database

- Emergency Department at Sloan-Kettering
- 24,000 visits/year
- Admission rate of 50 %
- 95 % patients with active cancer diagnosis
 - 70 % medical/neurologic complications
 - 30 % surgical complications
- Retrospective analysis of all patients seen in the UCC from Jan 1, 2012 to April 21, 2012 (111 days, 6681 encounters), for patients requiring admission,
 - 11% were discharged in less than 24 hours
- Of patients discharged home from the UCC, 10% required care lasting greater than 8 hours.
- 1396 patients (21%) evaluated in the UCC may have benefited from transfer to observation status.



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Is there a role for Observation Care in Evaluation and Management of Cancer Emergencies?

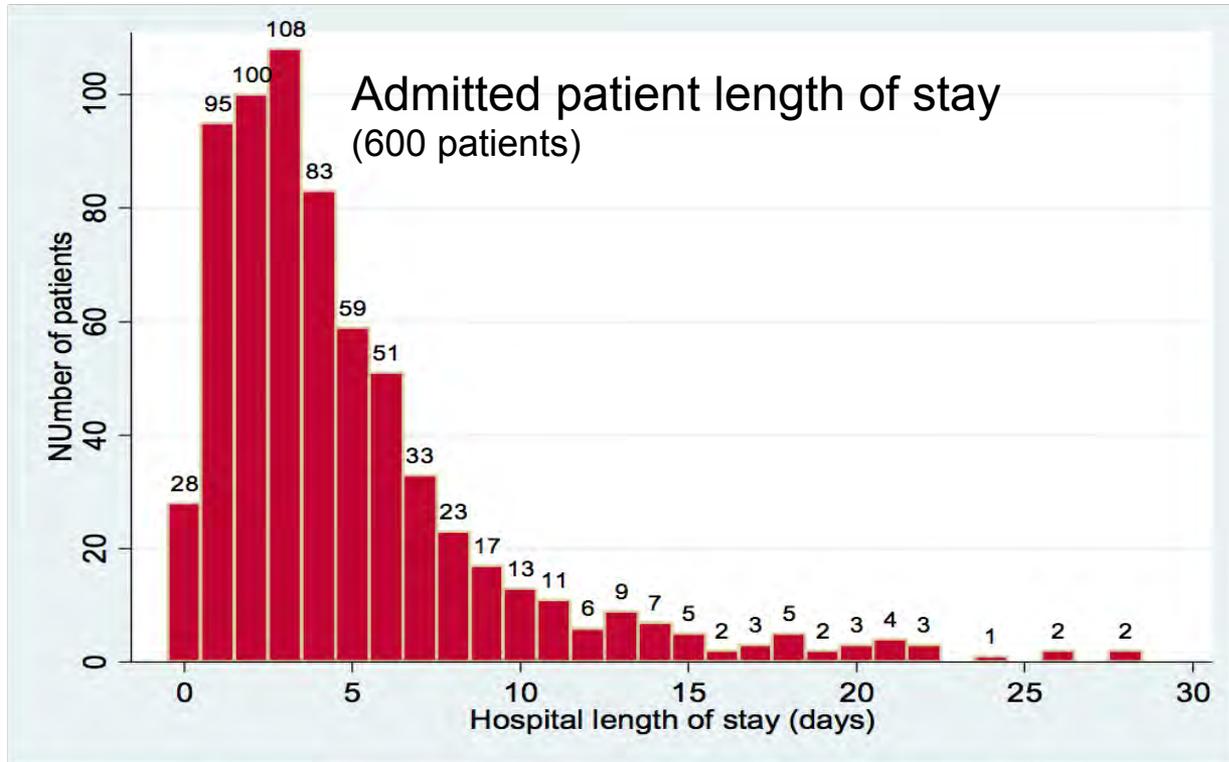
CONCERN Database



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20% of patients LOS 0-1 days

40% of patients LOS 0-2 days

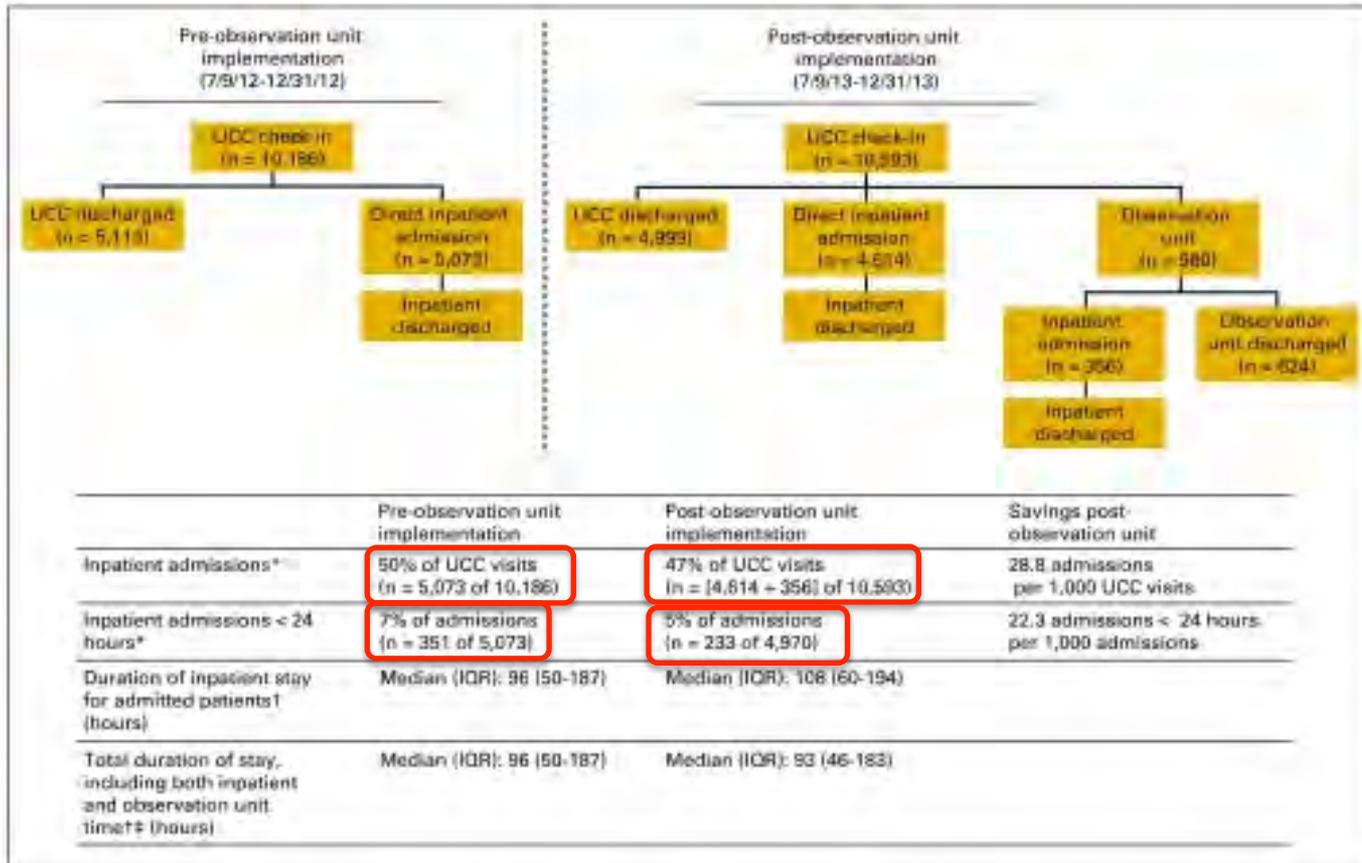


Does Observation Care actually reduce inpatient bed utilization?



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Klotz et al. *J Oncol Pract.* 2015



Outcomes: Does OBS management lead to fewer hospitalizations and less inpatient utilization



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Chief Complaint [‡]	Before Implementation [‡]		After Implementation [‡]		
	% Admitted of UCC Visits	Median Total LOS (hr)	% Seen in OU of UCC Visits	% Admitted of UCC Visits [§]	Median Total LOS (hr)
Chest pain [¶]	41	69	12	22	54
Dyspnea [¶]	68	99	10	58	99
Failure to thrive [¶]	63	118	3	71	123
Fever	56	91	5	54	96
Fluid and electrolyte disorder [¶]	55	98	17	47	85
Nausea and vomiting [¶]	69	100	13	54	90
Neurologic abnormality	57	120	8	56	95
Uncontrolled back or limb pain	44	135	11	47	138
Syncope	59	70	15	47	68

Abbreviations: LOS, length of stay; OU, observation unit; UCC, Urgent Care Center.

[‡]Pre-OU implementation period: July 9, 2012–December 31, 2012.

[‡]Post-OU implementation period: July 9, 2013–December 31, 2013.

[‡]UCC presenting complaint; the proportion of patients presenting with each complaint was similar between the pre- and post-OU periods.

[§]Includes patients directly admitted from the UCC and admitted from the OU.

^{||}Total LOS includes inpatient and OU time.

[¶]Statistically significant differences in percent admitted based on χ^2 tests, pre versus post; $P < .05$.

Klotz et al. *J Oncol Pract.* 2015



Clinical scenarios suitable for management in the observation setting

- **Chest Pain**
 - **Nausea and vomiting**
 - Dehydration
 - **New Atrial Fibrillation**
 - Pain management
 - Febrile patient
 - **neutropenia**
low/intermediate risk
 - No source
 - **Constipation**
 - **Cellulitis**
 - Hematuria
- **Hypersensitivity reactions**
 - Electrolyte derangements
 - Drainage of malignant pleural effusions and ascites
 - Uncomplicated IR/GI procedures
 - Seizure management
 - Transition to hospice
- “I don’t know what is going on in this patient ”



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Constipation Algorithm

Inclusion Criteria

- No evidence of mechanical bowel obstruction on AXR or CT
- Stable vital signs
- Reasonable likelihood of resolution of acute problem within 24 hours
- Difficulty administering further care at home
- Difficulty tolerating oral intake
- Pain that is not manageable with present outpatient analgesic regimen
- No other medical issues likely to prolong stay or require admission (infection, bleeding, electrolyte abnormalities)

Exclusion Criteria

- Bowel obstruction (or pseudo-obstruction) identified on CT scan
- Peritonitis/other overtly surgical problem
- Hemodynamic or respiratory instability
- Low probability of discharge within 24 hours



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Potential Interventions

- enema and/or manual disimpaction if indicated by exam or imaging
- If no improvement in 2 hours, Methylnaltrexone if using opiates >2 weeks and no contraindication
- If no improvement in 4 hours, osmotic laxatives (magnesium citrate, lactulose, GoLytely if no contraindication)

Disposition

Home

- Benign CDU course, stable vital signs
- Successful laxation with improvement in symptoms

Admission

- Ongoing symptoms
- Inability to tolerate oral intake/medication
- Inability to tolerate treatment in Obs



Caveats regarding specific conditions

- **Pain control** except high doses of opiates or complex regimen of multiple analgesics or PCA
- **Fever** excluding recent bacteremia, likelihood of procedure, indwelling GI or GU catheters; trend lactate; procal, viral PCR
- **Cellulitis** must have suitable oral regimen based on allergies and prior cx
- **Dehydration** when underlying condition is likely to improve
- Select immunotherapy toxicities such as grade 2 colitis
- BMT patients with early complications
- CAR-T cell therapy patients greater than 30 days after infusion



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Key differences between Observation Care in the noncancer and cancer populations



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Metric	Noncancer ED	Cancer ED
<i>LOS</i>	<i>15 hours</i>	<i>19 hours</i>
<i>Discharge to Home</i>	<i>80%</i>	<i>66%</i>
<i>Occupancy</i>	<i>60-75%</i>	<i>85%</i>
<i>Return to ED within one week</i>	<i><1%</i>	<i>3%</i>
<i>OC Volume / ED Volume</i>	<i>4-10%</i>	<i>10%</i>



“OBS or Crazy”

- 64 year old female with metastatic pancreas cancer and history of upper GI bleeding presents with a single episode of melena 18 hours ago. She is afebrile, hemodynamically stable, and has unchanged hemoglobin from 7 days earlier when she last received chemotherapy. She is neutropenic. She is requiring parenteral opiate analgesia for worsening back pain.
- 45 year old male with metastatic renal cell carcinoma found to have an new segmental pulmonary embolus. His vital signs are normal. He has a history of intermittent heavy hematuria and requires an IVC filter. Labs remarkable for Hgb 7.9, and found to have significant electrolyte derangements as well as new mild AKI.



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What is this patient's path
out of the hospital?

Is there a 66% or greater chance of
this happening?



Conclusions

- Observation Care can reduce inpatient bed utilization by cancer patients
- Cancer patients require longer stays in Observation Care and are admitted to the hospital more frequently than patients without cancer
- Cancer patients with a single medical problem are most likely to be discharged home following Observation Care



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Areas of Investigation

- Is care Observation Care cost effective for the management of oncologic emergencies?
- Which other oncologic emergencies can be safely managed in the observation setting?
- What are the ideal operational characteristics for the management of cancer patients in the observation setting?



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