Order from Order Sets: Analysis of Ordering Patterns and Patient Outcomes Before and After Order Set Changes on the Inpatient Psychiatry Units at TJUH

David Halpern, MD
Department of Psychiatry and Human Behavior, Thomas Jefferson University Hospital

Background

Problem

When patients are admitted to the psychiatry unit, an order set is used for each unit (adult and geriatric). In the past certain items were not included in the order set for anxiety, insomnia, and bowel management.

- **Issue:** Patients would be nervous or could not sleep overnight and the resident on-call would place one time orders for that time only, or not at all, impeding patient care.
- **Theory:** Increasing order set options will allow for less time spent on inter-staff communication and more time spent treating patients.
- **Ideal:** Decreased calls between staff unnecessarily and increase patient satisfaction, leading to improved outcomes.
- **Problem:** Having order sets can increase medication given innapropriately[1]
- **However:** order sets have been shown to produce better clinical outcomes in a variety of settings[2] and may even help improve resident training and education.[3]

Overarching Goal

Solving this problem would help decrease burden on staff overnight, help patients sleep and do better while on the unit and facilitate psychiatric recovery, and decrease possible negative overnight staff-patient interactions. This would be a beneficial improvement on any psychiatric service in the hospital the goal be met.

Aim

Short Term

To decrease the total number of times one-time orders were added for patients for Vistaril, Remeron, Melatonin, Colace, Senna, and MiraLAX. Increase number of times urine PCP and urine oxycodone added to the urine drug screen.

Long Term

To decrease overall length of stay and improve treatment outcomes

Specifics

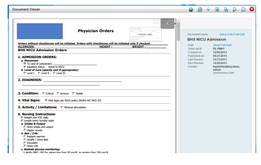
We were aiming for a 50% decrease in resident physician orders placed as one-time orders overnight for the above orders (Vistaril, Remeron, Melatonin, Colace, Senna, and MiraLAX) in the two months after the admission order set was changed compared to the 2 months prior to implementation. We were also looking to see a 50% increase in the urine PCP and urine oxycodone screening labs done from patients admitted to the inpatient psychiatric units within the same timeframe.

Stakeholders:

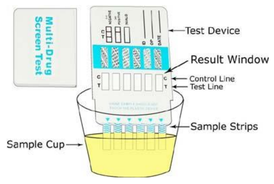
- The staff on the inpatient psychiatry units, both techs and nursing
- The overnight and daytime team residents
- The patients on the units benefiting from the decrease in lag-time between responses to requests.

Multidisciplinary:

- Nursing staff about what patients were asking them about the most
- Residents about what they would like to have in the order sets



An example of an admission order set similar to EPIC



Above: An example of a Urine Drug Screen

Right: Table of common medications associated with constipation (many of which are regularly given on the inpatient psychiatric units)

Examples of Medications Associated With Constipation*

CLASS	EXAMPLES
PRESCRIPTION DRUGS	
Opiates	Morphine
Anticholinergic agents	Benztropine, oxybutynin
Tricyclic antidepressants	Amitriptyline > nortriptyline
Calcium channel blockers	Verapamil hydrochloride
Anti-Parkinsonian drugs	Amantadine hydrochloride
Sympathomimetics	Albuterol
Antipsychotics	Haloperidol, risperidone
Diuretics	Furosemide
Antihistamines	Diphenhydramine
NONPRESCRIPTION DRUGS	
Antacids, especially calcium-containing	
Calcium supplements	
Iron supplements	
Antidiarrheal agents	Loperamide, attapulgite
Nonsteroidal anti-inflammatory agents	Ibuprofen

Locke GR III, et al. *Gastroenterology.* 2000;119:1766-1778. *This is not a complete list

Methods

Retrospective Chart Review

Collect data:

- Patient basic demographics (non-identifiers), and length of stay
- Amount of one-time orders placed for Vistaril, Remeron, Melatonin, Colace, Senna, and MiraLAX per patient
- Amount of times urine drug screen had urine PCP and urine oxycodone done per patient

Analyze Data:

- Simple comparison of amount per patient as described above
- Will attempt to divide and analyze data separately based on:
  - Which unit patient was on
  - Patients that stayed less than 3 days (the 72 hour timeline for voluntary discharge against psychiatric advise) versus those that stayed longer
  - Patient age (younger group vs. older adults/geriatric patients)
  - Patient gender identity
- Compare date from 2 months prior to date of order set implementation (1/30/2018) versus 2 months afterwards

Exclusions:

- Patients whose stay is longer than 1 month (often due to placement issues)
- Patients who are discharged within a 72 hours of admission

Flowchart Describing Relationship of Staff and Patients Overnight

Results

- Pending IRB approval

Discussion

- **Determine:** if this intervention helped patients dealing with constipation and/or mild anxiety, and improved urine drug screening for patients admitted to the psychiatry units.
- While we have not yet retrieved the data to effectively analyze our intervention, the issue of order sets is one that is relevant to multiple services in a hospital.
- **On admission:** the order set served as the template for what ancillary medications will be available on a PRN basis for the patient.
- **On the one hand:** if a medication is not included in the order set, then it is not available to patients when they need.
  - Requires more back-and-forth between nursing staff and the physicians
- **On the other hand:** patients are not just given medications for all of their needs, an issue particularly germane to the psychiatry units
  - Patients may do better when they have direct contact with a doctor and are not just given medication to fix their problems.[6]
- **Therefore:** Decreasing excess one-time orders from physicians may decrease patient frustration, improving treatment, and decreasing overall length of stay
- **Downside:** Decrease physician-patient interaction, less direct conversations, worsening care, and increased length of stay.

Conclusions

No conclusions can be reached as of yet, as the data has not been collected for analysis.

Acknowledgements

- Dr. Jeffrey Riggio for all his help with the implementation of the order set changes, and his help navigating the order set review and data retrieval, as well as IRB approval process
- Dr. Audrey Henry for her supervision and support for the order set implementation and with this review

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6. See Buckley, L. (2011). Critical Moments — Doctors and Patients. *The New England Journal of Medicine, 365*(14), 1270-1271 for a discussion on the importance of face-to-face communication.