LAI Delivery QI: Improving Compliance and Time to Treatment

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Background

- Long acting injectable (LAI) formulations of antipsychotics are commonly administered at TMCA-North campus. Previously, the LAIs were stored and dispensed from TMCA-South campus pharmacy, necessitating individual transport of an LAI from the South campus. This led to delays in the receipt of LAIs from TMCA-S, and thus delays in administration of LAIs. Patients may revoke consent for an LAI prior to administration in the time it takes an LAI ordered from TMCA-S to arrive at TMCA-N, resulting in LAIs being discarded or returned via courier to the South campus. Not only are these expensive medications to be discarded, but efforts to coordinate LAI transport with nursing and pharmacy staff are also wasted, and planned discharges may be disrupted due to LAI noncompliance.
Objective

- Improve the time delay related to administration of LAIs
- Improve compliance with LAIs patients initially consented to
- Reduce the waste associated with refused LAIs
Methods

- Pharmacy staff devised an intervention at TMCA-N to safely store each LAI dose in different compartments of the Pyxis machines. Instead of LAIs being dispensed from the TMCA-S pharmacy, Pyxis machines at TMCA-N were stocked with LAIs and dispensed there after an order was placed. Pharmacy staff compiled a list of LAI orders in the six months prior to storing LAIs at TMCA-N, including time of order, time of administration, whether the order was refused or administered, and whether the LAI was court ordered. Similar data was collected for the six months following this change in LAI storage procedure to compare time delays, compliance, and LAI wasting pre- and post-intervention. Time delay was defined as either 1) requiring more than two hours to administer the LAI from the time ordered, or 2) pharmacy having to retime the order due to transport delay. Orders for LAIs were sorted into one of three categories 1) administered within two hours after time ordered and did not require time change; 2) administered more than two hours from time ordered and did not require time change 3) administered more than two hours from time ordered and time change required. We compared the distribution among these categories, as well as rates of LAI compliance, between the pre- and post-intervention intervals. The data was analyzed using unpaired proportions t-test.
Results

• The rate of compliance with the ordered LAIs were significantly improved after intervention
Result cont.

- The amount of orders that required a time change or had significant delay in admin decreased significantly.
Discussion

- Storing LAIs at TMCA-N appeared to have significantly improved patient's compliance with LAIs, reduced incidence of delayed LAI administrations, and reduced logistical burdens for pharmacy and nursing staff. Reducing extraneous tasks for clinical staff at any stage of patient care is important, and time saved from having to coordinate LAI transport could be devoted to other aspects of patient care. As patients experienced reduced delays in LAI administration, this may have led to more timely discharges. While not directly analyzed in this project, increased LAI compliance can be inferred to improve cost effectiveness of care, since there is lower risk of LAIs being disposed of. Similarly, while not studied in settings outside a psychiatric inpatient hospital, reducing the delay between the time an LAI is ordered by a provider and the time it is administered to a patient can be inferred to improve rates of compliance. For example, a future project may investigate measures that streamline the process by which LAIs are verified and ultimately approved to be dispensed by pharmacy staff in terms of improving LAI adherence in other settings where LAIs are already stored on-site.
Conclusions

- This project provides validation that the decision to move LAI medication storage from off-site location (TMCA-S) to TMCA-N inpatient psychiatric facility was at the very least beneficial for reducing the time delay between when a medication was ordered and when it was administered. This appeared to improve compliance with medications already consented to.