The effects of WHO guidelines and patient education on inpatient rehabilitation opioid utilization and oral morphine equivalents on discharge

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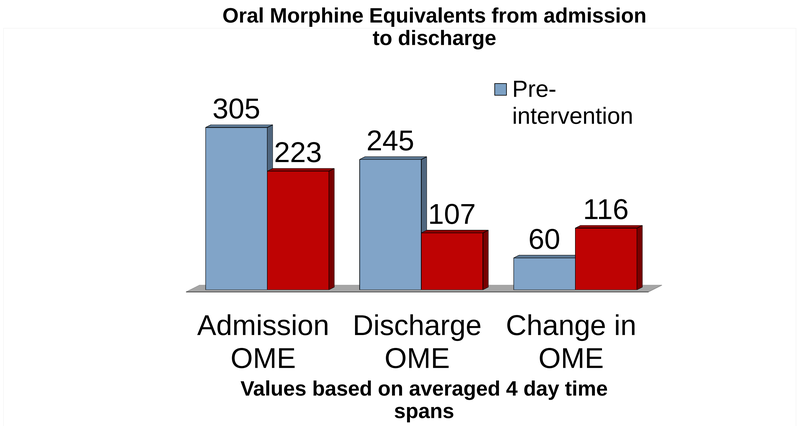
Introduction

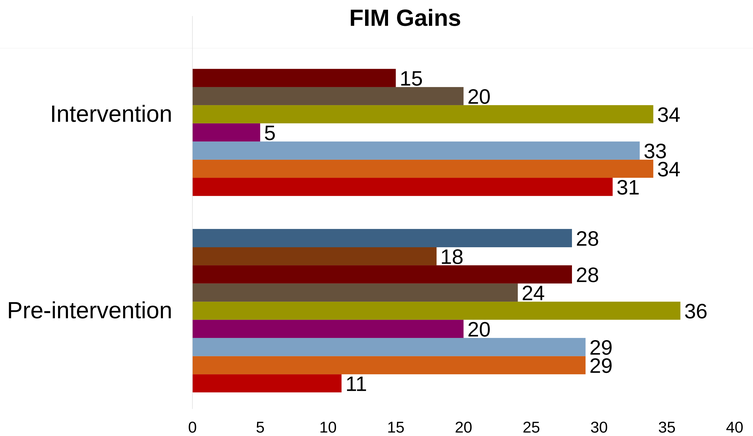
As the pendulum swings towards utilization of less opioids in patient care, emphasis is placed on physicians to manage patient's pain with alternative means and maximize adjuvant therapy while in the hospital and at discharge. Inpatient Rehabilitation (IPR) represents an ideal setting to closely monitor patient's pain, offer and optimize adjuvant therapies, set goals and expectations regarding recovery and course of pain, educate patients, and if needed create a regimented taper as an outpatient with close follow-up. In this proof of concept study, we wanted to discover if maximizing non-opioid medications and treatment in conjunction with education resulted in an appreciable change in opioid consumption while at IPR and upon discharge without negatively effecting functional independence measure (FIM) gains.

Methods

Seven patients with recent polytrauma or spinal fusion were treated using strict WHO guidelines and education upon admission regarding their pain, its expected course, various treatment options available to them, and expectations for them upon discharge. This was compared against nine patients who were previously treated with the standard of care. The primary outcome measure was change in oral morphine equivalent (OME) from the patient's historical baseline. The secondary outcome was FIM change from admission to discharge. Our pre-intervention group had an average 60 OME reduction (SD 71 OME) while our postintervention group had 116 OME reduction (SD 65 OME) P-value .1272.

Results





The difference in the intervention group versus the pre-intervention group was 56 OME over a 4 day average. This is calculated out to be 14 OME less per day than the pre-intervention group. Average FIM change in our pre-intervention was 24.7 (SD 7.4), while the intervention change was 24.6 (SD 11.4) P-value .967.

Discussion

Our study exhibits that with proper education and maximization of non-opioid medications reduction of OME can be achieved without significantly affecting FIM gains. Further studies with increased number of patients and continued structuring of the educational component will be required to fully understand the efficacy and long term utility of this strategy.

The results are promising in effectively reducing OME upon discharge without a discernable FIM loss. It is important to maximize adjuvant therapies before resorting to opioid medications to treat pain. However when it is unavoidable educating patients, setting expectations, and addressing pain issues daily could potentially lead to harm reduction upon discharge. IPR offers an environment where all these modalities can be employed on a daily basis for a relatively extended period of time. A decrease in 14 OME would result in 98 OME per week that would otherwise be prescribed to a patient upon discharge.

Close monitoring of patients post-discharge could be utilized to determine proper weaning of opioids to prehospitalization levels and how to properly dispose of excess medication if needed.

References

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