**Optimization of pharmacist led intravenous to oral medication conversions​**

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**Background:**Pharmacist led intravenous (IV) to oral (PO) conversion protocols can

significantly decrease drug costs and improve outcomes for inpatient populations. IV to PO

conversion protocols require clear workflow standards and eligibility criteria

to optimize outcomes. At Novant Health, while pharmacists have the authority to convert patients from IV to PO formulations, little guidance exists for pharmacists’ daily monitoring and documentation.

**Objectives:**The primary objective of this study was to assess the impact of a pharmacist led IV to PO conversion protocol on pharmacy costs. Secondary objectives included assessing the impact of improved pharmacist education and workflow on the frequency of IV to PO conversions, assessing the impact of these interventions on cost savings, and comparing the frequency of IV to PO conversions among medications included in the protocol

**Methods:**Improved workflow technologies and educational materials were used to optimize pharmacist led IV to PO conversions. New documentation tools were created to allow pharmacists to document their daily IV to PO assessments in addition to IV to PO conversions, enhancing visibility and accountability for daily monitoring. Templates were created in the form of smart phrases to assist pharmacists in their daily assessments and documentation. Job Aids were updated with information regarding new monitoring procedures, templates, and updates to the IV to PO medication list.

IV to PO conversions made by a pharmacist were used to determine the difference in drug spend per day of therapy (DSDT) which was calculated using the difference between the pharmacy acquisition cost for one day of IV medication and one day of the equivalent PO medication. The number of eligible IV medication orders, documented IV to PO assessments, and number of IV to PO conversions were compiled to assess the capacity and capture rate of pharmacists before and after implementation.

**Results:** There was no major difference in the total quantity of IV to PO conversions 60 days before and after implementation (867 and 813, respectively), but the difference in projected DSDT increased from $1900 to $2981, indicating notable cost savings. When separated by drug, all but four medications saw increases in total IV to PO conversions, with some medications doubling in conversions before and after implementation. Additionally, medications that saw increases in IV to PO conversions were of greater financial and clinical impact. The number of documented IV to PO assessments suggests that pharmacists review roughly 44% of eligible IV medication orders. PO medication orders made by pharmacists suggest that around 10% of eligible IV medication orders were converted before and after implementation.

**Conclusions**: Improved workflow technologies and education alone can have variable results on IV to PO conversion rates for pharmacists. Given the volume of eligible IV medication orders, inclusion criteria for IV to PO assessments should be refined to ensure that pharmacists are reviewing patients likely to be eligible for conversion. Additionally, effective documentation standards can increase visibility and show areas of opportunity for IV to PO protocols