

Using The EMR To Improve Pharmacologic Venous Thromboembolism Prophylaxis In Surgical Patients

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Background

- The Joint Commission Surgical Care Improvement Project (SCIP) core measure set recommends pharmacologic prophylaxis 24 hours prior to an operation to 24 hours after for prevention of venous thromboembolism (VTE)
- Pharmacologic prophylaxis was provided in less than 90 percent of the post-colorectal surgery population at our institution
- We were interested in strategies to improve compliance with prophylaxis in this patient population

Methods

- Prospectively collected data from NSQIP and UHC databases at a tertiary hospital that performs approximately 400 colorectal surgeries per annum was reviewed
- Chi-square test was used to assess for statistical significance

Results

- The VTE rate was similar to that noted nationally for colorectal surgery patients (1.3% versus 1.6%)
- Appropriate pharmacologic prophylaxis was administered correctly less than 90% of the time for this group of patients
- A barrier was identified in the electronic medical record (EMR). Prophylaxis administration defaulted the timing to the following day (POD#1) at 2100
- A new order set was created to default the administration to 12 hours post surgery completion

Baseline Data KUMC

DISCHARGES BETWEEN 1/1/2013 and 11/30/2013

VTE rate in CRS patients over 11 months

Colorectal Patients With a DVT/PE

*Secondary Diagnosis only of DVT & PE. DVTs and PEs that are Present on Admission (POA) have been excluded from the report

Num	Denom	Rate
5	312	1.60%

Appropriate VTE prophylaxis rate in CRS patients over same 11 months

Anti-Coag Medication On Day 0 or 1 After Surgery

*Surgery and medication admins were based on date only. Day 0 being day of surgery, day 1 being the day after.

Num	Denom	Rate
267	312	85.58%

Current Data with New Orders

DISCHARGES BETWEEN 12/11/2013 and 05/30/2014

VTE rate in CRS patients over 5.5 months

Colorectal Patients With a DVT/PE

*Secondary Diagnosis only of DVT & PE. DVTs and PEs that are Present on Admission (POA) have been excluded from the report

Num	Denom	Rate
1	167	0.60%

Appropriate VTE prophylaxis rate in CRS patients over same 5.5 months

Anti-Coag Medication On Day 0 or 1 After Surgery

*Surgery and medication admins were based on date only. Day 0 being day of surgery, day 1 being the day after.

Num	Denom	Rate	
143	167	85.63%	Total
59	75	78.67%	No Orderset Utilized
84	92	91.30%	Orderset Utilized

Conclusions

- The rate of appropriate administration of pharmacologic VTE prophylaxis was achieved in colorectal surgery patients by the use of an order set that altered the default administration time of medication based on surgery completion time
- Above 90% compliance with appropriate pharmacologic VTE prophylaxis can be achieved as long as the newly created order set is used

Discussion

- The Joint Commission has deemed VTE as a "never event"
- EMR can be a useful tool in obtaining appropriate levels of compliance for pharmacologic prophylaxis and preventing VTE
- Ultimately no tool is useful unless it is implemented appropriately
- Addition of Progress Notes with "hard stops" forcing acknowledgement of appropriate prophylaxis may be useful

Acknowledgement

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