



I Don't Need a Technician Checking Me! Or Do I?

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- o 300 bed
- o Not for Profit, Private hospital
- o Rules based Pharmacy Information System
- o Fax Imaging System
- o Automated Dispensing Cabinets house wide
- o Smart Pumps

History

- Previous- technician order entry with Pharmacist verification.
- Problem- lack of expertise for complicated orders
- Results: Time consuming, stopped this process

Justification

- Other than CPOE the best mechanism to decrease order entry errors is redundancy.
- Nursing was our redundancy

Current

- New Pharmacy system with fax imaging offers ability to identify new orders that have been entered into system
- Created Process for tech to verify order entry on every order sheet

New Process

1. "Attached fax" form prints every 30 minutes
2. Tech compares order to patient profile
3. Documents differences and gives to pharmacist (not all are errors)

New Process

4. Pharmacist corrects or documents no error
5. Separate into error types- No error, Height/weight error, missed order, missed dc or entry error.
6. Data entered into database

Current

Attach 4 faxes
FROM 8/27/2009 19:00:00 TO 8/27/2009 19:20:59

TIME	RPH	TECH INIT.	COMMENT	HT/WT ERR	NO ERR	MISSED ORD	DC	ENT INIT.	RPH ERR
19:18									
19:19									
19:20									
19:21			Protonix continuous missed by Pharmacist + Tech						
19:22									
19:23									
19:24									
19:25									
19:26									
19:27									
19:28									
19:29									
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19:58									
19:59									
20:00									

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Current

COMMENT	HT/WT ERR	NO ERR	MISSED ORD	DC	ENT INIT.	RPH ERR
Protonix continuous missed by Pharmacist + Tech						
NORVASE Sing, Entered NORVASE 10mg						

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Current

Attached Faxes
For the Month of December 2008

RPH Initial	Missed Order	Entry Error	Missed DC	Sub-Total Count	Total Orders	Total % Orders
1	42	22	0	64	3,325	1.92%
2	29	10	1	40	3,298	1.23%
3	41	10	4	55	4,811	1.15%
4	18	4	1	23	3,884	0.59%
5	28	12	3	43	5,454	0.79%
6	5	5	0	10	3,431	0.29%
7	21	10	1	32	4,435	0.72%
8	23	9	3	35	6,328	0.57%
9	13	12	0	25	4,555	0.55%
10	3	2	0	5	3,459	0.14%
11	8	4	1	14	3,433	0.38%
12	10	2	0	12	3,369	0.36%
13	8	0	0	8	3,393	0.24%
14	4	1	0	5	3,728	0.13%
15	5	3	1	9	5,248	0.17%
GRAND TOTAL	254	106	15	375	52,348	0.71%

Mean: 0.71
1st Std Dev: 1.19
2nd Std Dev: 1.67

Current

Attached Faxes
For the Month of July 2009

RPH Initial	Missed Order	Entry Error	Missed DC	Sub-Total Count	Total Orders	Total % Orders
1	20	4	0	24	2,395	1.00%
2	20	7	0	27	4,473	0.60%
3	10	3	1	14	3,826	0.37%
4	7	2	1	10	2,898	0.35%
5	12	4	1	17	3,888	0.44%
6	8	4	1	13	3,456	0.38%
7	10	5	0	15	3,339	0.45%
8	12	1	1	14	3,285	0.35%
9	4	2	0	6	3,888	0.16%
10	2	0	0	2	761	0.26%
11	3	2	0	5	2,888	0.17%
12	4	2	1	7	2,882	0.24%
13	8	3	0	11	3,335	0.33%
14	5	2	0	7	3,253	0.22%
15	2	0	0	2	3,441	0.06%
16	4	0	1	5	4,528	0.11%
17	1	0	0	1	4,444	0.02%
18	0	0	0	0	3,933	0.00%
GRAND TOTAL	147	41	7	195	52,987	0.37%

Mean: 0.26
1st Std Dev: 0.65
2nd Std Dev: 0.93

Results

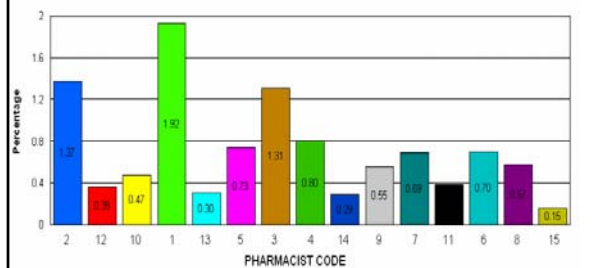
- Error rates declined
 - Highest 1.92% declined to 1.1%
 - Three > 1.3% to zero >1.1%
 - Overall 0.71% to 0.37%

Results

- Error rates declined
 - One pharmacist from highest of 1.92% to 0.28%
 - This pharmacist commented on the process helping them improve

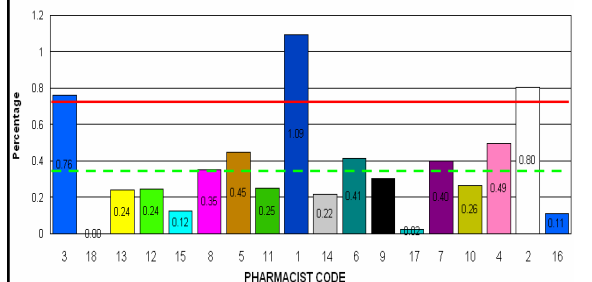
December 2008

Total Percentage



July 2009

Total Percentage



Conclusion

- Technician verification of pharmacist order entry will identify:
 - missed orders
 - dose entry error
 - wrong route
- Will NOT identify:
 - inappropriate dose

Conclusion

- Results in fewer Pharmacy errors making it to the floor.
 - **NURSING SEES VERY FEW**
 - Improves Nursing perception of Pharmacy
- Cost effective double check