



Using MEDMARX for Reporting and Benchmarking

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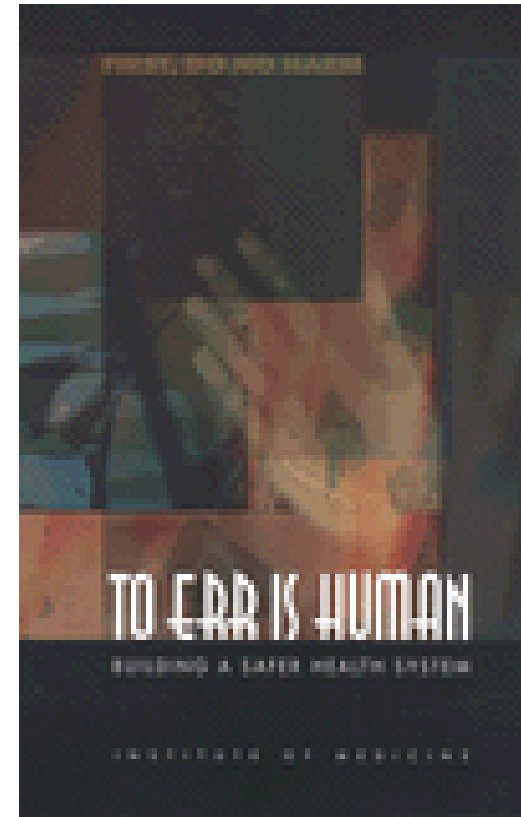
Purpose of the Grant: Assist small rural hospitals to...

- Voluntarily report and analyze medication errors
- Identify and analyze system sources of error
 - Compare current medication use system to best practices and prioritize change
 - Conduct root cause analysis, failure mode and effect analysis
- Implement and maintain organizational change

Why Are We Here?

“The problem is not bad people; the problem is that the system needs to be made safer.”

Institute of Medicine. (2000).
To Err is Human: Building a Safer Health System.
Washington, DC: National
Academies Press, p. 49.



Errors in Our Health Care System

- 44,000 – 98,000 deaths per year due to medical errors
 - 8th cause of death
 - One jet airplane crash per day
- 2.9% - 3.7% of hospital admissions result in adverse events
- Cost \$17 - \$29 billion/yr
- Adults get 55% of recommended care



Humans work in CAHs, too...

- Drugs given despite allergy
- IV antibiotics not infused
- Concentrated sodium chloride given to patient in error

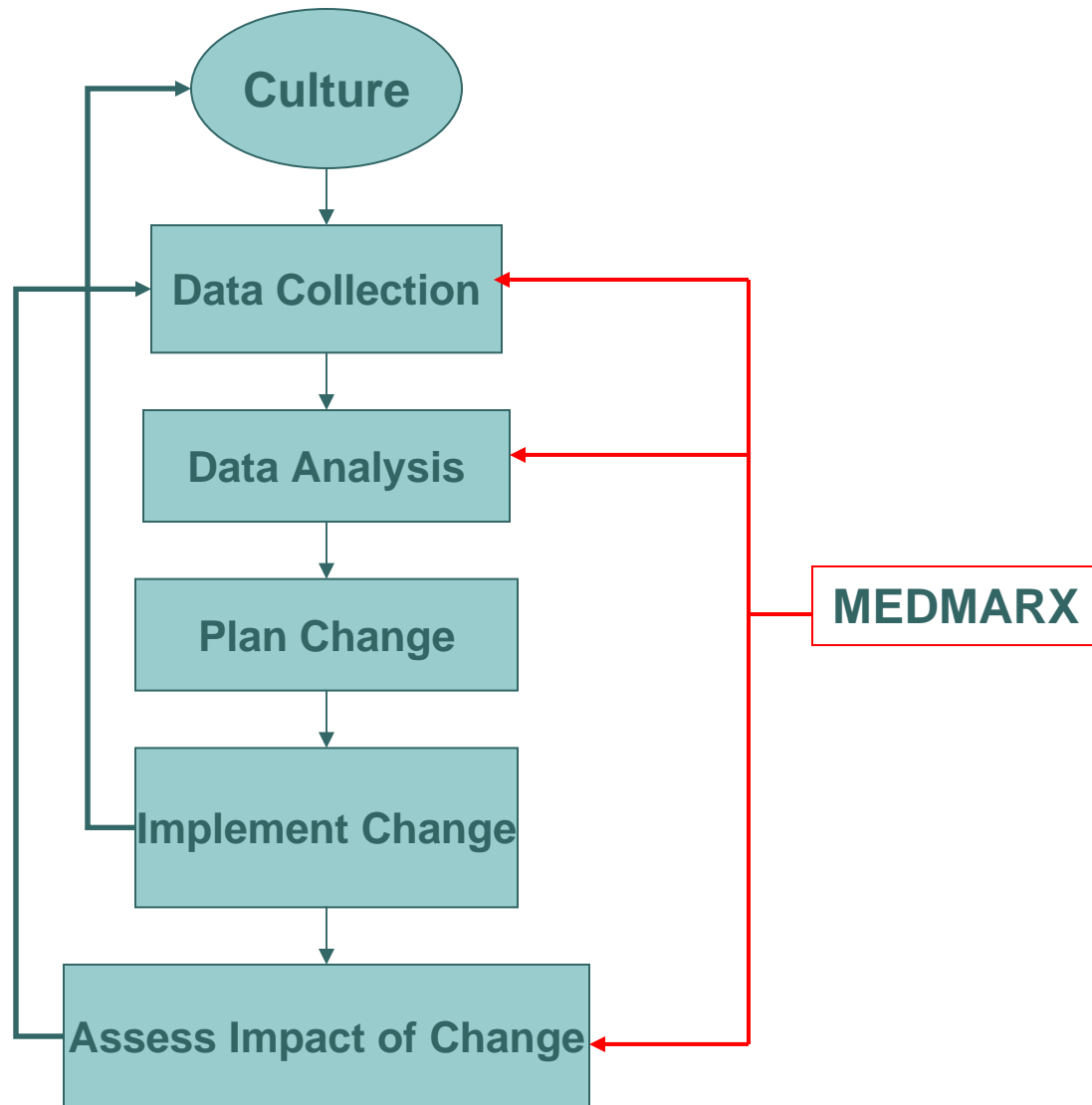




Role of MEDMARX in the Project

- Provides standardized terminology for data collection and analysis
- A critical tool
 - TELL A STORY WITH YOUR DATA
 - Source of benchmarks
- Overcomes rural barriers to QI
 - Small numbers
 - Limited information management resources
 - Limited human resources

Medication Safety Model (USP, 2004)





MEDMARX Menu

- Notices
 - Public/Private Notices
 - Messages from UNMC
 - Send Message to USP
- Record
 - New
 - Find and Update/Delete
- Search
 - By Record Number
 - Predefined, Saved, Custom, Graphs/Charts



MEDMARX Menu

- Admin

- User Administration

- Enter, Search, Update, Hold/Release & Admin Records

- Online Forms – not user friendly

- Facility Profile – Update at least annually when subscription renewed

- Location of error detail specified



Brief review of record entry

- Continuous approach to data entry
- Review of field lists
- A vs B – why such a big deal?
 - From the patient's perspective...
 - A means no error
 - B means error occurred but was intercepted...a measure of success

MEDICATION SAFETY REPORTING FORM

MEDMARX Code

Medical Record

Complete as soon as possible after discovering a medication error and giving appropriate patient care.

Check the ONE category that describes the SEVERITY of the error based on harm to the patient

NO ERROR	NO HARM
Category A	Circumstances or events have the capacity to cause error
ERROR	NO HARM
Category B	Error occurred but it did not reach patient
Category C	Error occurred that reached the patient, but did not cause harm (includes errors of omission)
Category D*	Error occurred that reached the patient and required monitoring to confirm that it resulted in no harm to the patient and/or required intervention to prevent harm
ERROR	HARM
Category E*	Error occurred that may have contributed to, or resulted in, temporary harm to the patient and required intervention
Category F*	Error occurred that may have contributed to, or resulted in, temporary harm to the patient and required initial or prolonged hospitalization
Category G*	Error occurred that may have contributed to, or resulted in, permanent harm to patient
Category H*	Error occurred that required intervention necessary to sustain life
ERROR	DEATH
Category I*	Error occurred that may have contribute to, or resulted in, patient death
*Complete check/list of monitoring or interventions required for Category D – I errors on the back of the form	

Source of record: Inpatient Outpatient LTC/AL Resident Date of Error: _____ Date of Report: _____

DESCRIBE THE ERROR, how the error occurred, how it was discovered:

Check the type(s) of the error:

- Deteriorated product
- Drug prepared incorrectly
- Expired product
- Extra dose

- Improper dose/quantity
- Mislabeling
- Omission
- Prescribing error

- Unauthorized/wrong drug
- Wrong admin technique
- Wrong dosage form

- Wrong route
- Wrong patient
- Wrong time

Check the cause(s) of the error:

- Abbreviations
- Blanket orders
- Brand names look alike
- Brand names sound alike
- Brand/generic names look alike
- Brand/generic names sound alike
- Calculation error
- Communication
- Computer entry
- Computer prescriber order entry
- Computer software
- Contraindicated, drug allergy
- Contraindicated, drug/ drug
- Contraindicated, drug/food
- Contraindicated in disease
- Contraindicated in pregnancy/breastfeeding
- Decimal point
- Diluent wrong
- Dispensing device involved

- Documentation inaccurate/lacking
- Dosage form confusion
- Drug distribution system
- Drug shortage
- Equipment design confusing/inadequate
- Equipment (not pumps) failure/malfunction
- Fax/scanner involved
- Generic names look alike
- Generic names sound alike
- Handwriting illegible/ unclear
- Incorrect medication activation
- Information mgmt. system
- Knowledge deficit/training insufficient
- Label (manufacturer's) design
- Label (your facility's) design

- Labeling (your facility's) Leading zero missing
- MAR variance
- Measuring device inaccurate/inappropriate
- Monitoring inadequate/lacking
- Non-formulary drug
- Non-metric units used
- Override
- Packaging/container Design
- Patient identification failure
- Preprinted order form
- Performance (human) deficit
- Procedure/Protocol not followed
- Pump, failure/malfunction
- Reconciliation-admission
- Reconciliation-discharge
- Reconciliation-transition

- Reference material confusing/inaccurate
- Repackaging by your facility
- Similar packaging/labeling
- Similar products
- Storage proximity
- System safeguards inadequate
- Trailing / terminal zero
- Transcription inaccurate /omitted
- Unlabeled syringe
- Verbal order confusing/incomplete
- Weight missing/inaccurate
- Written order confusing / incomplete
- Workflow disruption

Check factors that contributed to the error:

- A contributing factor not determined
- Code situation
- Computer system/network down
- Cross coverage
- Distractions and interruptions
- Emergency situation
- Fatigue
- Imprint, identification failure
- No 24-hour pharmacy
- No access to patient information
- None
- Patient names similar/same
- Patient transfer
- Poor lighting
- Range orders
- Shift change
- Staff, agency/temporary
- Staff, floating
- Staff, inexperienced
- Staffing, alternative hours
- Staffing, insufficient
- Workload increase

Check the ONE PHASE where the error ORIGINATED			
<input type="checkbox"/> Prescribing	<input type="checkbox"/> Transcribing/Documenting	<input type="checkbox"/> Dispensing	<input type="checkbox"/> Administering
Check the LOCATION of the initial error			
<input type="checkbox"/> Inpatient Acute	<input type="checkbox"/> Skilled Nursing	<input type="checkbox"/> Emergency Dept	<input type="checkbox"/> Outpatient Clinic
			<input type="checkbox"/> Outpatient Surgery
			<input type="checkbox"/> LTC
			<input type="checkbox"/> Procurement
			<input type="checkbox"/> Monitoring

LEVEL of STAFF REPORTING and MAKING the ERROR – Check if known

	Reporting	Making	Reporting	Making
RN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LPN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LPN-C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNA/MA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clerk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MEDICATION(S) INVOLVED (*generic name if known*), **DOSE, FREQUENCY, ROUTE:** _____

Patient Age (only): _____ Sex: M F Physician Notified: No Yes Time of Error: _____
 Number of occurrences: _____ (range: 1-300)

Check actions taken to avoid future errors:

- Communication process improved
- Education/training provided
- Environment modified
- Formulary changed
- Informed staff who made the initial error
- Informed staff involved in initial error
- Informed patient/ caregiver of error
- Policy/procedure changed
- Policy/procedure instituted
- Staffing practice/ policy modified

Further suggestions regarding system changes to prevent this error:

*****REQUIRED FOR CATEGORY D – I ERRORS*****
Check additional interventions/monitoring

- A level of care not determined
- Airway established/ patient ventilated
- Antidote administered
- Blood product infusion
- Cardiac defibrillation performed
- CPR administered
- Delay in diagnosis/treatment/surgery
- Dialysis
- Drug therapy initiated/ changed
- Hospitalization, initial
- Hospitalization, prolonged 1 – 5 days
- Hospitalization, prolonged 6 – 10 days
- Hospitalization, prolonged > 10 days
- Laboratory tests performed
- Narcotic antagonist administered
- Observation initiated / increased
- Oxygen administered
- Surgery performed
- Transferred to a higher level of care
- Vital signs monitoring initiated / increased
- X-ray / MRI / other diagnostic tests performed

Thank you for contributing to patient safety and quality of care. Place this form in an envelope marked "Medication Error" and return to your quality assurance coordinator/ risk manager.

Quality Improvement. Not Part of the medical record. Not discoverable by Nebr. Rev. Stat. Section 71-2046 to 71-2048. (Hospital Name: Revised July 2005)



Category A Example

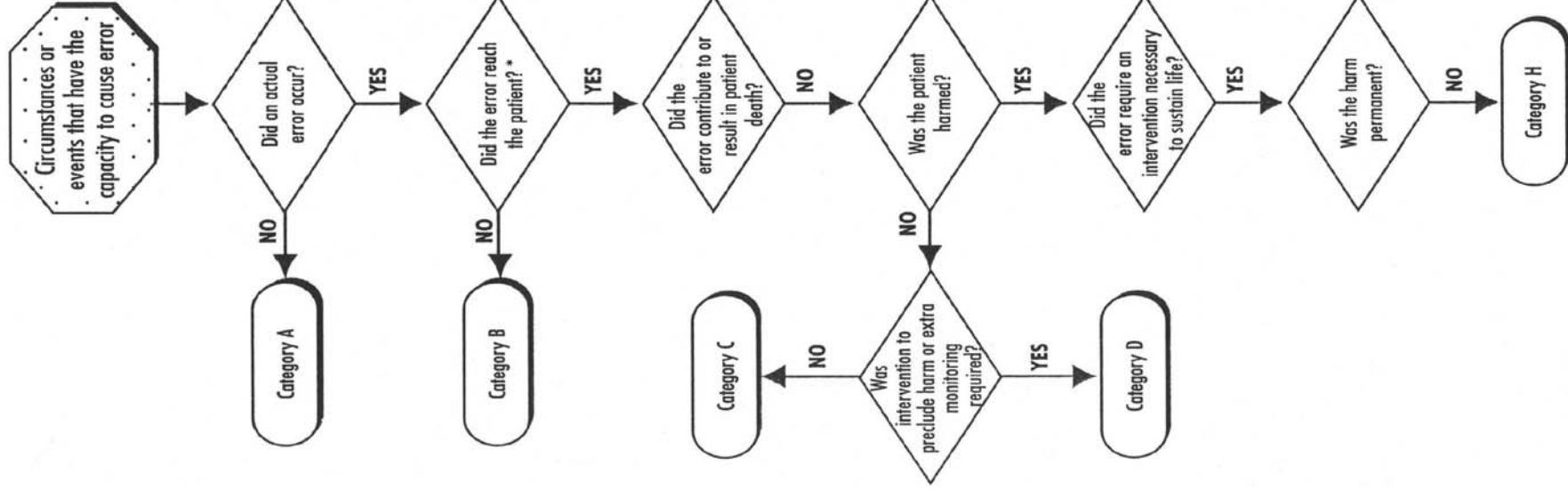
- Patient admitted from ER. Admitting nurse made a new Med list from patient's info and med bottles, but did not compare it to the med list in the clinic file. The meds missed from the clinic list included Calcium w/Vitamin D, Mobic and Effexor. Omission was picked up the next day by the 7-3 nurse comparing all the lists. Physician was notified, Effexor was the only one ordered, and was covered before the daily dose was due. Reporting nurse also noted to write out the home med list in layperson's language, not abbreviations, and to omit unapproved abbreviations e.g. "qd" as "every day".



Category B Example

- Xopenex and Atrovent Neb treatment ordered q 6hr without dose/strength of Xopenex indicated.
 - Root cause analysis summary: Physicians often let Pulmonary services complete the dose they want, but this leaves open the possibility that pharmacy might enter a different dose/strength in the computer. If Pulmonary doesn't clarify order the order remains incomplete and can delay treatment.
 - Action taken details: Informed staff who made the initial error (Physician)

NCC MERP Index for Categorizing Medication Errors Algorithm



Harm

Impairment of the physical, emotional, or psychological function or structure of the body and/or pain resulting therefrom.

Monitoring

To observe or record relevant physiological or psychological signs.

Intervention

May include change in therapy or active medical/surgical treatment.

Intervention Necessary to Sustain Life

Includes cardiovascular and respiratory support (e.g., CPR, defibrillation, intubation, etc.)

*An error of omission does reach the patient.



Brief Review of Record Entry

- Source of Record
- Description
 - Who (level of staff)
 - Did what
 - When
 - Where
 - Specific consequences



Brief review of record entry

- Causes
 - Mar Variance – MAR differs from order
 - Performance/human deficit
 - Reconciliation
- Contributing Factors
 - No 24 hour pharmacy
- Nodes
 - Procurement – ordering of inventory



Brief review of record entry

- Location of initial error
 - Consistent with Source of Record
- Products
 - Enter information you will use
 - Add additional product(s)
- Location of error detail
 - Required for data to be included in graphs
- Additional fields – use what is relevant
- **WORKING DOCUMENT** for 60 days



Summary

- Entering Records
 - Select Error Category
 - Enter Required Fields
 - Enter Product Information
 - Enter Additional Fields
- Administration
 - Holding/Releasing Records
 - Locating/Updating/Deleting Held Records



Enter Reports

- Problems
- Challenges
- Frustrations



Bolster Your Reporting...

- Educate staff
 - Use video to remind staff
 - Purpose of project
 - Culture of safety
 - Completing forms
 - Description most important
 - Review definitions of fields
 - Policy Statement



Policy Statement

- Nonpunitive culture
- Definitions
- Data Entry
 - Continuous approach best
 - Feedback on accuracy e-mailed monthly
 - Use Find and Update to make corrections
- QI Process



Next Steps...

- Conference Call Fall 05
 - Prioritize change using data from MEDMARX
 - Use best practices check list
- Workshop Spring 06
 - Implement and maintain change
 - RCA basics



MEDMARX Searches and Reports



Searches

- By Record Number

- Predefined Searches

- Director's Report

- Spreadsheet for trending level of staff making

- Error Outcome Category (demo)

- Spreadsheet shows number and %age of errors by severity

- Product Summary Report (demo)

- Spreadsheet shows products involved in errors during specified time

Custom Search Report Results

Row(s) 1 to 50 of 412

412 records found matching your search criteria

**Director's Report
June 2004 to May 2005**

Record #	Error Category	Staff type-initiated error	Medication process node	Location of error detail	Contributing factor	Generic name
865125	C	Pharmacist	Transcribing/Documenting	OB services	No access to patient information	Ketorolac
885153	B	Nurse, Registered	Transcribing/Documenting	OB services	A contributing factor not determined	Topical product, general
920232	B	Physician	Prescribing	OB services	Range orders; Workload increase	Zolpidem
924627	D	Nurse, Registered	Administering	OB services	Staff, inexperienced	Promethazine
819623	C	Nurse, Registered	Dispensing	emergency dept	Distractions; No 24-hour pharmacy; Staffing, insufficient; Workload increase	Cephalexin
819967	B	Nurse, Registered	Transcribing/Documenting	emergency dept	A contributing factor not determined	Cephalexin
820134	C	Nurse, Registered	Administering	emergency dept	No 24-hour pharmacy	Magnesium Hydroxide, Alumina, Magnesium Carbonate Co-Dried Gel, and Simethicone
820137	D	Pharmacist	Dispensing	emergency dept	Staff, inexperienced	Hepatitis B Vaccine, Recombinant
837621	B	Nurse, Registered	Transcribing/Documenting	emergency dept	A contributing factor not determined	Lorazepam
837640	C	Nurse, Registered	Administering	emergency dept	Distractions; No 24-hour pharmacy; Workload increase	Hydrocodone and Acetaminophen
845538	B	Nurse, Registered	Transcribing/Documenting	emergency dept	A contributing factor not determined	Cephalexin
845564	C	Physician	Prescribing	emergency dept	Distractions; Emergency situation	Enoxaparin

Error Outcome Category Report

06/01/2004 - 05/31/2005 (All Your Facility's Records)

		All Errors Category A-I n=688 (100%)		Actual Errors Category B-I n=403 (59%)		Errors that reached the patient Category C-I n=188 (27%)		Errors that reached the patient and caused Harm or Fatality Category E-I n=0 (0%)	
Error Category	Result Of Error	Number Of Errors	% of Total	Number Of Errors	% of B- I	Number Of Errors	% of C- I	Number Of Errors	% of E-I
No Error									
Category A	Circumstances or events that have the capacity to cause error.	285	41.42%	N/A		N/A		N/A	
Error, No Harm									
Category B	An error occurred but the error did not reach the patient (An "error of omission" does reach the patient).	215	31.25%	215	53.35%	N/A		N/A	
Category C	An error occurred that reached the patient but did not cause patient harm.	168	24.42%	168	41.69%	168	89.36%	N/A	
Category D	An error occurred that reached the patient and required monitoring to confirm that it resulted in no harm to the patient and/or required intervention to preclude harm.	20	2.91%	20	4.96%	20	10.64%	N/A	
Error, Harm									
Category E	An error occurred that may have contributed to or resulted in temporary harm to the patient and required intervention.	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Category F	An error occurred that may have contributed to or resulted in temporary harm to the patient and required initial or prolonged hospitalization.	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Category G	An error occurred that may have contributed to or resulted in permanent patient harm.	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Category H	An error occurred that required intervention necessary to sustain life.	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Error, Death									
Category I	An error occurred that may have contributed to or resulted in the patient's death.	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Product Summary Report

Category D Errors Product Summary Report

June 04 - May 05(Saved Search)

Product Name	Number of times product selected
Enoxaparin	4
Amino Acids with Electrolytes	3
Carbinoxamine, Pseudoephedrine, and Dextromethorphan	1
Dextrose 5% in Water and Sodium Chloride 0.45%	1
Hepatitis B Vaccine, Recombinant	1
Ipratropium	1
Lorazepam	1
Methylprednisolone Sodium Succinate	1
Promethazine	1
Warfarin	1
Rosiglitazone	1
Morphine Sulfate	1
Metformin	1
Levalbuterol	1
Hydrocodone and Acetaminophen	1
Glyburide and Metformin	1
Diazepam	1
Digoxin	1

Searches

- Predefined Searches

- Summary Report

- Spreadsheet shows severity, node, location of errors during specified time

- Top Five Types of Error Drill Down (demo)

- Spreadsheet shows top five error types and their top three causes, contributing factors, level of staff making error, and products involved during specified time

- Top Five Generic Names Drill Down

- Spreadsheet shows top five generic names and their top three causes, contributing factors, level of staff making error, and products involved during specified time

Custom Search Data

Row(s) 1 to 42 of 42

42 records found matching your search criteria

Summary Report of Prescribing Errors June 04 - May 05

Preview	Record #	Error category	Medication process node	Generic name
<input type="checkbox"/>	819631	B	Prescribing	Albuterol
<input type="checkbox"/>	819931	B	Prescribing	Risperidone
<input type="checkbox"/>	819963	B	Prescribing	Albuterol
<input type="checkbox"/>	820083	B	Prescribing	Ipratropium
<input type="checkbox"/>	820084	B	Prescribing	Fluticasone
<input type="checkbox"/>	820085	B	Prescribing	Vitamin Combinations, Miscellaneous
<input type="checkbox"/>	820087	B	Prescribing	Enoxaparin
<input type="checkbox"/>	820115	B	Prescribing	Cephalexin
<input type="checkbox"/>	820117	B	Prescribing	Valdecoxib
<input type="checkbox"/>	820118	B	Prescribing	Promethazine
<input type="checkbox"/>	820122	B	Prescribing	Insulin, Isophane, Human and Insulin, Regular, Human
<input type="checkbox"/>	820371	B	Prescribing	Aspirin
<input type="checkbox"/>	820380	B	Prescribing	Albuterol
<input type="checkbox"/>	820382	B	Prescribing	Enoxaparin
<input type="checkbox"/>	820385	B	Prescribing	Acetaminophen
<input type="checkbox"/>	837600	B	Prescribing	Morphine Sulfate
<input type="checkbox"/>	845529	B	Prescribing	Insulin, Aspart
<input type="checkbox"/>	845546	B	Prescribing	Potassium Chloride
<input type="checkbox"/>	883343	B	Prescribing	Propoxyphene Napsylate and Acetaminophen
<input type="checkbox"/>	883360	B	Prescribing	Acetaminophen, Aspirin, and Caffeine
<input type="checkbox"/>	883367	B	Prescribing	Cyclobenzaprine

Top Five Types of Error Drilldown

Top Five Errors Categories C-I
June 04 - May 05

Type Of Error	Top 3 Causes	Top 3 Contributing Factors	Top 3 Level of Staff, Made	Top 3 Generic Names
Omission error (70) *	Performance (human) deficit (28) Procedure/protocol not followed (21) Documentation (14)	A contributing factor not determined (45) Distractions (10) Staff, inexperienced (9)	Nurse, Registered (54) Nurse, Licensed Practical/Vocational (6) Unit Secretary/Clerk (5)	Cefazolin (4) Furosemide (4) Pneumococcal Vaccine Polyvalent (3)
Improper dose/quantity (35)	Performance (human) deficit (11) Procedure/protocol not followed (8) Communication (7)	A contributing factor not determined (25) Distractions (7) No 24-hour pharmacy (3)	Nurse, Registered (28) Pharmacist (2) Nurse, Licensed Practical/Vocational (2)	Hydrocodone and Acetaminophen (7) Enoxaparin (4) Acetaminophen (2)
Unauthorized/wrong drug (32)	Performance (human) deficit (11) Documentation (5) Procedure/protocol not followed (4)	A contributing factor not determined (14) No 24-hour pharmacy (7) Distractions (5)	Nurse, Registered (27) Nurse, Licensed Practical/Vocational (3) Pharmacist (2)	Sodium Chloride 0.45% and Potassium Chloride 20 mEq (3) Oxycodone (2) Promethazine (2)
Wrong time (23)	Procedure/protocol not followed (10) Performance (human) deficit (9) Communication (3)	A contributing factor not determined (12) Staff, inexperienced (5) Distractions (4)	Nurse, Registered (17) Nurse, Licensed Practical/Vocational (2) Pharmacist (2)	Enoxaparin (7) Cefazolin (3) Ampicillin and Sulbactam (2)
Extra dose (16)	Performance (human) deficit (7) Communication (4) Procedure/protocol not followed (3)	A contributing factor not determined (7) Staff, inexperienced (4) Patient transfer (2)	Nurse, Registered (10) Pharmacist (3) Unit Secretary/Clerk (2)	Tolterodine (1) Methylprednisolone Sodium Succinate (1) Furosemide (1)

Note: * denotes number of selections

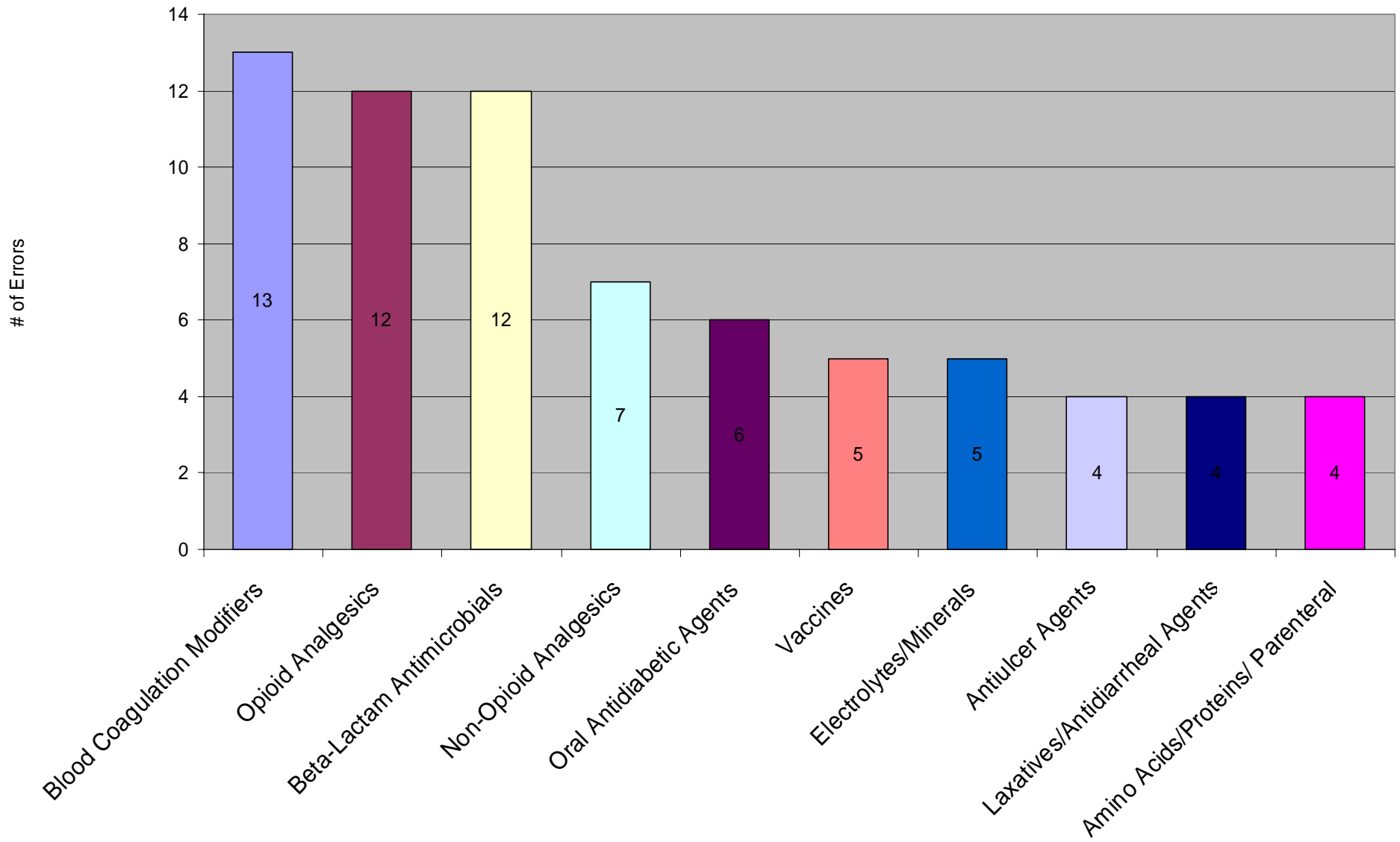


Predefined Graphs

- Top Generic Names
- Top Therapeutic Classes
- Top Types of Error
- Top Causes of Error

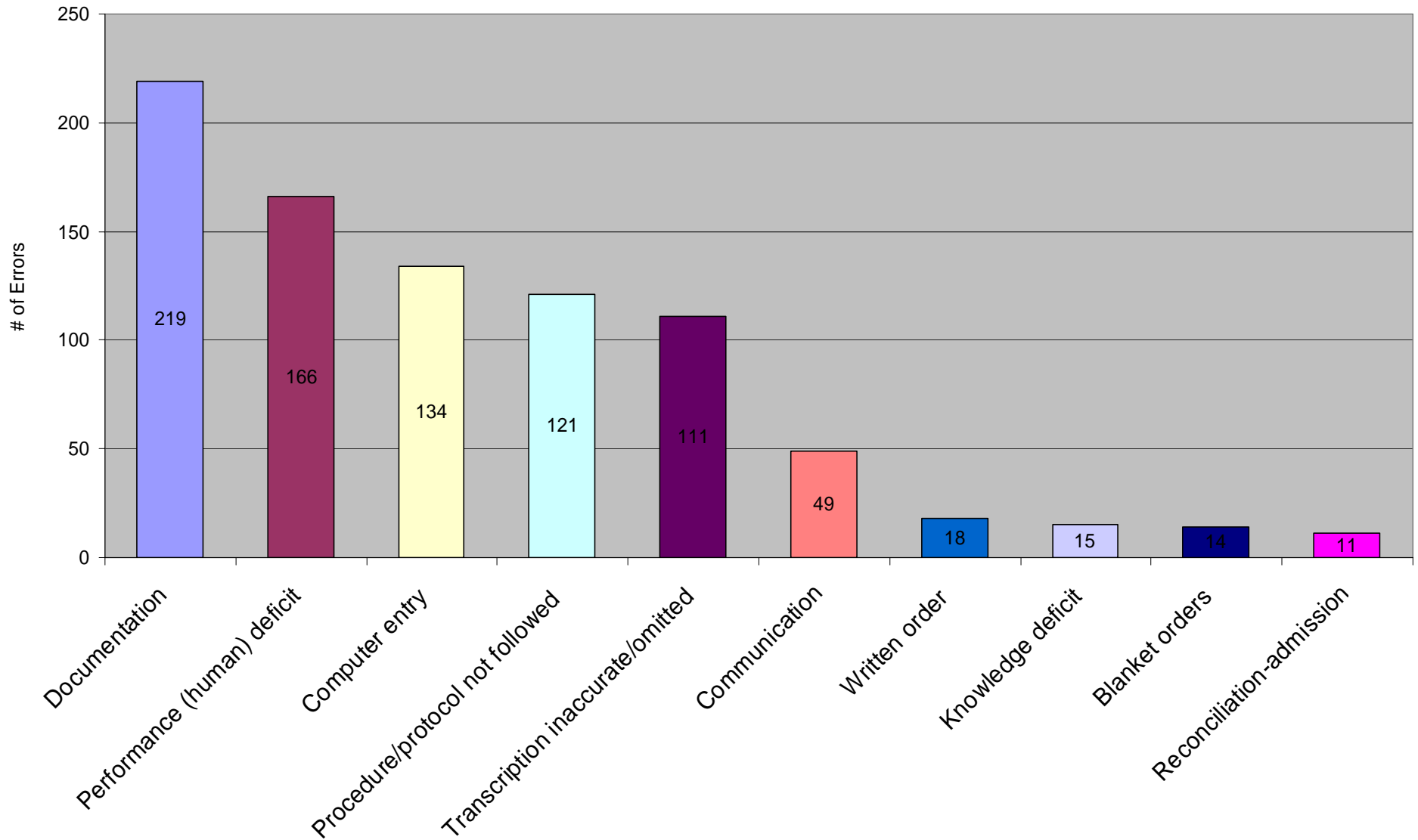
Your Facility Top Therapeutic Class of Errors that Reached the Patient

from 6/1/2004 to 5/31/2005

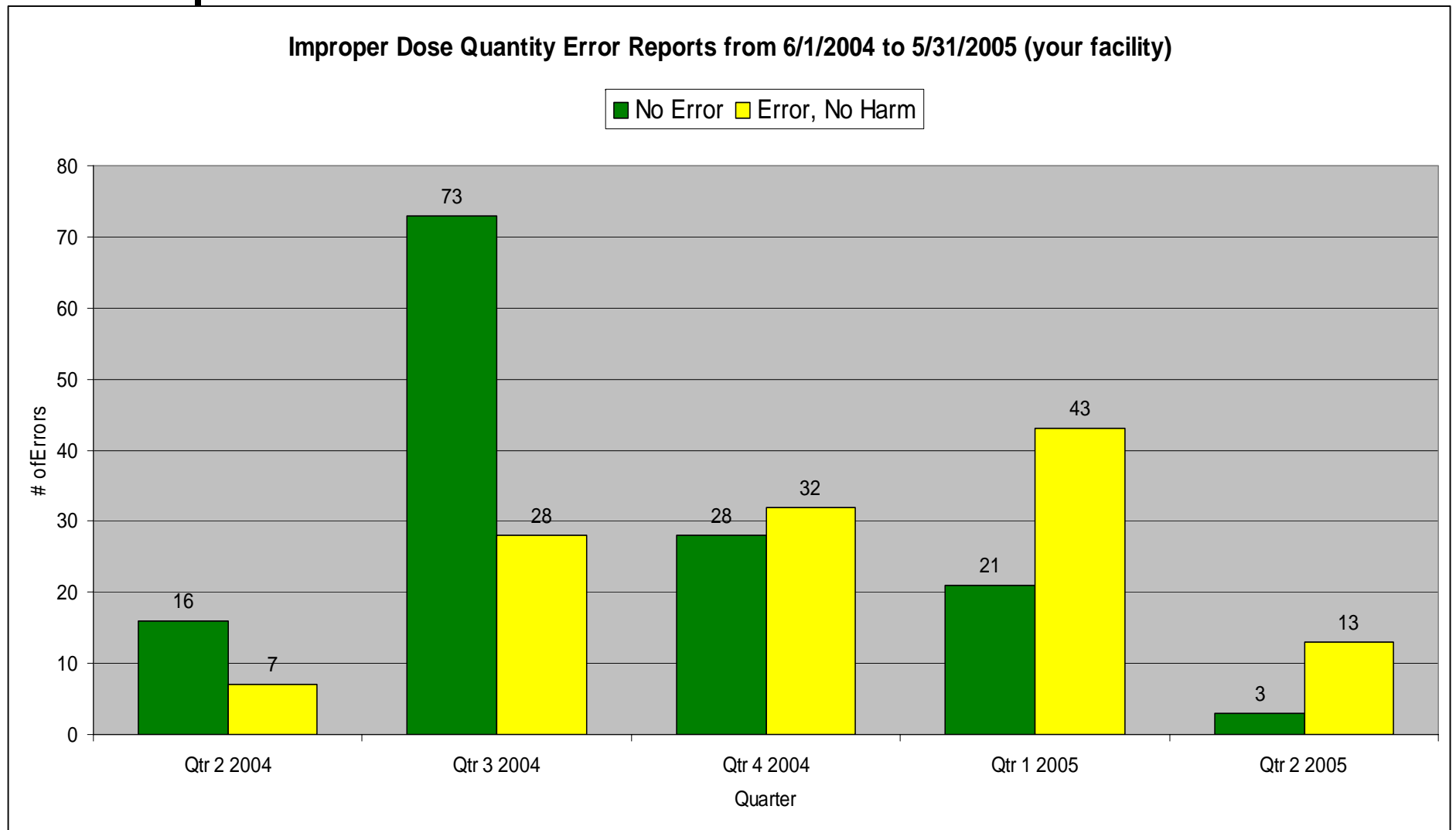


Your Facility Top Error Cause All Error Categories

from 6/1/2004 to 5/31/2005



Graphic Trending...useless





Predefined Spreadsheet Totals

- Spreadsheet Tally by Month, Quarter, Year
 - Date of Error
 - Error Category
 - Desired Field (Type, Cause, Node, Location)
- Total Number of Reports over time

Spreadsheet Tally

Medication process node
Spreadsheet Tally for Nodes For All Severity Categories
June 04 - May 05

Medication process node	Jun 04	Jul 04	Aug 04	Sep 04	Oct 04	Nov 04	Dec 04	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Total
Administering	10	17	19	9	10	13	8	13	8	17	11	4	139
Data not provided	0	0	0	0	0	0	0	0	0	0	0	0	0
Dispensing	7	6	3	1	2	1	1	4	3	1	1	1	31
Does not apply	26	51	44	25	14	5	14	10	24	41	24	7	285
Monitoring	0	0	0	0	0	1	0	1	0	0	0	0	2
Prescribing	1	3	8	4	3	2	4	4	1	3	8	1	42
Procurement	0	0	0	0	0	0	0	0	0	0	0	0	0
Transcribing/Documenting	13	15	15	14	15	11	11	23	16	30	13	13	189

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MEDMARXSM6.5 is to be used solely as part of Licensee's internal quality improvement process.

- MEDMARX**
- Logoff
- Notices**
 - View Notices
 - Send Message
- Record**
 - New Record
 - Find and Update
 - Batch Release
- Search**
 - By Record Number
 - Predefined Searches
 - Saved Searches
 - Custom Search
 - Graphs/Charts
- Admin**
 - Batch Update
 - User Administration
 - Forms
 - Facility Profile
- Tools**
 - Interface

Custom Search

Please indicate the fields below you want searched or displayed in your custom report table. Each field that you check will appear on the next page and you will be able to search this field and indicate whether you want this field to be displayed.

Required Fields

- | | |
|--|---|
| <input type="checkbox"/> Error category | <input type="checkbox"/> Source of records |
| <input type="checkbox"/> Date of error | <input type="checkbox"/> Date record was entered |
| <input type="checkbox"/> Description of error | <input type="checkbox"/> Type of error |
| <input type="checkbox"/> Cause of error | <input type="checkbox"/> Contributing factor |
| <input type="checkbox"/> Medication process node | <input type="checkbox"/> Staff type-initiated error |
| <input type="checkbox"/> Location of error | <input type="checkbox"/> Generic Name |
| <input type="checkbox"/> Error result on level of care | <input type="checkbox"/> Patient age |

Additional Fields

- | | |
|---|--|
| <input type="checkbox"/> Brand name | <input type="checkbox"/> Manufacturer |
| <input type="checkbox"/> Therapeutic classification | <input type="checkbox"/> Route of administration |
| <input type="checkbox"/> Strength-Concentration | <input type="checkbox"/> Labeler |
| <input type="checkbox"/> Dosage form | <input type="checkbox"/> Type of container |
| <input type="checkbox"/> Size of container | <input type="checkbox"/> Number Of Occurrences |
| <input type="checkbox"/> Time of error | <input type="checkbox"/> Day of week |
| <input type="checkbox"/> Source of order | <input type="checkbox"/> Root cause analysis summary |
| <input type="checkbox"/> Staff type-perpetuated error | <input type="checkbox"/> Staff type-discovered error |
| <input type="checkbox"/> Action taken | <input type="checkbox"/> Action taken detail |
| <input type="checkbox"/> Gender | <input type="checkbox"/> Historical Other |

User Defined Fields

- | | |
|---|--|
| <input type="checkbox"/> Compounded ingredients | <input type="checkbox"/> Investigational drug name |
| <input type="checkbox"/> Location of error detail | <input type="checkbox"/> Internal control |

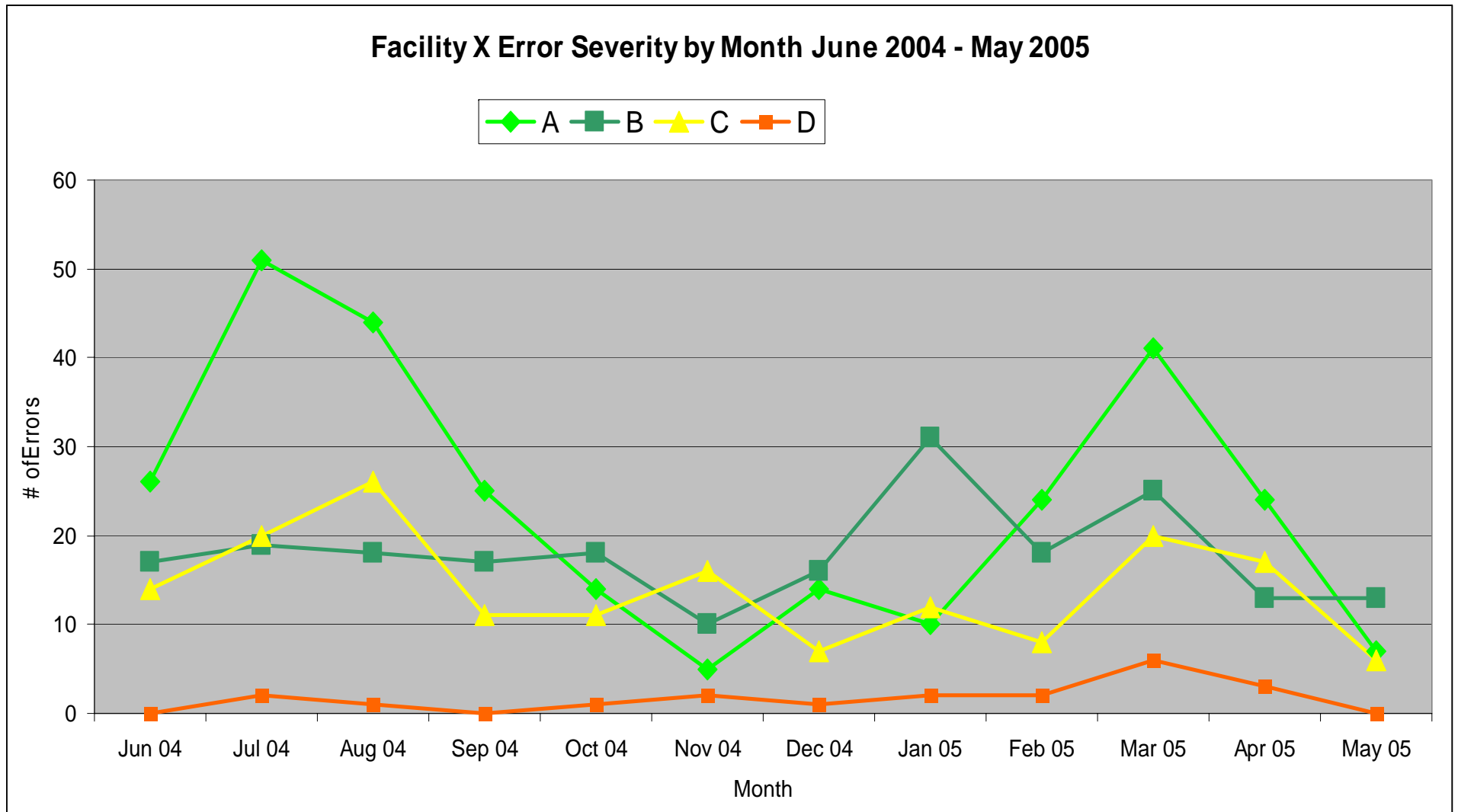


Suggested Quarterly Graphs

- Track Your Shared Organizational Goal:
Maximize Reporting of Potential & Near Miss Errors (A & B Error Reports)
 - Error Severity by Month
 - Severity Pie Chart
- Process Node Pie Chart

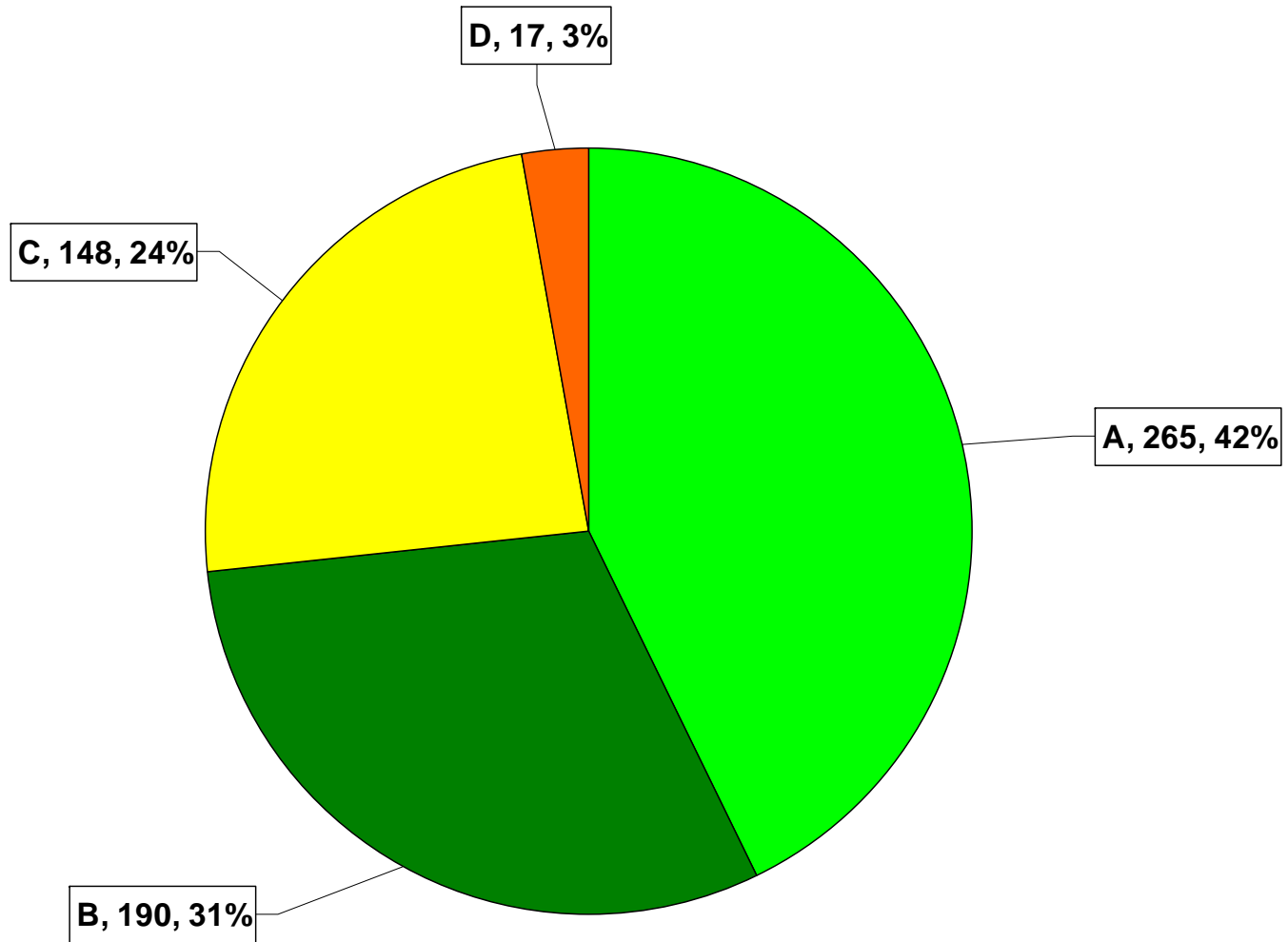


Error Severity Over Time



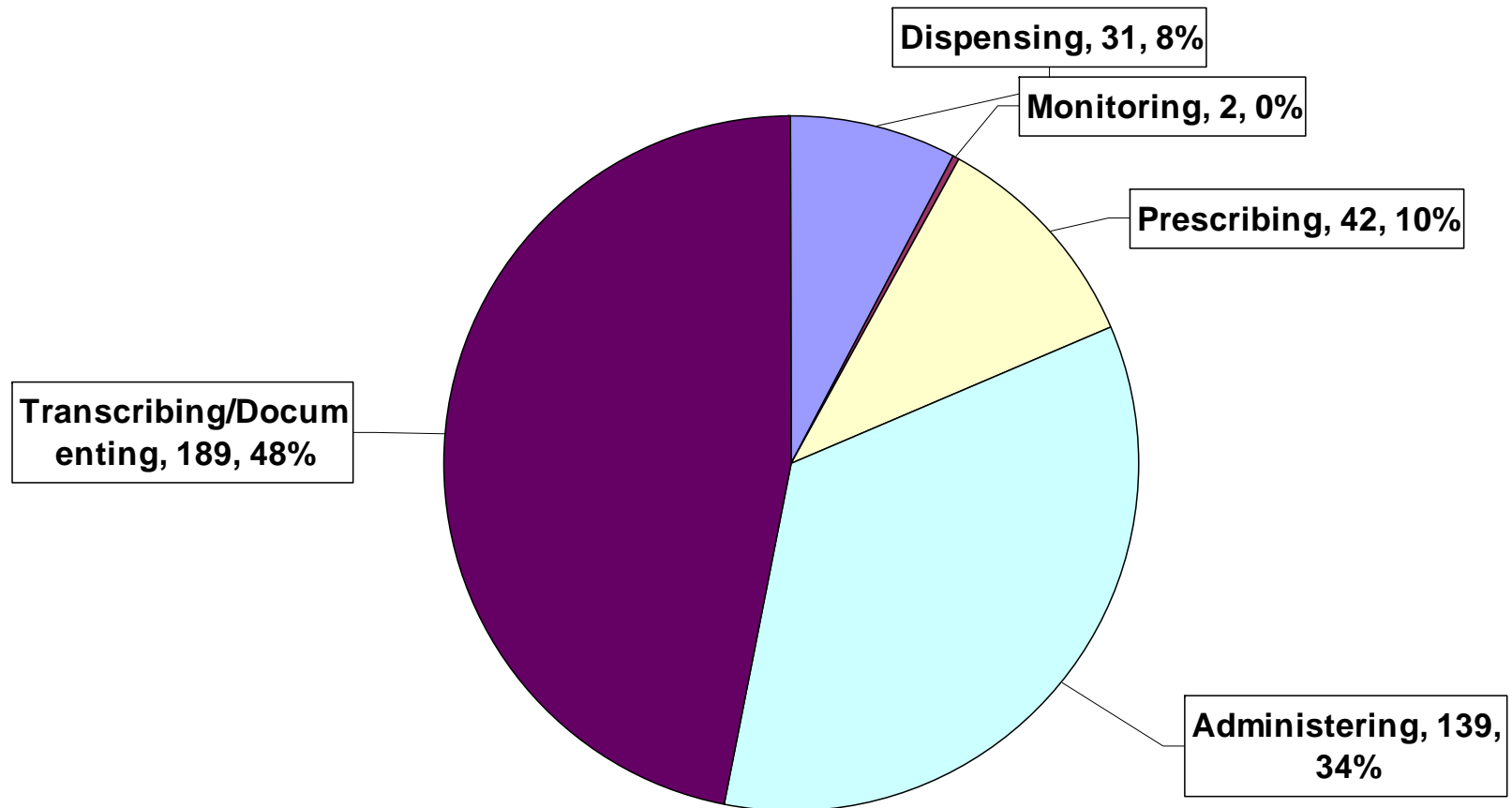
Severity Pie Chart

Error Severity from 6/1/2004 to 5/31/2005 (your facility)



Node Pie Chart

Medication Process Node from 6/1/2004 to 5/31/2005 (your facility)





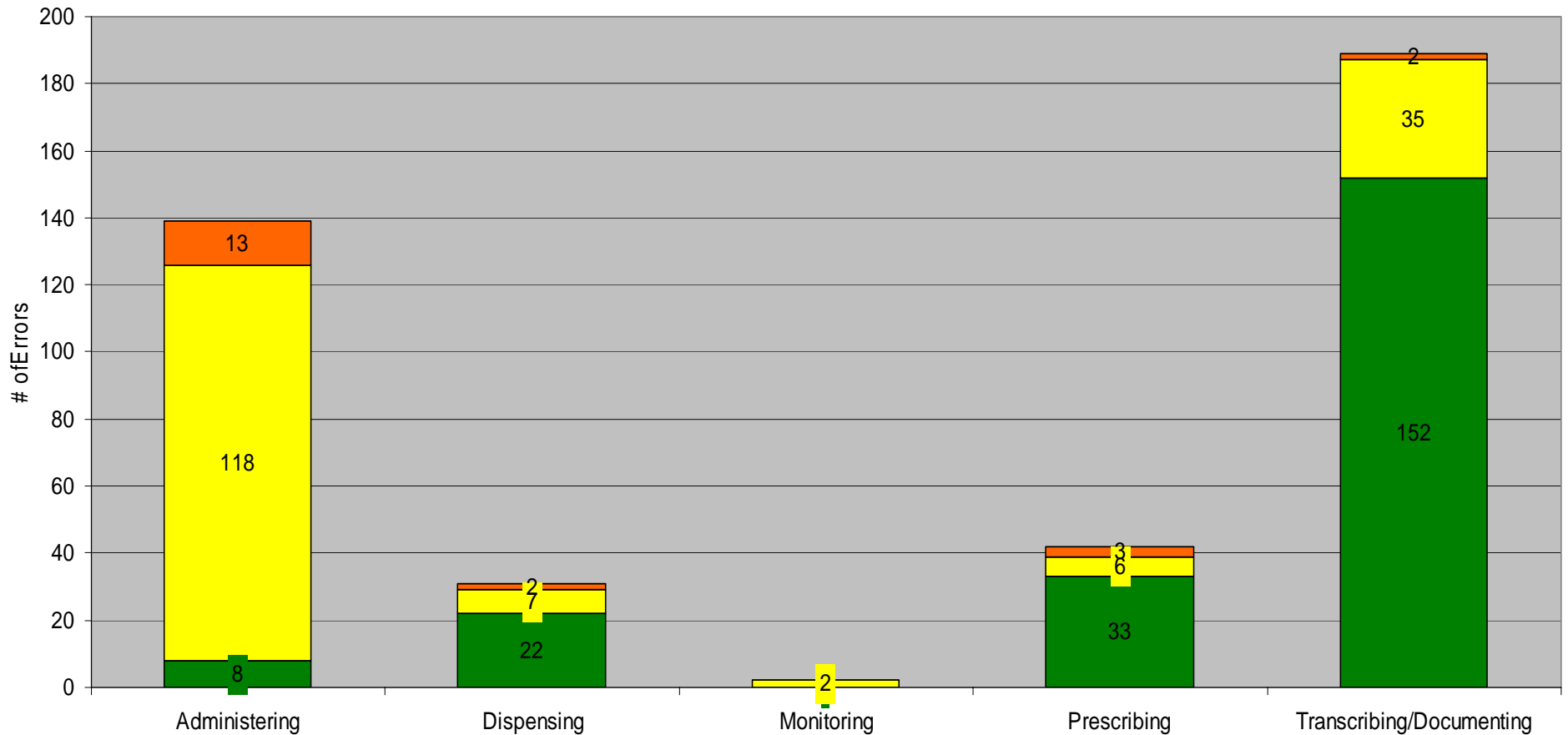
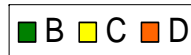
Suggested Quarterly Graphs:

- Stacked columns to slice your data by severity
 - Nodes by Severity
 - Types by Severity
 - Causes by Severity
 - Location by Severity



Nodes by Severity

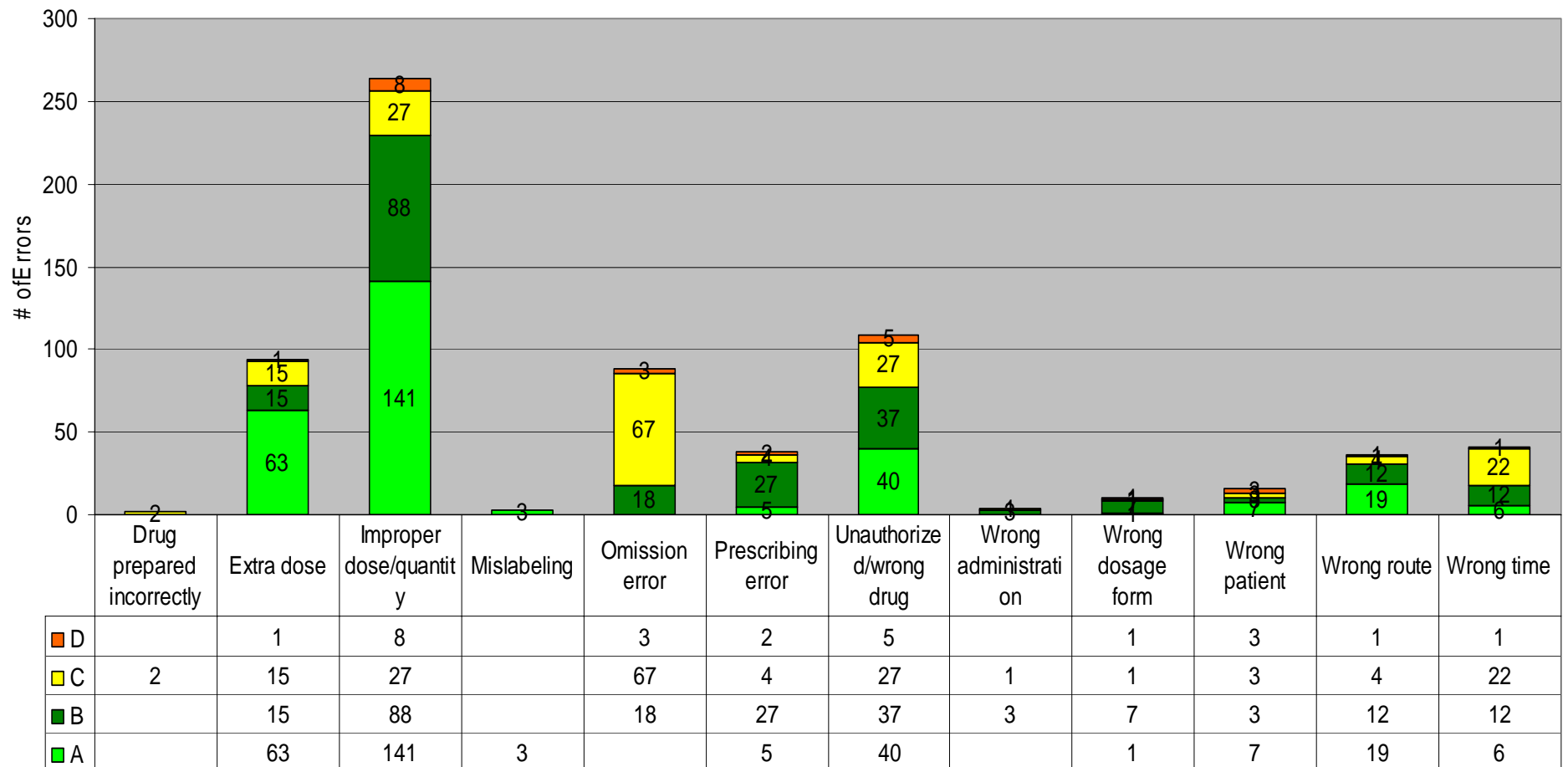
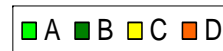
Medication Nodes by Severity from 6/1/2004 to 5/31/2005





Type By Severity

Type of Error by Severity from 6/1/2004 to 5/31/2005 (your facility)



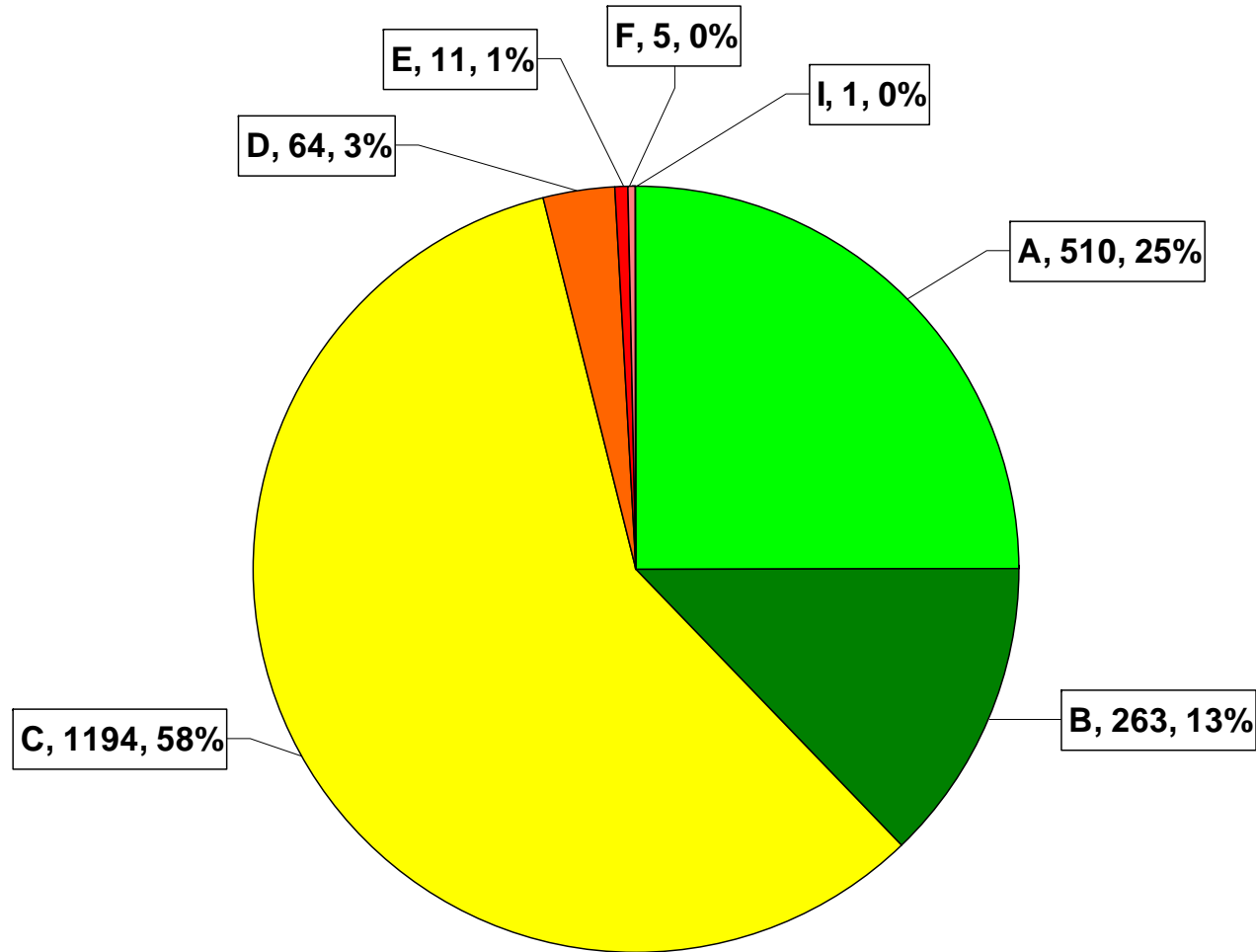


Benchmarks – definition??

- Error Severity by size
- Reporting by phase
- Harmful error types
- How common is my error?
- What did others do about it?
 - In hospitals my size reporting to MEDMARX
 - In all hospitals reporting to MEDMARX

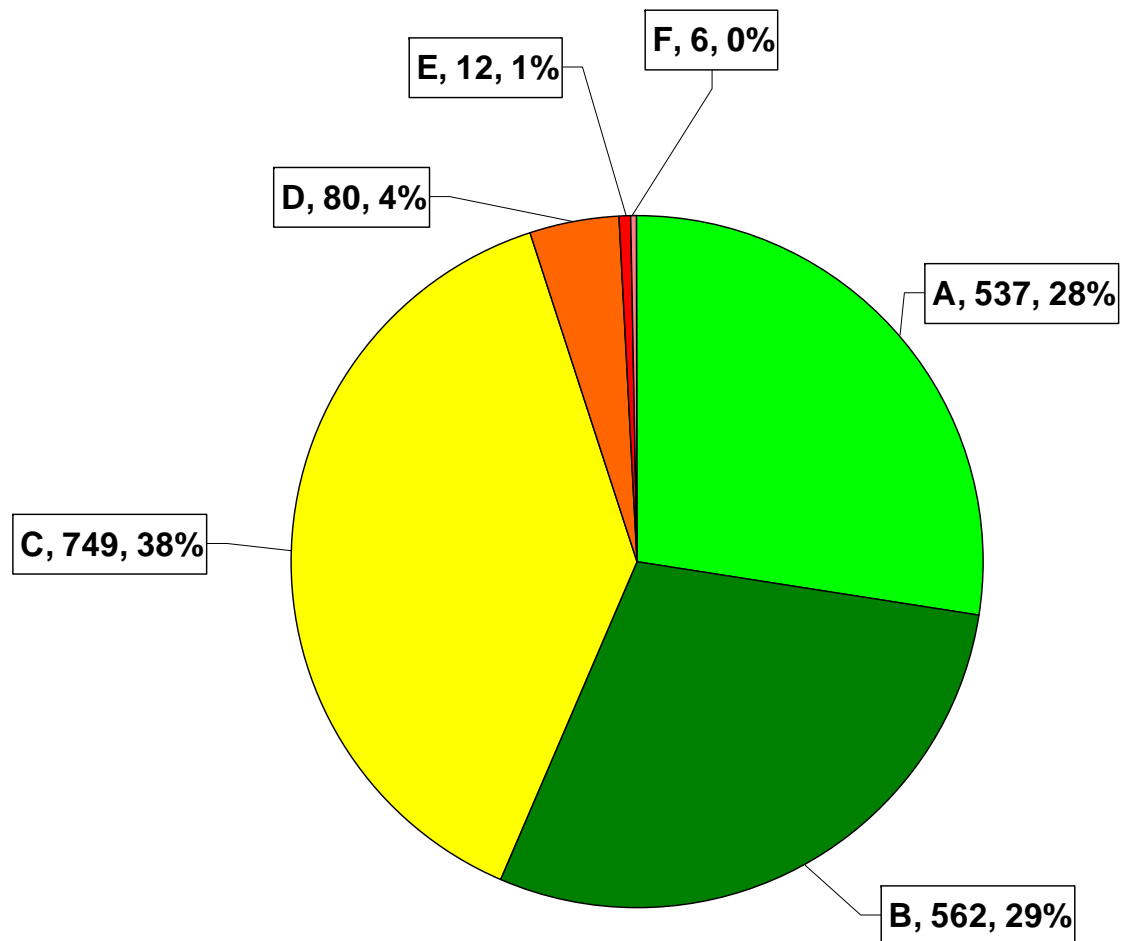
Severity Benchmark 1-10 Beds

Aggregate Error Severity of 19 Critical Access Hospitals (Average Occupancy 1 - 10 Beds) 2004



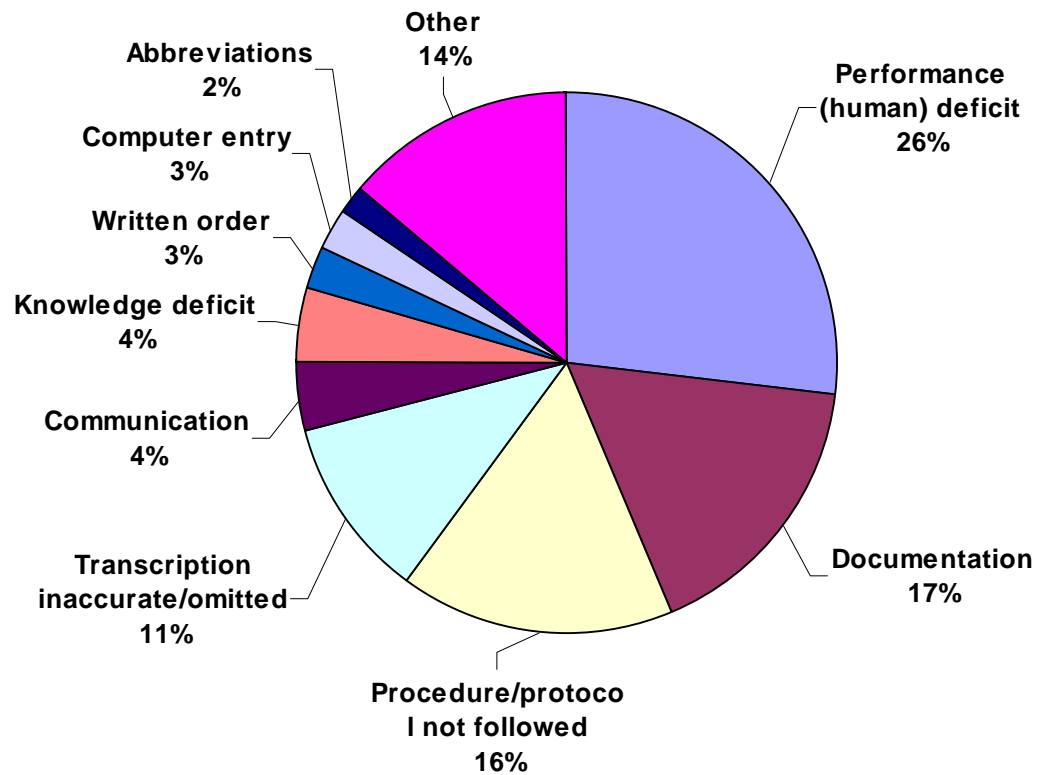
Severity Benchmark 11-25 Beds

Aggregate Error Severity of 13 Critical Access Hospitals (Average Occupancy 11 - 25 Beds) Reporting to Medmarx in 2004



Cause Benchmark CAHs

Aggregate Causes of Error in 32 Critical Access Hospitals Reporting to Medmarx in 2004





Detective Work...

- Are we really different?
 - Severity
 - Phase
 - Types
- Has this error happened elsewhere?
- How often?
- In which size hospital?
- What level of staff was involved?
- What did they do about it?



Questions



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