Medication Error Reduction Plan (MERP)
San Francisco General Hospital and Trauma Center
2016 SB 1875 Annual Report

Health and Safety Code 1339.63: subdivision (d)

Medication-related errors can occur in the following areas:

- Prescribing
- Prescription order communication
- Product labeling
- Packaging and nomenclature
- Compounding
- Dispensing
- Distribution
- Administration
- Education
- Monitoring
- Use

Plan Elements

1. **Evaluate, assess**, and include a method to address each of the procedures and systems listed under subdivision (d) to identify weakness or deficiencies that could contribute to errors in the administration of medications.
2. **Annual review** to assess the effectiveness of the implementation of each of the procedures and systems listed under subdivision (d).
3. **Modified** as warranted when weaknesses or deficiencies are noted to achieve the reduction of medication errors.
4. Describe the **technology** to be implemented and how it is expected to reduce medication errors.
5. Include a system/process to proactively identify actual or potential errors. Shall include concurrent and retrospective review of clinical care.
6. Multidisciplinary process to regularly analyze all identified actual or potential errors and describe how the analysis will be utilized to change current procedures and systems to reduce errors.
7. Include a process to incorporate external medication-related error alerts to modify current processes and systems as appropriate.

Note: Plan Elements #1-4 are defined within the grids on the following pages and #5-7 are located on page 25.

PRESCRIBING: OVERVIEW OF PLAN ELEMENTS

Strategy for Reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology
a) Implement computerized physician order entry (CPOE) in Inpatient areas	1999 IOM report on medication errors coupled w/development of technology and reports indicating CPOE's efficacy in reducing prescribing errors	2002-2015	**2002:** Core committee formed **2003:** Sorian to be new organizational IT platform for financial & clinical functions **2004:** Committees to implement Sorian clinical applications continue to develop Sorian CPOE **2005:** Delay in Sorian project **2007:** Sorian project postponed indefinitely: CPOE software is loaded into Invision **2008:** Funding source for Invision CPOE being explored **2009:** Hospital IT Steering Committee has placed this as high priority project **2010:** No modifications to date. **2011:** Committees established (Steering, Status Group, Electronic Order-Set, Nursing, Physician, Pharmacy) with significant work ongoing for CPOE pilot scheduled in 2012. **2012:** CPOE pilot initiated in May with FIS service on 5D. CPOE is now operational for all services who admit patients to 4D, 5A, 5C, 5D, 6A (gynecology), 7D, and PACU. **2013:** CPOE functionality continues to be expanded, with conversion of existing forms (heparin, insulin, comfort care). CPOE rollout to 4B in October 2013. **2014:** CPOE expanded to ICUs. Existing order forms continue to be converted to CPOE. Work continues on transfer pathway, with anticipated implementation in early 2015. **2015:** Transfer pathway, e-Kardex, and nurse order acknowledgement implemented. CPOE in the ICU paused with the intention to relaunch after the move to the new hospital to address issues. "Rules" implemented to warn providers about INRs for warfarin orders and anticoagulation limitations for epidural orders	Implementation of CPOE involves use of technology to reduce the number of prescribing and pharmacy order entry errors (drug name, strength, route and frequency)

b) Hire clinical pharmacists to assist in dosing and selection of appropriate medication: Anticoagulation, Oncology, Critical Care, Emergency Department, etc	To augment clinical expertise and support for these specialties.	2007-2015	**2007:** 4 clinical pharmacists hired (psychiatry, ACE, ED, oncology) **2008:** 4 clinical pharmacists hired (anticoagulation, critical care, med-surg) **2009:** 3 additional clinical pharmacists hired (med-surg, ADR, ED) **2010:** 2 additional clinical pharmacist hired to cover Pediatrics & ED, allowing additional coverage to Critical Care **2011:** 2 additional clinical pharmacists hired to maintain ADR coverage and new presence in Psychiatric Emergency Services. **2012:** 9 additional clinical pharmacists hired to establish coverage in PACU/OR, Womens' Health, Informatics, and to expand coverage in ambulatory care and medicine. **2013:** OR Satellite Pharmacy opens, providing clinical services to the OR and PACU. Pharmacy response to Code Blue initiated, with coverage Monday through Friday from 7-3:30 PM. **2014:** 4 additional clinical pharmacists hired to maintain Infectious Diseases coverage and expand coverage in other patient care areas. **2015:** 2 additional clinical pharmacists hired as float coverage. **2015:** Trauma team coverage started Q4 of 2015	N/A
c) Development of protocols and orders forms to address specific medications or disease states	In addition to continuous improvements to existing order forms, medication errors and sub-optimal ordering/monitoring were identified through error reporting and quality improvement projects	2011-2015	**2011:** Development of protocols/forms for DKA, use of argatroban (approved 2012), SFBHC admission **2012:** Development of protocols/forms for phenobarbital use in ED for alcohol withdrawal, PES admission, Comfort Care in ED, Pediatric Intensive Care Electrolyte Replacement, Pediatric Neurosurgery Admission, Pediatric ICU Pain and Sedation, Amiodarone Infusion, Argatroban, Peripheral Nerve Block. **2012:** Revision of existing order forms: BAPAC (pediatric and adult), Bebulin, NovoSeven, ICU insulin and DKA protocol, Acute Ischemic Stroke Intervention Order Set, Surgical Prophylaxis, Infant Circumcision, Heparin Infusion, Transitional	Use of hospital intranet to post pre-printed order forms

			Newborn, NICU Admission, Continuous Aerosolized Medications for ICU Patients, Chemotherapy Order Form, Alcohol Withdrawal. **2013:** Development of forms for: Ophthalmology Peri-op, Sepsis Order Set for Non-ICU Patients, Trauma Surgery ICU Pediatric Admit Orders **2013:** Revision of existing forms: Psychiatry Admission Form, 6G Intracardiac KCl order form, Spinal Cord Injury Admit Orders (Critical Care – ICU, 4B), Outpatient Contraceptive Implant Insertion Procedure, ICU Sepsis Orders, Kidney Biopsy Orders (Inpatient and Outpatient), 6C Labor and Delivery Epidural Physician Orders, Pediatric Intensive Care Electrolyte Replacement, 6C Admission Orders, 6C Post-Vaginal Birth Orders, Initial Ventilator Order Set **2013:** Revision of existing policies/protocols: Misoprostol use for cervical ripening, 6M Vaccine policy, Birth Center Patient Controlled Epidural Analgesia, Non-Cytotoxic Hazardous Drugs Management, Drug Recalls, Oral Administration of Parenteral Dexamethasone (Pediatrics), Malignant Hyperthermia Response, Hypertonic Saline, Cytotoxic Hazardous Drugs Management. **2013:** Development of policies/protocols for: Use of Fentanyl Transdermal Patch, Oral Morphine for Neonatal Abstinence Syndrome, Tranexamic Acid, Hydroxyprogesterone Caproate Injection (Makena®) Administration, COPC Adult Standing Orders, IV Magnesium Sulfate Administration for Acute Asthma Exacerbation in Pediatric Patients **2014:** Development of forms for: Pediatric Admission Orders, Adult ICU Admission Orders, Neurosurgery TBI Admission Order Set, Postoperative Pain Management Order Form (Gynecology, Urology, Orthopedics pilot), TBI Floor Admission Orders, Olanzapine Order Form, 4C Wound Clinic and Wound Care Provider Orders, OB Triage Orders, ICU Continuous Neuromuscular	

			Blockade Orders, Non-ICU Comfort Care Opioid Infusion Order Sheet, Opioid Infusion Order Sheet (not Comfort Care), Pediatric Continuous Albuterol Physician Order Form, Pre-Surgery Holding Room Orders **2014:** Revision of existing forms: Neonatal Standard Drip Preparation Worksheet, Chemotherapy Order Form, PCA Order Form (Adult & Pediatric), ICU Oral Phosphate Repletion, Wound Care Center Provider Order Form, ICU Pain and Sedation Orders, 6C Birth Center Admission Orders, 6C Birth Center Post-Vaginal Birth Orders, 6C Birth Center Post C-Section Birth Orders, Psychiatry Admission Orders, Women's Option Procedure Order Form, Interventional Radiology- TACE Order Form, Bay Area Perinatal AIDS Center (BAPAC) Physician Orders for Mom, Bay Area Perinatal AIDS Center (BAPAC) Physician Orders for Baby, Pediatric Convulsive Status Epilepticus, Pediatric Admission Orders, Pre-Op Cesarean Delivery Orders, Pediatric PACU Physician Order Form, Pre-op Antibiotic Order Form **2014:** Revision of existing policies/protocols: Routine Vaccination for Hepatitis A & B for Primary Care Adult Patients, Tetanus Booster, Cytotoxic Ordering, Primary Care RN Standardized Procedures (UTI & URI) **2014:** Development of policies/protocols for: Ethanol Lock Technique for Prevention of Central Line Associated Bloodstream Infections (CLABSIs) Policy, Cytotoxic Bleomycin Protocol for Dermatology **2015:** Development of forms for 6C OB Discharge Medication Order Form, Pediatric Post-Op Pain Order Form, and Reversal of Direct Oral Anticoagulants **2015:** Revision of existing forms: Chemotherapy Order Sheet, Pediatric Continuous Albuterol, Fetal Demise/Termination Labor and Postpartum Orders, Adult Traumatic Brain Injury Admission Orders (Non-ICU), Adult Medical/Surgical Orders, Adult ICU	

			Admission Orders, PACU Physician Orders, Critical Care Organ Donation, Adult DKA and HHS Physician Order Form (ICU only), CVVH Physician Order Form, Adult Post-Op Multimodal Pain Management Order Form (all services), Epidural Physician Order Form, Stroke Pathway Physician Order Form, Zoledronic Acid Physician Order Form, Neonatal/Pediatric TPN Order Form, BAPAC Physician Forms (for infants and mothers), Clozapine Order Form **2015:** Revision of existing policies/protocols: Guidelines for Management of Medical Induction for Spontaneous Demise or Pregnancy Termination, Neuraxial Guidelines and Addendum (new oral anticoagulants) to Periprocedural Guidelines **2015:** Development of policies/protocols for: Neonatal Status Epilepticus **2015:** Revision of current order forms to show "alteplase (r-TPA)" on ICU Adult Admission Orders Physician Order Form, Spinal Cord Injury Admit Orders, Acute Ischemic Stroke (Fibrinolytic) Alteplase (r-tPA) Order Form, Stroke Clinical Pathway Order Form, Pulmonary Embolus-Thrombolytic Recombinant Tissue Plasminogen Activator (Alteplase, r-TPA) form, and Inpatient Hemodialysis form. Revision of Nerve Block Form, Development of new Intracerebral Hemorrhage (ICH) Admission Orders, **2015:**New Chemotherapy Extravasation Form, Intraoperative Orders for Surgical Services, and Pediatric Surgical Antibiotic Prophylaxis order form. Revisions to Clozapine Order Form, Alcohol Withdrawal Guidelines, Pediatric Status Epilepticus Guidelines, Pediatric Admission Form, Pediatric Continuous Albuterol Order Form, Adult Continuous Albuterol Physician Form, Reversal agent Praxbind for TSOAC (Target Specific Oral Anticoagulants) Order Form.	
d) Establishing and implementing policy for verification of	A trend with adverse drug reactions involving accidental opioid overdoses was noted	2011-2015	**2012:** FMEA completed, and plan to have a policy for verification of high risk opioid pain medication established, to be implemented in	CPOE alerts to remind providers to verify doses of high risk opioid pain medications

high risk opioid pain medications	from 2010-2012. August 2012 Joint Commission Sentinel Event Alert focused on the safe use of opioids in the hospital setting to prevent accidental overdoses.		2013. **2013:** Implementation delayed in order to develop robust education plan, with plan for implementation in 2014. **2014:** Development of education plan continues, implementation delayed pending finalization of education plan. **2015:** No modifications	when admitting patients with chronic pain.
e) Development of guidelines for anti-thrombosis guidelines for patients with neuraxial procedures	To reduced risk of adverse events (bleeding) during coadministration of anticoagulants and epidurals, guidelines were developed by anesthesia and the anticoagulation service	2011-2015	**2011:** Guidelines implemented **2012:** Guidelines updated to include new anticoagulants **2014:** Guidelines updated to reflect consolidation of recommendations between UCSF, SFGH, and VASF **2015:** Guidelines updated to include management of novel oral anticoagulants	Guidelines posted on intranet for all services to access. Pop-up in Siemens for all epidural products warning of interaction with anticoagulants.
f) Chemotherapy manual contains standardized regimens approved for use at SFGH	SFGH Chemotherapy Manual was developed several years ago to standardize approved chemotherapy regimens and is maintained by the Hematology-Oncology Department	2015	**2015:** Chemotherapy Manual updated with current recommended regimens	Chemotherapy Manual is available on hospital intranet for provider usage.

PRESCRIPTION ORDER COMMUNICATION: OVERVIEW OF PLAN ELEMENTS

Strategy for Reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology
a) A list of prohibited dangerous abbreviations and unacceptable methods of expressing doses is established	Monthly audit of medical records to assess compliance with hospital's Do-Not-Use (DNU) Abbreviations List, established as required by TJC NPSG 02.02.01 to ensure safe order communications.	2002-2015	**2002:** Signs and flyers in patient care areas **2003:** List of prohibited abbreviation established; manual quarterly order interventions by RPhs **2005:** DNU abbreviations eliminated from Invision LCR Rx writer **2010:** No modifications through 2010 **2011:** Addition of "Biweekly", etc to DNU list per Q3 2010 ISMP recommendations **2012:** No modifications through 2012 **2013:** No modifications through 2013 **2014:** No modifications through 2014 **2015:** No modifications through 2015	DNU abbreviations in Invision (LCR Prescription Writer) were eliminated to comply with TJC
b) Use of Invision system as backbone for Medication	Patient Safety & Quality literature suggests medication reconciliation as one of many safe practices for better	2007-2015	**2005:** Pilot implemented **2007:** Full implementation completed. **2007:** ED Med Rec form created. **2007:** OR Med Rec process implemented	Invision system can be accessed by all disciplines. Orders are sent to Invision directly from Siemens

Reconciliation Process: Taskforce consists of physicians, nurses, IT and pharmacy meet bimonthly; training for MD by MDs	patient care. It is also one of The Joint Commission's National Patient Safety Goals (TJC-NPSG #8) to improve communication of patient medication information throughout the continuum of care.		**2008:** Home Med List function in Nursing Admission Database **2008:** Improved formatting & nomenclature changes to printed forms & Invision function buttons **2009:** To address prescribing errors in SFBHC pts admitted to the hospital, new pop-up window implemented to alert prescribers to use the current hospital med list, not the outpatient med list which is normally used for a standard admission. **2010:** Additional physician order sheets printed from Invision for handwritten orders for increased legibility of patient identifiers **2011:** Taskforce created working group, meeting weekly, to develop new Med Rec module to accommodate e-Prescribing, inpatient CPOE, and outpatient systems **2012:** "Enterprise" medication reconciliation module implemented, allowing for meaningful use and including medication lists from inpatient CPOE (Invision/LCR), and outpatient systems (HERO, ED, Laguna Honda, and CareLinkSF). **2012:** New Medication Reconciliation Module work group formed to develop new module to be used in Invision with the goal of making the reconciliation process more accurate and robust. The module will allow for electronic prescribing (e-Rx) of outpatient medication upon admission via CPOE, and e-Rx of medication upon discharge. Implementation in Summer 2013. **2013:** New Medication Reconciliation Module to be used with the goal of making the reconciliation process more accurate and robust. The module will allow for electronic prescribing (e-Rx) of outpatient medication upon admission via CPOE, and e-Rx of medication upon discharge. Pilot May 2013, pilot ceased in June 2013 for continued development. **2014:** New Medication Reconciliation Module and Discharge/ePDP module initiated in April 2014. The module will allow for electronic prescribing (e-Rx) of outpatient medication	Pharmacy system. Medication Reconciliation instructions are also posted on Invision for all disciplines to access as necessary.

			upon admission via CPOE, and e-Rx of medication upon discharge. This should provide consistent, documented med reconciliation going forward that will be integrated directly into the discharge paperwork both for the use of the patients and outpatient providers. Four medication reconciliation techs hired to provide assistance in med list completion. **2015:** no new modifications	
c) Use of Siemens Pharmacy system to provide printed MAR	Internal review of order transcriptions showed discrepancies between pharmacy and nursing, which identified an area for improvement.	2007-2015	**2007:** Fully implemented in Med-Surg units **2009:** Implementation plan to roll out to Perinatal & Psychiatry postponed to early 2010 **2010:** Implemented in Psychiatry successfully (analysis completed) **2011:** No modifications through 2011 **2012:** Units that have converted to MAK (electronic) medication administration charting updated so that they no longer generate printed MARs. **2013:** No modifications through 2013 **2014:** No modifications through 2014 **2015**: No modifications through 2015	Use of Siemens Rx system to decrease transcription errors
d) Use of Siemens Pharmacy system to provide electronic Medication Administration Check & Communication (MAK)	Internal review of order transcriptions showed discrepancies between pharmacy and nursing, which identified an area for improvement.	2008-2015	**2008:** Electronic MAR pilot implemented in 5C **2009:** Multidisciplinary group met regularly to fix complex problems identified in 5C implementation prior to going live in 5D. Roll out to all other Med-Surg areas planned for early 2010. **2010:** Implemented in 5D; identified obstacles (wireless connection, hardware issues) **2011:** MAK implemented on 5C, 5D, 5A, & 4D; internal audits show less transcription error on MAK units **2012:** MAK implemented on 4B, 6A (gynecology), 7A, 7B, 7C, 7D, 7L. **2013:** No modifications through 2013 **2014:** No modifications through 2014 **2015:** Implemented in 6H (NICU) and 6A (Pediatrics)	Use of Siemens Rx system to decrease transcription errors, provide clinical alerts, real-time lab values, drug info, co-signatures, monitoring, record of injection sites.
e) Pre-printed order forms reviewed, revised and posted	MUSS/P&T reviews & approves new & revised order forms with medications to	2002-2015	**2002:** Implemented **2008:** Taskforce established to ensure preprinted physician orders are reviewed and	Use of hospital intranet to post pre-printed order forms

	on Hospital Intranet, standardized method of obtaining forms	improve legibility, to aid in standardization of therapy, and to decrease potential ambiguity of orders.		revised at least every 3 years **2009:** Process fine-tuned to eliminate obsolete order forms and q 3yr review calendar is followed **2010 May:** Date printed to display on the forms as they are printed to identify old forms that may have been stockpiled that should no longer be used. **2011:** Forms revised to eliminate therapeutic duplication in PRN orders with QA audits **2012:** Twenty-one forms reviewed and approved. **2013:** Thirteen new forms reviewed and approved. Thirteen pre-existing forms revised. **2014:** Thirteen new forms reviewed and approved. Nineteen pre-existing forms revised. **2015:** Eight new forms reviewed and approved. Thirty pre-existing forms revised.	
f)	Evolution of E-fax into E-prescribing for discharge, outpatient pharmacy, and clinics	E-prescribing allow for meaningful use of electronic prescribing, facilitate better medication use information throughout the continuum of care, and streamline workflow	2011-2015	**2011:** E-prescribing capability developed; plan for implementation with new Med Rec module in April 2012 for inpatient (and outpt clinic) discharges. CareLinkSF (eCW) rollout in clinic begins. **2012:** Enterprise Med List established in LCR, where medication lists from Invision/LCR. CareLinkSF (eCW), ED PulseCheck, HERO (PHP Clinic), Jail Health, and Laguna Honda Hospital can be accessed and vi ewed in one location. **2012:** New Medication Reconciliation Module work group formed to develop new module to be used in Invision with the goal of making the reconciliation process more accurate and robust. The module will allow for electronic prescribing (e-Rx) of outpatient medication upon admission via CPOE, and e-Rx of medication upon discharge. Implementation in Summer 2013. **2013:** New Medication Reconciliation Module pilot initiated in May 2013, pilot put on hold in June 2013 for continued development. **2013:** CareLinkSF (eCW) rollout continues, now active in most COPC clinics and GMC. This system provides various tools for	Utilization of Invision/LCR as central location where outpatient and inpatient lists can be viewed. Utilizing a new electronic system (eCW) to improve outpatient clinic prescribing.

			outpatient providers to improve outpatient medication management. Medication reconciliation performed and allergies checked at each visit. Medical and prescription history is available at the point of prescribing. E-prescribing reduces illegible prescriptions and errors from oral miscommunications. Warning system for allergies, side effects and drug interactions reduces medication errors. Adherence is improved through timely response to electronic medication refill requests. **2014:** New Medication Reconciliation Module and Discharge/ePDP module initiated in April The module will allow for electronic prescribing (e-Rx) of outpatient medication upon admission via CPOE, and e-Rx of medication upon discharge. This should provide consistent, documented med reconciliation going forward that will be integrated directly into the discharge paperwork both for the use of the patients and outpatient providers. Four medication reconciliation techs hired to provide assistance in med list completion. **2015**: Implementation of electronic reconciliation enables providers to more completely address ALL inpatient and outpatient medications at the point of discharge, which was a major gap in the program before.	

PRODUCT LABELING: OVERVIEW OF PLAN ELEMENTS

Strategy for Reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology
a) List of Hazardous Drugs per NIOSH and Handling Policy & Procedures established	To assist with preventing any unnecessary exposure to hazardous drugs and their effects as identified by NIOSH. Those drugs to have special labeling and pop-up window in Omnicell (as applicable) to alert staff.	2010-2015	**2010:** Policy and procedures rolled out in Nov 2010 **2011:** reviewed annually. No modifications through 2011. **2012:** Reviewed annually **2013:** List of Hazardous Drugs revised with new medications per latest NIOSH recommendations. A new separate policy	If drug is stored in Omnicell, pop-up window alerts the nurses on precautions to take. If drug is to be stored in the pt's own cassette, a separate alert sticker is affixed in the pharmacy.

			was established for the management of non-cytotoxic hazardous medications. Grading system for exposure risk and necessary precautions established. Pharmacy IT continues to explore strategies to identify & display hazardous drugs in medication dispensing systems. **2014:** Siemens drug database updated to automatically print labeling of hazardous and cytotoxic on pharmacy labels. **2015**: Updated list pending approval and implementation in 2016	
b) Infrastructure established to improve quality of medication labeling	Two areas where improvements were needed in medication labeling. Need to standardize labeling capabilities for medications dispensed from Omnicell. Also a need to upgrade labeling capabilities for unit dose medications dispensed from Inpatient Pharmacy.	2013-2015	**2013:** Infrastructure put in place and tested for printing labels directly from Omnicell machines. Policies and procedures being developed for appropriate usage of Omnicell labeling capabilities. New labels will also allow for barcoding on IV medications. Plan for implementation Q1-2014. **2013:** Infrastructure put in place and tested for new DataRay printer in Unit Dose. New printer will allow for improvements such as designating medications with special handling precautions, and use of tall man lettering. Plan for implementation Q1-2014. **2014:** Implementation of Omnicell label printing capability completed for all units. Labels are now generated for all IVs dispensed from Omnicell. RNs are also able to generate labels ad hoc. Med Pass auditing tool (CalNOC) modified to include Omnicell generated labels in med pass process. **2015**: No modifications	Harnessing capabilities of the Omnicell upgrade to improve labeling of medications in patient care areas. Using new printer in Inpatient Pharmacy to improve labeling of unit dose medications.

PACKAGING AND NOMENCLATURE: OVERVIEW OF PLAN ELEMENTS

Strategy for Reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology
a) List of Look-Alike/Sound-Alike Drug alert established, staff	Identified as good practice for safe medication use and to comply with TJC's NPSG 03.03.01	2004-2015	**2004**: Implemented **2007:** List of high alert medications modified **2008:** Additional modification to list **2009:** Additional modification to list	List is available on hospital intranet for hospital staff to view.

education materials distributed annually reviewed			**2010:** List reviewed for modification with change in formatting for increased utility **2011:** List updated to reflect current medications used **2012:** List updated to reflect current medications used **2013:** List updated to reflect current medications used **2014:** Labeling of medication storage in Inpatient Pharmacy reviewed to ensure alignment with hospital Look-Alike/Sound-Alike Drug List **2015:** Look-Alike/Sound-Alike Drug List reviewed and updated to reflect current medications used.	

COMPOUNDING: OVERVIEW OF PLAN ELEMENTS

Strategy for Reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology
a) Compliance to USP 797 Regulations	USP 797 gap analysis performed to identify areas for improvement	2005-2015	**2005:** Implemented **2006:** Installation of MIC **2007:** P&P's changed to comply with USP regulations **2008:** Additional changes to P&Ps **2009:** Hospital Rebuild plan incorporates automated compounding & clean room **2011:** See MERP POC regarding air sampling **2012:** P&Ps modified to clarify and describe preparation of IV admixtures in more detail. Expansion and remodel of IV compounding area in Inpatient Pharmacy, allowing for stricter compliance with USP 797 guidelines. **2013:** No changes through 2013 **2014:** Designated staff members attended Critical Point conference for education about compounding standards, to be implemented in pharmacy facilities in 2015. **2015**: Critical point training implemented to all pharmacy staff to complete and integrated into annual competencies	N/A
b) Concentrations are standardized for	Identified as good practice for safe medication use per	2002-2015	**2002:** Implemented prior to 2002 **2008:** Implemented in neonates/pediatrics	**2009:** Posted on Hospital Intranet

Neonates and Adults	TJC's Medication Management Standards and other patient safety literature.		**2009:** Weight-based standard concentration worksheet for neonates for Rx and Nursing calculations; All neonate IV orders (except emergency & drugs w/short stability) are mixed by Pharmacy **2010:** Additional changes to Neonatal worksheet for clarity; implementation of IV Smart pumps for adults **2011:** Smart pump drug library for neonates created (clinical pediatric pharmacist) to be implemented 2012; significant creation of short-codes in Siemens for neonatal orders, "Adult IV Master Formula" table implemented in pharmacy to standardize preparation, concentrations, and expirations **2012:** Smart pump drug library for neonates implemented. "Pediatric/Neonatal IV Master Formula" table implemented in pharmacy to standardize preparation, concentrations, and expiration dates. **2013:** Standard concentration of adult norepinephrine drips changed to reduce fluid volume. Crash carts and Smart pump libraries updated. **2014:** Number of standard concentrations for fentanyl continuous infusions reduced from two to one to eliminate errors attributed to having two standard concentrations. **2014:** Neonatal morphine concentrations changed from 0.2mg/ml to commercially available 0.5mg/ml, decreasing need for manual pharmacy pre-packing. Plan for implementation in 2015. **2015:** Perioperative concentrations changed to match institution standard concentrations. **2015**: Neonatal morphine concentration changed to commercially available concentration to decrease manual pre-packing	**2011:** Utilized Siemens system to promote consistent preparation during pharmacy transcription
c) Expansion of IV compounding area in pharmacy	Cramped working space in the inpatient pharmacy likely contributing to errors	2011-2015	**2011:** Significant planning completed for expansion of inpatient pharmacy with implementation 2012. **2012:** Expansion of IV compounding area in pharmacy. New IV compounding area now fully operational. **2013:** Significant planning completed for	N/A

			expansion of chemotherapy compounding area with implementation 2014. **2014:** Expansion of IV chemotherapy compounding in pharmacy. Now IV chemotherapy compounding area now fully operational **2015**: No modifications through 2015. Plan for new cleanroom/laminar flow hoods/chemo compounding robot in new hospital for 2016	
d) Chemotherapy preparation standards table created for pharmacy	Standards for consistent compounding practices (stock, dilution, and expiration) of standard chemotherapeutic agents to ensure consistent, safe ordering and pharmacy preparation	2011-2015	**2011:** Tables created, approved Feb 2012 **2012:** Tables modified to include new chemotherapeutic agents. **2013:** Tables modified to include new chemotherapeutic agents and to address implementation of Equashield® closed system drug transfer device. **2014:** No changes through 2014 **2015:** Tables updated to reflect recommendations for use of second generation Equashield® devices	N/A
e) Closed system drug transfer device (Equashield®) for compounding and administering hazardous drugs implemented	The National Institute for Occupational Safety and Health (NIOSH) has recommended that in addition to the use of personal protective equipment (PPE), healthcare workers should use a closed system drug transfer device (CSTD) in order to minimize exposure to hazardous drugs and their adverse effects.	2013-2015	**2013:** Equashield® use implemented in compounding and administration of cytotoxic hazardous medications. **2014:** No changes through 2014 **2015:** Second generation Equashield products implemented to improve safety in compounding and administration of cytotoxic medications.	N/A.
f) Compounding vincristine in minibags instead of syringes eliminates the risk of potentially fatal intrathecal administration	Multiple organizations, including ISMP, have cited the compounding of in syringes as a risk factor for intrathecal injection. ISMP has vincristine set the conversion of compounding vincristine in minibags instead of syringes as a 2014-2015 hospital goal	2014-2015	**2014:** Multidisciplinary discussion about change in compounding practice, with agreement for changing vincristine packaging to minibag instead of syringe. Plan for implementation in 2015. **2015:** Vincristine and vinblastine packaging standards changed from syringe to minibag.	N/A
g) Barcode scanning of medications prior	Barcode scanning of medications prior to compounding to eliminate risk	2015	**2015**: Plan for utilization of barcode technology prior to compounding **2015:** Plans for new hospital pharmacy	Use of barcoding technology and improved packaging to reduce risk of compounding an

to compounding	of admixing incorrect product		include carousels for unit dose medications, a chemotherapy compounding robot, barcoding technology in the compounding process (DoseEdge), new electronic inventory system (WorkFlow Rx), and a clean room for IV compounding with laminar flow hoods	order with the wrong medication.

DISPENSING: OVERVIEW OF PLAN ELEMENTS

Strategy for Reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology
a) Omnicell system upgraded to improve automated medication dispensing in patient care areas.	Upgrades available from Omnicell utilizing technology to improve the medication use process	2012-2015	**2012:** Omnicell system upgraded, utilizing biometric technology, larger screens to show more specific patient information. Open matrix shelves were also removed from Omnicells in long term care areas to limit medication access. **2013:** Infrastructure put in place and tested for printing labels directly from Omnicell machines. Policies and procedures being developed for appropriate usage of Omnicell labeling capabilities. New labels will also allow for barcoding on IV medications. Plan for implementation Q1-2014. **2014:** Capability for patient-specific medication labels to be printed by staff from Omnicell implemented. **2015**: Increased widespread use of biometrics at Omnicells	Utilizing capabilities afforded by Omnicell upgrade to improve access to medications
b) Using Universal Medication Schedule (UMS) as preferred language of discharge medication instructions given to patients	Simplifying and standardizing medication administration instructions can reduce potential errors by ensuring that directions are stated in a way that is easy for patients to understand	2013-2015	**2013:** Current language used for discharge medications reviewed and UMS was discussed as a preferred language of discharge medication instructions **2014:** UMS language for prescription instructions programmed into eCW, SFGH, and CBHS pharmacy software. Further improvements to UMS integration in eCW planned for 2015. **2015**: Integration removed due to eCW limitations and increased potential for errors. Pharmacy staff incorporating UMS language into outpatient labels. **2015**: Font size of outpatient labels changed	N/A

			per Board of Pharmacy regs.	
c) Barcode scanning of medications	Barcode scanning of medications prior to dispensing to Omnicell (ADM) to reduce rick of wrong medication stored in Omnicell	2015	**2015**: Plan for utilization of barcode technology and improved packaging to dispense from pharmacy into Omnicell.	Use of barcoding technology

DISTRIBUTION: OVERVIEW OF PLAN ELEMENTS

Strategy for Reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology
a) Regular drug shortage updates, distributed to pharmacy staff/leadership	Significant drug shortages across a variety of drug classes have impacted hospitals and providers choices in therapy and lead to errors by medication delay. (e.g. lorazepam, cisplatin, docetaxel)	2011-2015	**2011:** No modifications **2012:** No modifications **2013:** Policy for managing medication shortages updated to reflect current practices **2014:** No changes through 2014 **2015**: No modifications	N/A
b) Medication refrigerator/freezer temperature log modified and standardized throughout the hospital to ensure appropriate storage condition of refrigerated drugs, appropriate documentation and follow up in the event of out-of-range temperature occurrences.	The VFC form was modified to incorporate the hospital-specific need of recording the Min-Max temperature for non-24hr units. The same form is used for all medication refrigerators on site and the same thermometer is used to ensure consistency.	2010-2015	**2012:** Remote monitoring of medication refrigerator/freezer developed, with function for the notification of the appropriate parties for out of range temperatures. To be fully implemented in 2013 pending finalization of policy. Guidance provided from VFC regarding handling of medication during out of range temperature situations **2013:** Policy continues to be developed, with plan for implementation in 2014 **2014:** Due to changes to VFC log form, decision made to use VFC forms in FHC, 6M, and GR1, while the rest of the hospital will use the hospital form. Remote monitoring of refrigerated medications implemented. **2015**: New electronic monitoring system (TEMP Trak) throughout campus. Implemented with out of range alerts via paging system	N/A
c) Barcode scanning	Barcode scanning of	2015	**2015:** Plan to use barcode technology and	Use of barcoding technology

of medications prior to distribution to RN	medications prior to distribution from ADM to RN to reduce distribution errors		improved packaging for distribution from ADM to RN staff in 2016	

ADMINISTRATION: OVERVIEW OF PLAN ELEMENTS

Strategy for Reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology
a) Use of Siemens Pharmacy system to provide electronic Medication Administration Check & Communication (MAK)	Internal review of order transcriptions showed discrepancies between pharmacy and nursing, which identified an area for improvement.	2007-2015	**2007:** Pilot Implemented in Unit 5C **2008:** MAK to provide clinical alerts, real-time lab values, drug info, co-signatures, monitoring, record of injection sites. **2009**: Multidisciplinary group met regularly to fix complex problems identified in 5C implementation prior to going live in 5D. Roll out to all other Med-Surg areas planned for early 2010. **2010 Aug:** Implemented in 5D; identified obstacles (wireless connection, hardware issues) to roll out to other areas. **2011:** MAK implemented on 5A, & 4D **2012:** MAK implemented on 4B, 6A (gynecology), 7A, 7B, 7C, 7D, 7L; Significant education of nursing and pharmacy to support rollout. **2013:** No modifications through 2013 **2014:** No changes through 2014 **2015:** Standard administration times implemented in 6A and 6H, precursors required for MAK **2015:** Implemented in 6H (NICU) and 6A (Pediatrics)	Use of Siemens Rx system to decrease transcription errors
b) Hospital specific IV administration guidelines	Tool to assist Nursing in safe administration of IV medications by detailing where and by whom specific medications can be administered	2003-2015	**2003**: Last revised **2009:** Review initiated; scheduled to be approved 1st Qtr 2010 **2010:** Original approval date postpone **2011:** IV Administration Guidelines update approved, distributed, and posted on intranet **2012:** IV Administration Guidelines revised by a joint nursing-pharmacy group and distributed to nursing leadership **2013:** No modifications through 2013 **2014:** New chemotherapy agents added. Modifications to where dobutamine,	IV Administration Guidelines posted on hospital intranet to facilitate easier access of information by nursing staff at point of care

			hypertonic saline, and insulin drips can be administered. Hazardous drug notations added. Process established for quarterly updates to guidelines. **2014:** Haloperidol IV now allowed on 4B, as it now has monitoring capabilities comparable to the ICU. All IV haloperidol orders must have daily 12-lead EKG orders. IV Administration Guidelines revised to reflect this new change. **2015**: No modifications. (Potential future changes for 4B)	
c) Med-Pass Observations	Nursing QA process to assure correct and safe medication administration procedures	2005-2015	**2005:** Implemented **2008:** MedPass Administration process was enhanced using CalNOC indicators to benchmark **2010:** Med pass audits presented to MUSS; **2011:** Results of audits to be included in Med Error Reports when completed **2012:** No changes through 2012 **2013:** Med pass audits continue to be conducted, with results presented at MERP meetings. Audits continue to use CalNOC benchmark indicators. **2014:** No changes through 2014 **2015**: No modifications. Nursing staff to bring audits to MERP in 2016	N/A
d) Smartpump implementation to improve safety of IV infusions	Standard doses and volumes, soft limits and hard limits for dosing and concentrations when appropriate. Pediatric and adult drug libraries. Unit-based drug libraries for specific monitoring parameters. Includes TALLman lettering	2010-2015	**2010:** Implemented house-wide, pharmacy staff in-serviced **2011:** Continued updated of IV pump library; PCA Smartpumps rollout completed; Plan to complete Neonatal Smartpump pilot and capability for wireless updates of pumps in 2012 **2012:** Neonatal Smartpumps initiated on 6H. Adult ICU Smartpump libraries updated so that standard drip concentrations can be more easily selected. Adult Smartpumps were given wireless capabilities allowing updates to be communicated instantaneously. **2013:** No modifications through 2013 **2014:** Pump library amended to alert staff that calcium chloride should be infused through a central line. **2014:** Due to errors with magnesium sulfate	Smartpump allows for additional safety stops at point of administration. Wireless capability allow for consistent updating to all active pumps.

			40gm/580ml administration outside of 6C, plan to restrict this volume and concentration to administration only in 6C and 4E/5E/5R. **2015**: Implementation of new BBRAUN pumps in OR maintaining standard concentrations. **2015:** Plan for a new library (level 3 or 4) for Med Surg in 2016 to signify increased level of care	
e) Electronic medication ordering and administration record (EDIS) in the emergency department	Comprehensive electronic patient care system in ED allows for more precise, electronic medication ordering, tracking, and review.	2011-2015	**2011:** Implemented **2012:** Expanded EDIS to allow charting of medications given in the ED to include those given after a patient is admitted but remained physically in the ED, preventing duplicate dosing once the patient is moved to an inpatient unit **2013:** No modifications through 2013 **2014:** No changes through 2014 **2015**: No modifications	Electronic records allow medication records to be stored in patients LCR records for review by other providers.
f) Barcode scanning of medications prior to administration	Barcode scanning of medications prior to administration to eliminate risk of administering incorrect medication dose.	2012-2015	**2011, Q4:** Pilot initiated on 4D **2012:** Continued rollout to other MAK units (5A, 5C, 5D, 6A, 4B, 7A, 7B, 7C, 7D, 7L) **2013:** No modifications through 2013 **2014:** Functionality problems with electronic barcode scanners leading to multiple episodes of overrides. New devices purchased with anticipated go live in 2015. **2015:** New barcoding devices implemented on MAK units. Plan to spread hospital wide in 2016 with acknowledgement of workflow limitations	Use of electronic barcode scanners while charting medication administration in electronic MAR (MAK).
g) Transition to new ISO tubing connector standards	Tubing misconnections can lead to severe patient injury and death, since tubes with different functions can easily be connected using luer connectors. New ISO (International Organization for Standardization) tubing connector standards have been developed for manufacturers with plans for phased implementation.	2014-2015	**2014:** Multidisciplinary work group organized to prepare for the transition to Phase I of the new ISO connector standards (enteral connectors) **2015:** Delayed until further notice by manufacturer(s)	N/A
h) Utilizing Omnicell applications to improve workflow		2016	**2016:** Plan for implementation of Anywhere RN, Omni Explorer, Single Point, and other Omnicell applications as appropriate	

EDUCATION: OVERVIEW OF PLAN ELEMENTS

Strategy for reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology
a) Critical Point education for pharmacy staff members	Designated staff members attended Critical Point conference to learn about IV admixture standards, with plan for implementation of standards in hospital pharmacy.	2014-2015	**2014:** Designated staff members attended Critical Point conference. Education modules assigned for all staff members for completion in 2015. **2015**: Critical Point implemented and plan for incorporation into annual competencies in 2016	N/A
b) Revisions to adult inpatient VTE guidelines	Guidelines put in place to standardize practices for inpatient VTE prophylaxis	Pre-2015	**Pre-2015:** In place prior to 2015 **2015:** Guidelines updated to standardize practices based on latest guidelines and align with practices at UCSF and VASF	Available on hospital intranet for dissemination
c) Revisions to surgical prophylaxis guidelines	Guidelines put in place to promote best practices for antibiotic prophylaxis prior to surgical procedures	Pre-2015	**Pre-2015:** In place prior to 2015 **2015:** Guidelines updated to provide more clarity and specificity to the surgical procedure type and antibiotic of choice.	Available on hospital intranet for dissemination
d) Pharmacy residency program (post-graduate year 1/ PGY1)	Encouraging professional development though a formalized post graduate year 1 (PGY1)	Pre 2013-2015	**Pre 2013:** Groundwork and framing for residency program started and visualized into fruition for the first class in 2013 **2013:** First class of pharmacy residents started and completed the program in 2014 **2014:** Second class of pharmacy residents started and completed program in 2015 **2015:** Third class of pharmacy residents staredt and will complete program in 2016. **2015:** Pharmacy Residency program accredited for 6 years	N/A
i) Financial support for pharmacy personnel who wish to pursue professional certification	Encouraging professional development contributes to improved operations and safety.	2014-2015	**2014:** Department of Pharmacy has started to support PTCB certification of pharmacy technicians **2015:** Financial support available from service budget to promote new board certification for pharmacists.	N/A
j) Improve high-risk patient's understanding of discharge medications	HCAPS scores on question: "Do you understand the purpose of your medications?"		**2015:** Received Hearts Grant for "Meducation®" software to facilitate pharmacist and nurse education of patients' medications upon discharge.	On line software platform with 15 user licenses accessible via subscription through July 2017

MONITORING: OVERVIEW OF PLAN ELEMENTS

Strategy for reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology
e) Medication Reconciliation process to prevent Adverse Events and to include patients whenever possible: Taskforce consists of physicians, nurses, IT and pharmacy meet bimonthly; training for MD by MDs	Patient Safety & Quality literature suggests medication reconciliation as one of many safe practices for better patient care. It is also one of The Joint Commission's National Patient Safety Goals (TJC-NPSG #8) to improve communication of patient medication information throughout the continuum of care	2005-2015	**2005:** Pilot implemented **2007:** Full implementation completed. **2007:** ED Med rec form created **2007:** OR Med Rec process implemented **2008:** Home Med List function in Nursing Admission Database **2008:** Improved formatting & nomenclature changes to printed forms & Invision function buttons **2009:** No modifications **2010:** No modifications **2011:** Taskforce created working group, meeting weekly, to develop new Med Rec module allowing for meaningful use and to accommodate e-Prescribing, inpatient CPOE, and outpatient systems **2012:** Enterprise Med List established in LCR, where medication lists from Invision/LCR. CareLinkSF (eCW), ED PulseCheck, HERO (PHP Clinic), Jail Health, and Laguna Honda Hospital can be accessed and viewed in one location. **2012:** New Medication Reconciliation Module work group formed to develop new module to be used in Invision with the goal of making the reconciliation process more accurate and robust. The module will allow for electronic prescribing (e-Rx) of outpatient medication upon admission via CPOE, and e-Rx of medication upon discharge. Implementation in Summer 2013. **2013:** New Medication Reconciliation Module pilot initiated in May 2013, pilot ceased in June 2013 for continued development. **2014:** New Medication Reconciliation Module and Discharge/ePDP module initiated in April **2014**: The module will allow for electronic prescribing (e-Rx) of outpatient medication upon admission via CPOE, and e-Rx of	Invision system can be accessed by all disciplines. Orders are sent to Invision directly from Siemens Pharmacy system. Medication Reconciliation instructions are also posted on Invision for all disciplines to access as necessary.

			medication upon discharge. This should provide consistent, documented med reconciliation going forward that will be integrated directly into the discharge paperwork both for the use of the patients and outpatient providers. Four medication reconciliation techs hired to provide assistance in med list completion. **2015**: Transitions pharmacist hired to oversee the process. **2015:** Plan for increased hospital implementation of discharge counseling, a transitions process, and a discharge hub in 2016.	
f) Unusual occurrence (UO) system to review, investigate & monitor medication errors	Hospital's system for identifying errors; certain med error UO's are referred to Root Cause Analysis Committee and MUSS for further analysis.	2002-2012	**2004:** Hospital-wide electronic UO system implemented **2009:** UO reporting system revamped for easier reporting and better data collection **2010:** UO system rollout postponed due to technical obstacles **2011:** New system implemented in November to allow for easier reporting, more sophisticated analysis of errors. Medication Error Analysis Group (MERP Subcommittee working group) established to review UOs **2012:** No changes through 2012 **2013:** No changes through 2013 **2014:** No changes through 2014 **2015**: No modifications through 2015, potential changes in personnel in 2016	Electronic reporting system allows for information to be assigned, processed and tabulated to gather data for further action to improve patient safety.
g) Anticoagulation clinic and inpatent program monitoring	Monitoring of anticoagulants in concordance with ISMP patient safety goals	Pre-2015-2015	**Pre-2015** Anticoagulation programs in place **2015**: Anticoagulation report to MUSS	N/A

USE: OVERVIEW OF PLAN ELEMENTS

Strategy for reducing Med Errors	1: Evaluation/Assessment	2: Annual Review	3: Modifications	4: Technology

a) Proactive process to examine workflow, identify weak spots, and potentially reduce errors	Lean is a quality improvement methodology which has the potential to reduce errors	2015	**2015**: LEAN methodology and concepts (5S, standard work, 3P, A3) applied to improve processes to be implemented in new hospital. Medication errors can potentially be identified and reduced.	N/A
b) Medication Error Analysis Group, a multidisciplinary group, formed to analyze error data	A multidisciplinary group formed to provide more in-depth analysis of UO data, error trends, and explore new ways to obtain/solicit/ disseminate med error data through hospital.	2010-2015	**2010:** Group formed **2011:** Reformatted Med Error Report to stimulate more meaningful discussion in MERP **2012:** Addition of Med Error "Dashboard" to give a snapshot of UO data along with a quarterly focus area. Presented quarterly at MERP **2013:** No changes through 2013 **2014:** No changes through 2014 **2015**: No modifications through 2015	Med Error Analysis Group analysis error data collected from the electronic Unusual Occurrence (UO) system.
c) Quarterly Neonatal/ Pediatric Error Audit completed by pediatric clinical pharmacist	Initiated to catch errors and near misses in prescribing, order entry, dispensing, and administration that may not be reported through the UO system.	2012-2015	**2012:** Review started in February 2012. Quarterly review presented initially at MERP and later at quarterly joint pediatric physician/nurse/pharmacist meetings. **2013:** No changes through 2013 **2014:** No changes through 2014 **2015:** No modifications through 2015	N/A
d) Improvement in monitoring of controlled substances use	All nursing units conduct ongoing random audits of staff to ensure appropriate dispensing.	2014-2015	**2014:** Reporting format modified to improve how information was communicated. Utilization of Pandora software implemented to identify trends of use. **2015:** Utilizing CURES (California state controlled substances Database) as another source to identify patient CS refills	Pandora software utilized to detect trends in controlled substance dispensing.
e) Improvement of Code coverage by the pharmacy department		2014-2015	**2014**: Started limited coverage of Code Blue coverage by pharmacists **2015:** Plan to increase number of ACLS trained staff with goal of 24/7 pharmacist coverage of Code blue in 2016	

2016 MERP PLAN INITIATIVES AND GOALS

Procedure or System:	Evaluation/Assessment	Plan Modification
Prescribing	In addition to continuous improvements to existing order forms, medication errors and sub-optimal ordering/monitoring were identified through error reporting and quality improvement projects.	Continued development of protocols, order sets and forms to assure safe use of ordering system. Order sets and forms optimized for eventual conversion to CPOE.
	1999 IOM report on medication errors coupled w/development of technology and reports indicating CPOE's efficacy in reducing prescribing errors.	Continued plan of development for implementation of CPOE and integration of different electronic platforms.
Prescription Order Communication	Patient Safety & Quality literature suggests medication reconciliation as one of many safe practices for better patient care. It is also one of The Joint Commission's National Patient Safety Goals (TJC-NPSG #8) to improve communication of patient medication information throughout the continuum of care.	Continued development of medication reconciliation module. Module is electronic but some paper still exists. Plan to complete converting to all electronic sets for 2016. Plan for hiring IT nurses, utilize omnicell applications that incorporate "Safety Stock" (into and out of omnicell bar coding)
Compounding	New hospital with space for pharmacy operations scheduled to open in Q2 2016. New hospital pharmacy facilities will provide an opportunity to implement best practices in technology.	Plans for new hospital pharmacy include carousels for unit dose medications, a chemotherapy compounding robot, barcoding technology in the compounding process (DoseEdge), new electronic inventory system (WorkFlow Rx), and a clean room for IV compounding with laminar flow hoods.
	New hospital will allow space for ICU and ED pharmacy satellites with compounding capabilities. Location of satellites will allow for timely delivery of emergent medications	Plan for pharmacy satellites with compounding capabilities to open with the new hospital in Q2 2016
Dispensing	Barcode scanning of medications prior to dispensing to Omnicell (ADM) to reduce rick of wrong medication stored in Omnicell	Plan for implementing barcoding technology to dispense from pharmacy into ADM in the new hospital scheduled to open in 2016
Distribution	Barcode scanning of medications prior to distribution from ADM to RN to reduce distribution errors	Plan for implementation of barcoding technology in the distribution process in new hospital pharmacy scheduled to open in 2016
Administration	Utilize Omnicell applications to facilitate workflow	Plan for implementation of Anywhere RN, Omni Explorer, Single Point, and other Omnicell applications where applicable
Education	In addition to continuous improvements to existing order forms, medication errors and sub-optimal ordering/monitoring were identified through error reporting and QI projects.	Continuing to develop P&T approved policies and protocols for safe medication use.
	Designated pharmacy staff members attended a Critical Point conference for education about IV admixture standards. Standards to be utilized in hospital pharmacy space. USP 800 education to be completed by all pharmacy staff.	Critical Point education modules assigned for all pharmacy staff members, for completion in 2015 and incorporation into annual competency for 2016.
	Expand use of Meducation ® to team based pharmacists to use as discharge instruction tool with high risk patients	Identify and roll out training plan by Q1 2016

Monitoring	Medication Reconciliation process to prevent adverse events and to include patients whenever possible	Plan for increase hospital implementation of discharge counseling, a transitions process, and a discharge hub

5: Actual or potential errors: System/process to proactively identify; include concurrent and retrospective review of clinical care

a. Quarterly ISMP Action Agenda
b. Sentinel Event Review
c. Trigger Drug Review at MERP
d. Unusual Occurrence (UO) System
e. FMEA process
f. Medication Error Analysis Group

6: Multidisciplinary process: to regularly analyze all identified actual or potential errors and describe how the analysis will be utilized to change current procedures and systems to reduce errors.

a. Risk management review committee (formerly known as Sentinel Event Review Committee)
b. P&T Committee
c. P&T Subcommittees: Nutrition Subcommittee, Medication Use & Safety Subcommittee, Antibiotic Advisory Subcommittee, Formulary Review Subcommittee, Pain Management Subcommittee, Laboratory & Therapeutics Subcommittee, Procedural Sedation Committee (Dec 2008), Medication Error Reduction Program (MERP)
d. Joint Nursing and Pharmacy
e. NAF formerly known as NQICC
f. Chief Residents Meeting
g. EOC Safety Committee
h. Pharmacy-IT Committee
i. Medication Error Analysis Group
j. Code Blue/Critical Care

7: External medication-related error alerts: Process to modify current processes and systems as appropriate

a. ISMP
b. FDA MedWatch
c. Black Box Warnings
d. CSHP InfoSource
e. Recall Notifications from wholesaler, FDA, manufacturer letters, Board of Pharmacy Bulletin, UHC Newsletter