

# **APPENDIX 4**

## **PART ONE**



Department of Corrections  
*and Rehabilitation*



# Pharmacy Operating System (Guardian) Implementation Guide

Executive Sponsor: Betsy Chang Ha

Guide Developers: Ed Mondragon, Doug Mudgett, Jane Robinson and Debra Truelock

October 30, 2007



California  
Department of Corrections  
and Rehabilitation



# Pharmacy Operating System (Guardian) Implementation Guide

Executive Sponsor: Betsy Chang Ha

Guide Developers: Ed Mondragon, Doug Mudgett, Jane Robinson and Debra Truelock

October 30 2007

# Table of Contents / Tab Index

1. Pharmacy Conversion Project Description  
- Project at a Glance
2. Project Checklist
3. Guiding Principles
4. Project Scope
5. Constraints and Assumptions
6. Organizational Structure
7. Governance – Roles and Responsibilities

# Table of Contents / Tab Index, cont'd

8. Standard Software Implementation Deliverables
9. Standard Clinical Implementation Deliverables
10. Project Timeline
11. Project Plan
12. Project Communications

# Table of Contents / Tab Index, cont'd

- Appendix
  - a) Pharmacy Conversion Prioritization Worksheet for Site Readiness
  - b) Clinical Disciplines Training
  - c) Nursing Work Flow Processes and Guardian Touch Points
  - d) Guardian Pharmacy System Training-Care Point

# Pharmacy Conversion Project Description

Executive Summary or "Project at a Glance"

# Pharmacy Conversion Project Description

This is the initial phase of an 18 month pharmacy software implementation project that will result in a patient centered, centralized, efficient and better organized pharmacy system.

During this phase the following will occur:

- Assessment of facilities and medication management system.
  - Personnel
  - Equipment
  - Facility
  - Process, policy and procedure
- Formation of implementation teams at the facility level with support from CPR, CDCR and Maxor.
- Staff Training.
- Installation and support of Guardian software.
- Evaluation of the implementation process utilizing established and consistent metrics and dashboards.
- Establishment of communication mechanisms to ensure timely, effective and pertinent information flow between all stakeholders.

# Project Checklist

# Project Checklist

## MAXOR GUARDIAN SITE IMPLEMENTATION ASSESSMENT

INSTITUTION NAME:

SCHEDULED IMPLEMENTATION DATE:

	RESPONSIBLE PARTY	COMPLETION TIMING PRIOR TO IMPLEMENTATION	COMPLETE X
<b>1. ADMINISTRATIVE</b>			
1.A. Establish local interdisciplinary Pharmacy conversion team, at least 60 days prior to implementation, to meet weekly and to include at least the PIC, DON, HCM, AISA, AW Health Care, and Regional DON.	CPR & local instit.	8 weeks	
1.B. Analyze pharmacy data to determine average # of scripts/day, average # of refills/day, average # of STAT orders, and peaks. Determine workload associated with pharmacy volume.	Maxor, CPR & local Pharmacy conversion team	6-7weeks	
1.C. Begin database population, prior to implementation.	Maxor & local instit.	2 weeks	
1.D. Organize a "Go/No Go" meeting/conference call with Maxor, CPR, and the local pharmacy conversion team prior to the Guardian go-live date.	CPR	1week	
<b>2. WORK FLOW REDESIGN</b>			
2.A. Evaluate local nursing medication delivery process, including points of interface with pharmacy, and create process flowchart (including timeframes).	Maxor, CPR & local Pharmacy conversion team	7 weeks	
2.B. Identify current pharmacy database and methods of system access used by nursing during the medication delivery process.	Maxor, CPR & local Pharmacy conversion team	5 weeks	
2.C. Redesign nursing medication delivery process post-Guardian go live including manual access to MARs and patient profiles.	Maxor, CPR & local Pharmacy conversion team	4 weeks	
2.D. Apply established process measures and baseline.	Maxor, CPR & local Pharmacy conversion team	3 weeks	
2.E. Create a manual process for providing pharmacy profile printouts to LVNs and clinics on a routine basis.	Maxor, CPR & local Pharmacy conversion team	2-3 weeks	

	RESPONSIBLE PARTY	COMPLETION TIMING PRIOR TO IMPLEMENTATION	COMPLETE X
<b>3. STAFFING &amp; TRAINING</b>			
3.A. Using pharmacy data (refer to 1.B ), evaluate adequacy of staffing levels in the pharmacy, C.O 's in medication distribution areas, and nursing. Augment staffing, as necessary.	Maxor, CPR & local Pharmacy conversion team	5 weeks	
3.B. Train LVN's on new pharmacy and medication distribution processes prior to implementation.	Maxor, CPR & local Pharmacy conversion team	2 weeks	
3.C. Provide LVN refresher after implementation.	Local Pharmacy conversion team	1-2 weeks after	
<b>4. TECHNICAL</b>			
4.A. Provide access to Guardian system through the DCHCS network for pharmacy, medical records, and clerical.	CPR	8 weeks	
4.B. Evaluate number and location of existing computer terminals. Augment terminals necessary for Guardian access	Maxor & CPR	4-6 weeks	
<b>5. WORKSPACE</b>			
5.A. Evaluate medication distribution sites. Modify sites and local process as necessary.	CPR & local Pharmacy conversion team	6 weeks	
5.B. Evaluate equipment/supply needs (i.e. carts/tubs for meds).	CPR & local Pharmacy conversion team	4-6 weeks	
5.C. Evaluate pharmacy space (i.e. is there adequate table space, storage area).	CPR & local Pharmacy conversion team	4-6 weeks	
<b>6. INMATE/STAFF NOTICE</b>			
6.A. Identify an individual (temporary) to field staff and inmate concerns and complaints during/immediately following conversion.	local Pharmacy conversion team	2 weeks	
6.B. Distribute letter to inmates regarding conversion.	CPR	1 week	

October 30, 2007

# Guiding Principles

# Guiding Principles

- Patient-centered – Clinical care process requirements will drive the system redesign and technical configuration.
- Interdisciplinary Process – It is essential to include all key stakeholders of the local institution utilizing a facility wide group process.
- Standardization – Aim to develop standardized policies, procedures and core processes with flexibility to accommodate appropriate institution specific variations.
- Data-driven – Ensure measurement of important and appropriate results to drive sound decision making.
- Realistic – Don't let the “perfect” get in the way of “good.”
- Adherence (or “Fidelity”) to Scope – Promoting, monitoring, and guarding the project focus and activities to ensure that valuable project resources are directed towards completion of the project objectives/deliverables.

# Project Scope

What Guardian Implementation is about, or "What's In"

What Guardian Implementation is not about, or "What's out"

# Pharmacy Conversion Project Scope Phase 1

## What's in:

- Guardian access for all in-scope pharmacy employees.
- CPR connectivity solution within pharmacy.
- New desktops within the pharmacy.
- Guardian security accounts and user level access.
- Training and documentation for in-scope Guardian services.
- Break fix for software support.
- Medication label printing.
- New MAR printouts and format.

# Pharmacy Conversion Project Scope Phase 1

## What's Out:

- Break fix for nursing processes not directly related to the Guardian implementation.
- Break fix support for Guardian PC's and Printers.
- Guardian access in all Medication Delivery Areas.
- Network extensions to all Medication Delivery Areas outside of Pharmacy facilities.

# Constraints and Assumptions

# Correctional Facility Constraints and Assumptions

## Constraints

- Physical Space
- Staffing
- Infrastructure
- Storage

## Assumptions

- Medical management assessment <5 weeks
- GAP analysis < 5 weeks
- IT requirements identified < 5 weeks
- Standardized clinical organizational and workflow process
- No major confounding space issues or problems
- No major clinical compounding order and refill processes
- Standard IT infrastructure within pharmacy

# Assessment and Gap Analysis Pre- Guardian

Who does this: Maxor

# Correctional Facility Assessment

Maxor Team Guardian Facility Pre-Implementation Assessment				
Correctional Facility				
Survey Team Members:				
<b>I. Pharmacy Conversion Prioritization Sheet Criteria (Score Weak=1, Average=2, Strong=3)</b>				
Criteria			Score	Comments
<b>Pharmacy Compliance</b>				
<b>Pharmacy Physical Space</b>				
1)	Workload/staffing within Target Parameters			
2)	No Major Confounding Issues or Problems			
3)	Pharmacy Organized and Good Workflow			
4)	Missing Medication Process Well Managed			
5)	Refill Process Clear and Functional			
6)	Medication Storage Space Outside Pharmacy Adequate			
7)	Medication Storage Outside Pharmacy Well Managed			
8)	MAR Process Clear and Followed			
9)	Location and circumstances Optimal for Paired Facility			
<b>II. Medication Management Detail Level Assessment</b>				
Cat	Process	Owner	Score N=Never R=Rarely S=Sometimes U=Usually A=Always	
<b>Selection &amp; Procurement</b>				
1	Medications are properly stocked so available when needed. What is process for Rx when med is out of stock?	Pharmacy		
2	Medications not over stocked.	Pharmacy		
3	Expired medications quarantined from active stock.	Pharmacy		
4	Optimal package type used for circumstance (unit-dose, multi-dose, etc)	Pharmacy		
5	Reclamations process description.	Pharmacy		
6	Ordering process (short list, etc) description.	Pharmacy		
7	Medication properly stored and environmental and security requirements met.	Pharmacy		
8	Overall reliability and standardization of Selection and procurement	Pharmacy		

# Correctional Facility Assessment

Cat	Process	Owner	Score N=Never R=Rarely S=Sometimes U=Usually A=Always	Process Description & Comments
<b>Ordering &amp; Prescribing</b>				
1	Prescriber orders medication including all required elements of an order.	Prescriber		
2	Nonformulary form is completed as required.	Prescriber		
3	Pharmacist interventions & clarifications are responded to reliably and in a timely manner.	Prescriber		
4	Orders are pulled and checked for completeness.	Nursing		
5	Order are transmitted/delivered to pharmacy in a timely manner.	Nursing		
6	A reliable system to renew medications is in place. Medication reconciliation occurring.	Nursing/Prescriber		
7	A reliable system to refill medication is in place. Medication reconciliation occurring.	Nursing/Prescriber		
8	Allergy information is transmitted to pharmacy.	Nursing/Prescriber		
9	<i>Overall reliability and standardization of Ordering and Prescribing.</i>	Nursing/Prescriber		
<b>Preparation &amp; Dispensing</b>				
1	Pharmacy screens orders for formulary status and required elements of an order.	pharm		
2	Pharmacist completes profile review and intervenes as necessary (documentation).	pharm		
3	Reliable and timely system exists to resolve problem orders.	pharm		
4	Workflow is well managed and organized (diagram workflow "as is" and compare to Guardian workflow process)-see Guardian Workflow tab. Consider # needed and locations of terminals and checking stations for Guardian. Is any additional equipment such as tables, sorting stations, shelving, bins needed?	pharm		
5	Labeling requirement for Rx met.	pharm		
6	Medications prepared for use in optimal and appropriate manner.	pharm		
7	Pharmacy physical layout is organized, clean and efficient.	pharm		
8	What is cut off time and are all orders received by cut off time processed and delivered by COB daily? (See Service measures from baseline collection)	pharm		
9	Medications are organized for delivery.	pharm		
10	Describe MAR printing & delivery process. Is it reliable and efficient?	pharm		
11	Are medications tracked in some way to point of delivery or nursing accepting medications? (see baseline missing medications measures)	pharm		
12	Medication errors documented and reported.	pharm		
13	<i>Overall reliability and standardization of Preparation and Dispensing.</i>	pharm		
	Average new Rx/Day, Avg # refills/day, Avg # stat orders per day			
	Staffing Assessment, does pharmacy need supplemental staff to implement beyond initial Maxor team?			

# Correctional Facility IT Assessment

Correctional Facility	PC's	Bar code scanners	Fax	Laser Printer	Label Printer	New Power	Existing Power	New Drops	Existing Drops	New Phone	Existing Phone
Building/Room	3	3	0	1	3		OK	4	0	0	1
Building/Room	1	1	1	0	0		OK		2	0	1
Building/Room	1	1	0	0	0		OK	1	0	0	0
Building/Room	1	1	1*	1*	1		OK	3	0	0	0
Building/Room	3	3	0	1	3	2 20amp	None	2	0	2	0
Building/Room	6	6	1	1	3	3 20amp	None	8	0	4	0
Building/Room	1	1	0	1	0		OK	2	0	0	0
Building/Room	1	1	0	1	0		OK	2	0	0	0
Building/Room	1	1	0	1	0		OK	2	0	0	0
Building/Room	1	1	0	1	0		OK	2	0	0	0
Totals	19	19	2	7	10	5		26	2	6	2

# Organizational Structure for The Project

# Pharmacy Conversion Organizational Structure

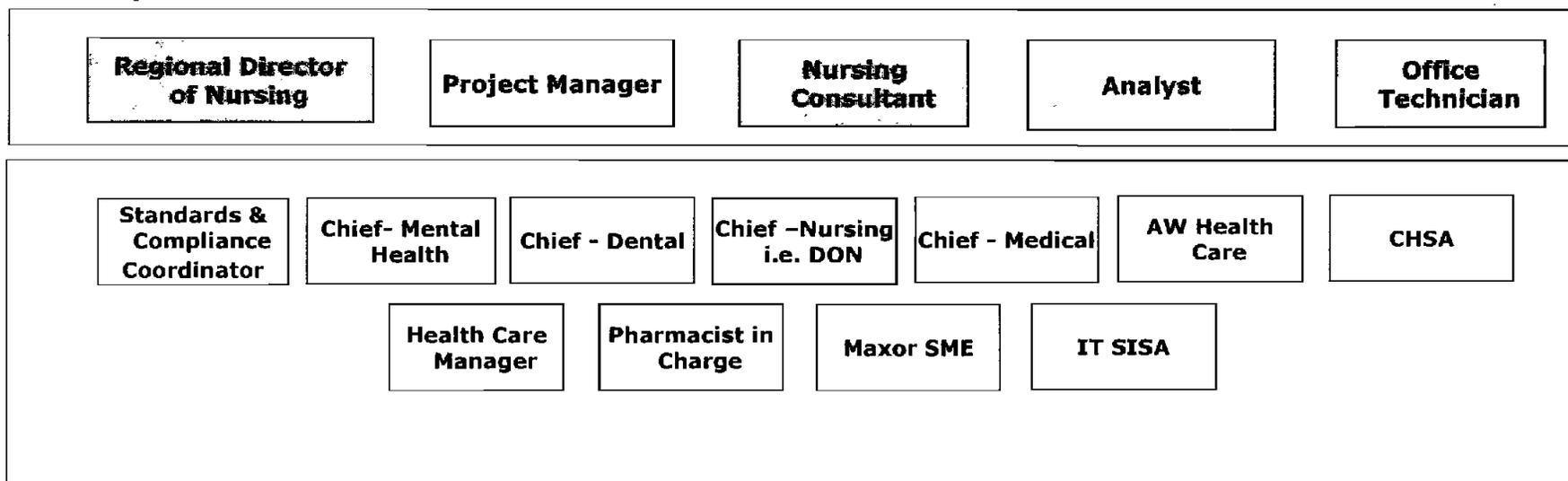
## Project Sponsors

Robert Sillen	John Hagar
Betsy Chang Ha	John Hummel

## Steering Committee

Betsy Chang Ha - Co-Chairperson	John Hummel - Co-Chairperson
Jackie Clark	Glenn Johnson - Designee
Matt Keith	

## Implementation Team



Pharmacy Conversion Team

Local Process Improvement Teams

**Clinical**  
 Registered Nurses  
 Mental Health  
 Dental  
 Medical Prescribers

**Information Technology**  
 Institutional IT  
 Maxor IT  
 CPR IT

**Pharmacy**  
 Institutional Pharmacy  
 Maxor Pharmacy

**Custody**

# Governance – Roles and Responsibilities

# Governance Model Roles & Responsibilities in the Implementation

## Project Sponsors

Robert Sillen, Receiver

John Hagar, Chief of Staff

John Hummel, CIO

Betsy Chang Ha, Chief Nurse Executive

## Steering Committee

### \*Chaired by Chief Nurse Executive | CIO

- Monitor achievement integration objectives
- Provide guiding principles & strategic direction
- Resolve conflicts by making required decisions timely
- Ensure resource commitments to meet schedule
- Ensure funding to conclude implementation effort
- Monitor overall progress and report status as needed
- Approve major implementation strategy changes
- Manage Implementation Budget

## Implementation Team

### \*Chaired by RDON | Project PM | Nursing Consultant

- Coordinate overall program across all teams and stakeholders
- Manage Implementation execution
- Capture and prioritize issues and drive effective resolution
- Report integration status, risks, metrics to stakeholders
- Acceptance criteria
- Lead PIT meetings and drive decision making
- Manage internal communications
- Coordinate management of change
- Identify "white spaces" and deploy into milestones
- Manage adherence to scope

## Pharmacy Conversion team

### \*Lead by Functional Leads

- Develop function specific implementation plans
- Drive alignment on dependencies with other teams
- Execute functional plans, make decisions
- Manage conflict between implementation priorities
- Report Implementation progress
- Surface and resolve issues
- Ensure continuity and support momentum
- Ensure Go Live readiness

## Local Process Improvement Teams

### \*Lead by SME

- Provide guidance to the Implementation Team as needed
- Provide guidelines for the implementation strategy
- Provide functional expertise to the Implementation Leads
- Facilitate issue resolution and escalations
- Regularly assess implementation risk
- Support Implementation effort with tools as appropriate
- Individually train
- Facilitate usage of institutional training resources

# Standard Software Implementations Deliverables

Who does these: Maxor and Project IT

# Standard Software Implementation Deliverables

1. Facility assessment.
  - Pharmacy services are analyzed which includes a physical space layout and pharmacy workflow and processes.
2. Analysis of Pharmacy data.
  - A determination of the average number of scripts per day, average number of refills per day, average number STAT orders and peaks.
  - Medication Management Process Assessment including Gap analysis
  - Service and Quality measures baseline and weekly for missing medications and MARs
3. Determination of workload associated with the pharmacy volume.
4. Medication file printouts.
  - (Sigma files –Dose and Frequency) files from PPTS are provided
5. Validation of Drugs by Maxor and CDCR staff.
6. PPTS to Guardian soft conversion practice runs on validated drug data.
7. Pre-go- live week staff training.

# Standard Software Implementation Deliverables, cont'd

8. Pre-go- live week staff training.
  - Training pharmacists and pharmacy technicians
  - Training of clinical staff: RNs, MDs, and LVNs
  
9. Weekend before Go live.
  - Pharmacy Inventory
  - Data migration and conversion
  - Production and printing of all new Guardian MARs
  - Load MAR into new binders
  
10. Go-Live week.
  - Order filling
  - Refills
  - Process support
  - Problem solve

# Standard Clinical Implementation Deliverables

Who does these: Project Clinical Managers, Facility HCM, DON, CMO, & SRNII's

# Standard Clinical Implementation Deliverables

1

## FLOW-MAPPING PROCESSES

### 1. Complete medication administration process flow-mapping for service areas

(see appendix for samples)

#### *Corresponding Work plan "Task"*

2. A. Evaluate local nursing medication delivery process, including points of interface with pharmacy, and create process flowchart (including timeframes).

#### Important things to remember

- Flowmap the actual processes that are being used (including "work-arounds"), not the idealized
- Focus on "touch-points" with Pharmacy and the eventual Guardian implementation
- Fix only those processes/steps that absolutely need fixing, and remember that Guardian is not meant to fix all broken medication management processes.

# Standard Clinical Implementation Deliverables

2

## FLOW-MAPPING PROCESSES

- 2. Complete process flow-mapping for other med admin. related functions: physician order processing, med renewals, med refills; resolution processes for missing meds, missing MARs, incorrect MARs**

### *Corresponding Workplan "Task"*

2. H. Evaluate other medication management processes (Physician order writing, order transmission to pharmacy, order clarification, medication renewal, missing medications, refills, etc)

### Important Things to Remember

- Flowmap the actual processes that are being used (including "work-arounds"), not the idealized
- Focus on "touch-points" with Pharmacy and the eventual Guardian implementation
- Fix only those processes/steps that absolutely need fixing, and remember that Guardian is not meant to fix all broken medication management processes.

# Standard Clinical Implementation Deliverables

3

## TRAINING

- 3. Institutional Nursing Services management and Nursing Education department to provide training to all nursing staff on process flow-maps developed in deliverables 1 and 2.**

### *Corresponding Workplan "Tasks"*

2. A. Evaluate local nursing medication delivery process, including points of interface with pharmacy, and create process flowchart (including timeframes).
2. H. Evaluate other medication management processes (Physician order writing, order transmission to pharmacy, order clarification, medication renewal, missing medications, refills, etc)

### Important things to Remember

- Complete design of any desired process fixes prior to training, then train on existing vs. eventual
- Emphasize to nursing staff:
  1. Guardian is not meant to be a panacea for nursing med management process/system failures
  2. Success of Guardian implementation absolutely depends on sticking to the project scope and preventing scope-creep

# Standard Clinical Implementation Deliverables

4

## NURSING METRICS

4. **Define infrastructure, flow-map process, and train staff regarding collecting, documenting and reporting the three nursing point-of-service metrics. Construct, document, and distribute list of names for “who is responsible for what” in data collection and reporting process.**

### *Corresponding Workplan “Task”*

- 2.1. Create process for implementation period nursing measures, collection, collation, analysis and distribution.

### Important things to Remember

- Use the provided standardized data collection form for “hash marks”; DON/designee faxes forms daily to HQ
- The nursing metrics are “point-of-service” metrics, i.e. they capture problems that are perceived to be present at the time of medication administration to the patient, and serve as rough proxy measures for issues that could cause negative patient outcomes
- The staff list of “who is responsible for what” is crucial

# Standard Clinical Implementation Deliverables

5

## NURSING METRICS

### 5. Collect, document, and report out baseline Nursing Point-of-Service metrics

#### *Corresponding Workplan "Task"*

1. F. Obtain Baseline Nursing metrics: Number of perceived missing MARS, perceived missing doses and perceived incorrect MARS

#### Important things to remember

- Your baseline data will be assumed to represent the "pre-Guardian" steady state or status quo with respect to the measured problems
- Deviations from baseline data during Guardian go-live will be assumed to have some direct or indirect tie-in to the conversion process (i.e. they will be considered sequelae of the conversion)

# Standard Clinical Implementation Deliverables

6

## STAFFING

6. **Nursing Services management and supervisors to evaluate adequacy of current nurse staffing in medication administration areas and for Phase One Guardian access med refill function. Hire additional contract/registry nursing staff (LVNs, PTs) as necessary.**

### *Corresponding Workplan "Task"*

3. D. Evaluate adequacy of nursing staffing levels (For medication administration function post pharmacy conversion)

# Standard Clinical Implementation Deliverables

7

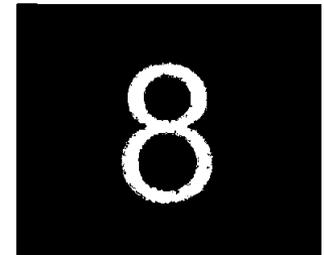
## STAFFING

7. **Medical and Pharmacy Services management and supervisors (e.g. HCM and PIC) to evaluate adequacy of current OT, MA, and Pharmacist/Pharm Tech staffing needed to fulfill functions upon Guardian implementation. Hire additional staff through contract/registry as necessary.**

### *Corresponding Workplan "Task"*

3. D. Evaluate adequacy of nursing staffing levels (For medication administration function post pharmacy conversion)

# Standard Clinical Implementation Deliverables



## PHYSICAL PLANT

- 8. Evaluate medication administration service areas (physical plant, space, medication storage, work-flows) for guardian go-live readiness. Adjust/modify as needed.**

### *Corresponding Workplan "Task"*

5. A. Evaluate medication distribution sites. Modify sites and local process as necessary (Pill Rooms, etc).

### Important things to remember

- If Maxor chooses to not change drug packaging at the institution, then most likely the current method/equipment for storage does not need to change either
- Important general corollary (applies to the entire conversion project): if something is working and you don't need to change it for Guardian conversion, then don't change it (there is enough to do without creating unnecessary "good idea" work for yourself)

# Standard Clinical Implementation Deliverables

9

## EQUIPMENT & SUPPLIES

9. Evaluate medication administration service area equipment and supply needs (e.g. carts, bins/tubs, high quality and durable binders for MAR storage, pre-punched 3-hole paper for MAR printing, etc.). Adjust/modify as needed.

### *Corresponding Workplan "Task"*

5. B. Evaluate equipment/supply needs (i.e. carts/tubs for meds).

# Standard Clinical Implementation Deliverables

10

## STAFF ROSTERS

10. Provide rosters to Maxor staff of all institutional clinical staff that will need Guardian access and Guardian training for: 1) Phase One Guardian implementation (centralized and limited software distribution/access) and 2) later for Phase Two Guardian implementation (decentralized and thoroughly-distributed Guardian access institution-wide).

### *Corresponding Workplan "Task"*

4. D. Roster of All Employees that will need Access to Guardian (prepare for access and passwords)

# Standard Clinical Implementation Deliverables

11

## GUARDIAN ACCESS & TRAINING-NURSES

11. **Nursing Services management and supervisors (DON, SRN3's, SRN2's) to coordinate with Maxor trainers to ensure all nursing staff on Phase One and Phase Two rosters (in a timeframe consistent with respective Phase One and Phase Two go-lives) receive Guardian user accounts, passwords, and training for: MARs, med profiles (reconciliations), and med refills.**

### *Corresponding Workplan "Task"*

4. D. Roster of All Employees that will need Access to Guardian (prepare for access and passwords)
3. B. Train LVN's on new pharmacy and medication distribution processes prior to implementation.

### **Important things to remember**

- Maxor staff will provide Guardian training to institutional nursing staff
- Nursing management and supervisors need to facilitate scheduling of nursing staff with Maxor trainers, emphasize its priority to nursing staff, and follow-up to monitor and ensure attendance

# Standard Clinical Implementation Deliverables

12

## GUARDIAN ACCESS & TRAINING- PRESCRIBERS

12. **Medical Services management and supervisors (HCM, CMO, CHSA) to coordinate with Maxor trainers to ensure all prescribing clinician staff on Phase One and Phase Two rosters (in a timeframe consistent with respective Phase One and Phase Two go-lives) receive Guardian user accounts, passwords, and training for: MARs, med profiles (reconciliations), and med refills.**

### *Corresponding Workplan "Task"*

No corresponding work plan task yet.

# Standard Clinical Implementation Deliverables

13

## PREPARING PHASE ONE REFILL SPACE

13. **Coordinating with institutional HCM and custody staff (AW of Healthcare), select and prepare a suitable institutional space/location for Phase One centralized Guardian medication refill processing by selected nursing staff (LVNs and/or PTs) with necessary key/lock access, desks/chairs, phones, PCs, printers, office supplies, etc.. Coordinate with project IT staff to ensure installation of necessary hardware occurs for internet connectivity.**

### *Corresponding Workplan "Task"*

4. D. No corresponding work plan task yet.

# Standard Clinical Implementation Deliverables

14

## CONTINGENCY PLAN

- 14. Establish, communicate, and document Go-Live nursing services contingency plan infrastructure, problem-solving duties, and reporting process. Ensure specific SRN2 supervisors' names and areas of responsibility for contingency plan are clearly specified, documented, and distributed to all health care staff. SRN2s required to be on-site at medication administration areas at 0600 for entire week of Go-Live for contingency**

### *Corresponding Workplan "Task"*

4. D. No corresponding work plan task yet.

### Important things to remember

- One of the most important caveats in this guide is to plan for contingencies
- No matter how well processes, infrastructure, communication, training and human resources are planned for, things/issues will come up in Week One of Go-Live that will require real-time expert problem-solving and rapid-fix deployment to ensure no or minimum negative impact to patient care
- Do not skimp on this step

# Standard Clinical Implementation Deliverables

15

## DAILY CHECK-IN MEETINGS

15. Establish Go-Live week “daily check-in” meetings for primary project stakeholders. Meeting purpose is to report out implementation progress and problems, identify needed resources, discuss rapid-fix strategies and deployment options, and identify ownership for decision-making and problem resolution efforts.

### *Corresponding Workplan “Task”*

4. D. No corresponding work plan task yet.

# Project Timeline and Project Plan (aka the “worksheet”)

Who shepherds these documents: Maxor – Project Timeline; Overall Project  
Manager – Project Plan.

# Guardian Rapid Installation Timeline - Generic

draft 8.30.07

Week	<5	<1	2	3	4	5	6	7	8	9	10
Medication Management Assessment and Workflow Mapping Completed	█										
Pre-training (PIC & Tech)		█									
IT (equipment purchase, installation (phone computers, printers, scanners) & Med Management Gap Resolution			█	█	█	█	█	█	█		
Hiring additional Staff (pharmacy & Clerks as determined by assessment)			█	█	█	█	█	█			
Medication Management Gap Resolution (should be very minimal for rapid deployment process)			█	█	█	█	█	█			
On-site Training (once hardware installed)								█			
Go Live (extra Maxor staff on-site)									█		
1st Week Post-assessment and Extra staff Review										█	
2nd Week Post-assessment and extra staff Review											█

October 30 2007

# Guardian Implementation Project Plan

draft 9.11.07

Replace with Facility Name

Scheduled Go-Live Date:

Go live date here

STATUS LEGEND	
Task has been completed	
Task has been started and is on track for completion by the project due date	
Task at risk of falling behind projected due date due to unrealistic planning, lack of resources, unanticipated issues, or Impact of late completion are understood and risks have been mitigated; plan for completion of item is in place.	 <b>Delayed</b>
Immediate attention is needed – task is behind or will miss its due date with major impacts to other groups/initiatives; mitigation plan needed; plan for completion of item may or may not be in place	

Numbers are cross reference to Guardian Implementation Site Readiness Assessment Template (example 1.A.).

TASK	WHO	WHEN	TOOL	COMPLETION DATE	STATUS
<b>Pharmacy Conversion Team Meeting #1</b>	Maxor, CPR & local Pharmacy conversion team	Day 1 of week 1			
5.C. Complete medication management assessment and pharmacy workflow mapping. Evaluate pharmacy space (i.e. is there adequate table space, storage area)	Maxor and PIC	Week 1			
1.A. Establish local interdisciplinary Pharmacy conversion team, at least 60 days prior to implementation, to meet weekly and to include at least the PIC, DON, HCM, AISA, AW Health Care, and Regional DON and Maxor Nurse Liaison.	Maxor, CPR & local Pharmacy conversion team	Week 1			

TASK	WHO	WHEN	TOOL	COMPLETION DATE	STATUS
2.A. Evaluate medication delivery process, including points of interface with pharmacy, and identify touch points to pharmacy/Guardian. 2.B. Identify current pharmacy database and methods of system access used by staff during the medication delivery process.	Maxor	Week 1			
2. Overview of process for implementation	Maxor, CPR & local Pharmacy conversion team	Week 1			
Implement Pharmacy Service and QI measures	Maxor & local PIC	Week 1			
1.B. Analyze pharmacy data to determine average # of scripts/day, average # of refills/day, average # of STAT orders, and peaks. Determine workload associated with pharmacy volume. 3.A. Using pharmacy data (refer to 1.B.), evaluate adequacy of staffing levels in the pharmacy. Augment staffing, as necessary	Maxor	Completed in pretraining prior to week 1			
<b>Pharmacy Conversion Team Meeting #2, Include MAR introduction and Profile. Discuss touch points for Guardian.</b>	Local Pharmacy conversion team	Week 2			
Define process changes for touch points.	CPR IT & Maxor & PIC	Week 2			
<b>Begin local hiring of clerks to print MARs, Reports, enter refills &amp; any additional pharmacy staff needed</b>	CPR & Local Nursing Team	Beginning week 2			
4.B. Evaluate number and location of existing computer terminals. Augment terminals necessary for Guardian access. Include all locations for network lines and phones and all equipment for CPR IT and Maxor IT	Maxor & CPR	Week 2			
Completed flow mapping of touch point changes	CPR & local Pharmacy conversion team	Week 3			

TASK	WHO	WHEN	TOOL	COMPLETION DATE	STATUS
<b>Pharmacy Conversion Team Meeting #3</b>	Local Pharmacy conversion team	Week 3			
5.B. Evaluate equipment/supply needs (i.e. carts/tubs for meds) within pharmacy. Order needed items.	Maxor and PIC	Week 3			
<b>Pharmacy Conversion Team Meeting #4</b>	Local Pharmacy conversion team	Week 4			
2.E. Create a manual process for providing pharmacy profile printouts to LVNs and clinics on a routine basis. (see above). Define training process for nursing to access we based information	Maxor, CPR & local Pharmacy conversion team	Week 4			
Populate PPTS Main drug file with correct NDC number for product used. Maintain accurately there after through data migration to Guardian.	PIC	Week 4			
<b>Pharmacy Conversion Team Meeting #6</b>	Local Pharmacy conversion team	Week 5			
Maxor IT provide PIC SIG 1 & SIG 2 spreadsheet. PIC populate with corresponding dose and frequency information for data migration.	Maxor IT/PIC	Complete by Week 5			
1.C. Begin database population, prior to implementation. (Pharmacy data migration)	Maxor & local instit.	Week 6			
4.A. Provide access to Guardian system through the CPR network for pharmacy, medical records, and clerical.	CPR	Week 6			
Print MARs from Guardian and compare to PPTS MARs to resolve conflicts prior to go-live.	PIC	Week 6			
3.B. Train non pharmacy staff on new pharmacy information access process (manual MARS, reports, profiles) (begin training for those clerks who will perform print tasks and refills.	Maxor, CPR & local Pharmacy conversion team	Week 7			
Pharmacy Specific Training	Maxor	Week 7			

TASK	WHO	WHEN	TOOL	COMPLETION DATE	STATUS
6.A. Identify an individual (temporary) to field staff and inmate concerns and complaints during/immediately following conversion.	Local Pharmacy conversion team	Week 7			
<b>Pharmacy Conversion Team Meeting #7. 1.D. Organize a "Go/No Go" meeting/conference call with Maxor, CPR, and the local pharmacy conversion team prior to the Guardian go-live date.</b>	Local Pharmacy conversion team	Week 7			
6.B. Distribute letter to inmates regarding conversion.	CPR	Week 6			
Complete In-Pharmacy Inventory the day before Go-Live	Maxor	Weekend prior to go-live			
<b>GO LIVE DAY</b>					
<b>Pharmacy Conversion Team Meeting #9</b>	Local Pharmacy conversion team	Week 9			
<b>Pharmacy Conversion Team Meeting #10</b>	Local Pharmacy conversion team	Week 10			

# Project Communications

# Project Communications

- MAC and Formal Letter Inmate Project Notification.
- Pharmacy conversion team weekly meeting and minutes.
- Local Process improvement weekly meeting and minutes.
- Guardian Project Plan Weekly Status.
- Metrics Pharmacy and Nursing.
- Daily check-in meeting post Go-Live.
- Daily status update emails to Sponsors.

# Weekly Calendar

(All times PST) - Sample

Monday	Tuesday	Wednesday	Thursday	Friday
		<p>Pharmacy Conversion Team 9:00 – 10:00am (pst)</p> <p>Local Process Improvement Teams 1:00p.m – 3:00pm (pst)</p>		

\* Meeting/Call Frequency to be adjusted as required

# Communications- Minutes

<b>Meeting Agenda &amp; Minutes</b>
-------------------------------------

<b>Project Name:</b> Guardian Implementation <b>Prepared By:</b> <b>Title:</b>	<b>Document Version No:</b> 1 <b>Document Version Date:</b>
--	--

**1. MEETING SPECIFICS**

<b>Purpose:</b>				
<b>Meeting Date:</b>	<b>Start Time:</b>	9:00 AM PST	<b>End Time:</b>	9:30 AM PST
<b>Next Meeting Date:</b>		9:00 AM PST		10:00 AM PST
<b>Meeting Location /Bridge Line No:</b>	Teleconference Dial In #1-888-272-7337; Code			
<b>Meeting Leader:</b>		<b>Phone:</b>		

**2. FTO PLANNED**

Name	Dates

**3. PARTICIPANTS**

Name	Attend	Representing	Role	Phone	Email
	x				

**4. MEETING AGENDA**

Time	Topic	Presenter

**5. MEETING MINUTES**

TOPIC	Discussion
Maxor	
Nursing	
Pharmacy	
Custody	
IT	

**6. MEETING RESULTS**

#	Open Date	Close Date	Status	Description	Assigned To

# Communications- Pharmacy Conversion Nursing Point-of-Service Data Collection Form

## Pharmacy Conversion Nursing Point-of-Service Data Collection Form

Three Nursing Services Metrics: Perceived Missing MARs, Perceived Missing Doses, Perceived Incorrect MARs

Specific Service Area Location (e.g. Building, Yard, Facility Clinic; Ad Seg; MSF, etc.) \_\_\_\_\_

Watch \_\_\_\_\_ Date \_\_\_\_\_ Nurse \_\_\_\_\_

**Directions:**

- (1) Place a hash mark in the box under the appropriate column heading for each medication administration point-of-service issue identified
- (2) Ensure one form is completed for each watch that administers medication (typically 2W and 3W)
- (3) Do not include additional or extraneous information on this form
- (4) Document identified problems that pertain to medication administration for your watch ONLY (i.e. if a MAR is missing for a medication that is only administered on 2W, the 3W nursing staff do not repeat the documentation of the hash mark on 3W; if a medication is only administered on 3W and is identified as missing, the nursing staff on 2W do not also document a hash mark for that particular missing med)
- (5) Service Area Supervisors are to collect completed forms daily and route to the Director of Nurses (DON)
- (6) The DON is responsible for ensuring the routing of the completed forms (typically via fax) for the entire institution daily to the identified contact

Perceived Missing MARs	Perceived Missing Doses	Perceived Incorrect MARs

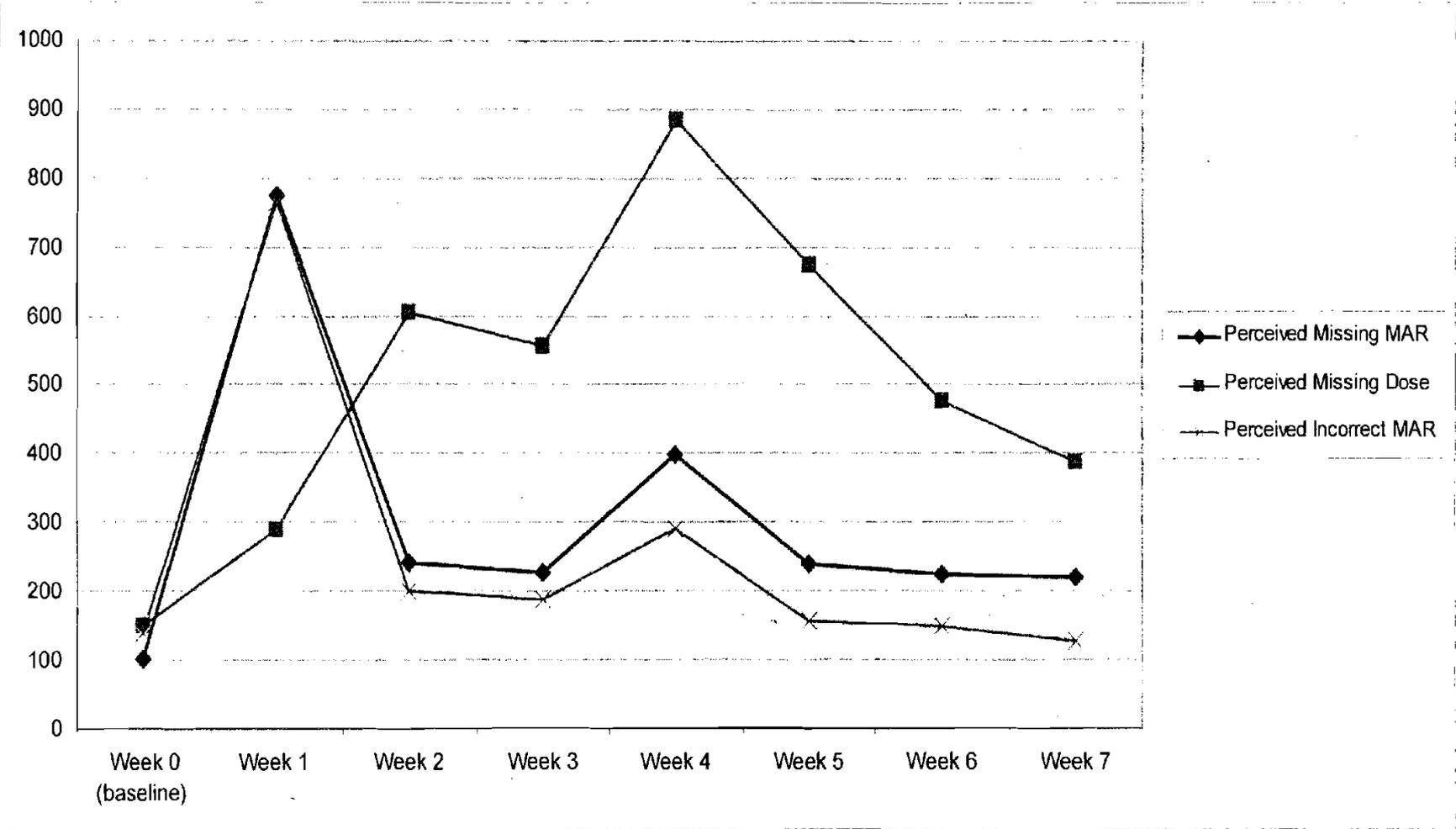
# Communications- Nursing Metrics

## RUN CHART: MCSP Point-of-Service Nursing Measures

	<b>Week 0 (baseline)</b>	<b>Week 1</b>	<b>Week 2</b>	<b>Week 3</b>	<b>Week 4</b>	<b>Week 5</b>	<b>Week 6</b>	<b>Week 7</b>
<b>Perceived Missing MAR</b>	<b>103</b>	<b>776</b>	<b>241</b>	<b>228</b>	<b>399</b>	<b>240</b>	<b>226</b>	<b>221</b>
<b>Perceived Missing Dose</b>	<b>151</b>	<b>291</b>	<b>606</b>	<b>557</b>	<b>886</b>	<b>675</b>	<b>477</b>	<b>389</b>
<b>Perceived Incorrect MAR</b>	<b>139</b>	<b>765</b>	<b>201</b>	<b>189</b>	<b>291</b>	<b>156</b>	<b>150</b>	<b>128</b>
<b>Total Issues</b>	<b>393</b>	<b>1832</b>	<b>1048</b>	<b>974</b>	<b>1576</b>	<b>1071</b>	<b>853</b>	<b>738</b>

*Note: Nursing service measures are intended to capture problematic issues that occur at the point (and time) of medication dose administration. The data are not verified/validated by nursing staff through an exhaustive retrospective investigation, and therefore the nomenclature "perceived" is used. However, after the point-of-service issue is first identified and nursing staff completes a brief validation of the existence of the problem, pharmacy then completes an exhaustive review of the origins of each problematic issue and verifies the status.*

# Communications-Nursing Metrics, cont'd



# Communications-Nursing Metrics, cont'd

## MULE CREEK PHARMACY CONVERSION: NURSING POINT-OF-SERVICE MEASURES DATA

Data Collection Period: October 22-29, 2007

### Institution Totals by Date & Watch

October	22nd 2nd W	22nd 3rd W	23rd 2ndW	23rd 3rd W	24th 2nd W	24th 3rd W	25th 2nd W	25th 3rd W	26th 2nd W	26th 3rd W	27th 2nd W	27th 3rd W	28th 2nd W	28th 3rd W	TOTALS
Perceived Missing MAR	0	4	6	5	6	1	10	2	7	1	11	10	10	2	75
Perceived Missing Dose	9	6	12	9	10	4	3	11	6	8	7	8	5	11	109
Perceived Incorrect MAR	0	0	5	0	0	1	2	0	8	0	0	0	1	0	17
<b>Total Issues</b>															<b>201</b>

### A Clinic

October	22nd 2ndW	22nd 3rd W	23rd 2ndW	23rd 3rd W	24th 2nd W	24th 3rd W	25th 2nd W	25th 3rd W	26th 2nd W	26th 3rd W	27th 2nd W	27th 3rd W	28th 2nd W	28th 3rd W	TOTALS
Perceived Missing MAR	0	2	2	2	6	1	8	2	6	1	1	1	1	1	34
Perceived Missing Dose	6	2	8	2	4	2	2	5	4	8	5	6	3	10	67
Perceived Incorrect MAR	0	0	0	0	0	1	0	0	8	0	0	0	1	0	10
<b>Total Issues</b>															<b>111</b>

### B Clinic

October	22nd 2ndW	22nd 3rd W	23rd 2ndW	23rd 3rd W	24th 2nd W	24th 3rd W	25th 2nd W	25th 3rd W	26th 2nd W	26th 3rd W	27th 2nd W	27th 3rd W	28th 2nd W	28th 3rd W	TOTALS
Perceived Missing MAR	0	2	4	3	0	0	2	0	1	0	10	9	9	1	41
Perceived Missing Dose	3	4	4	7	6	2	1	6	2	0	2	2	2	1	42
Perceived Incorrect MAR	0	0	5	0	0	0	2	0	0	0	0	0	0	0	7
<b>Total Issues</b>															<b>90</b>



# Communications - Pharmacy Services

## Missing Medication QI

### OCTOBER RUN CHART: MCSP PHARMACY MISSING MEDS QI

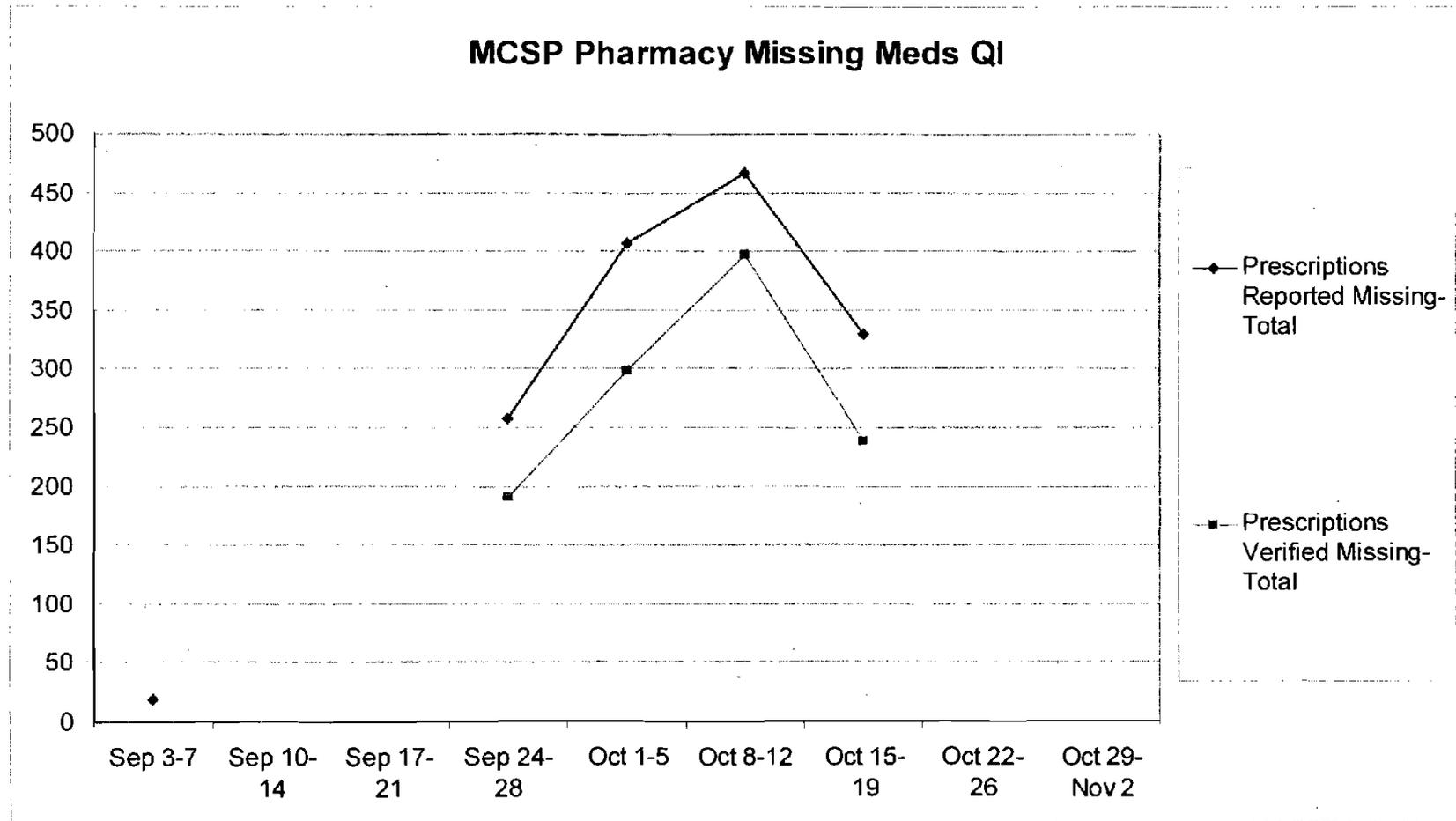
	Oct 1-5	Oct 8-12	Oct 15-19	Oct 22-26	Oct 29-Nov 2
Prescriptions <b>Reported</b> Missing-Total	407	467	330		
Prescriptions <b>Verified</b> Missing-Total	299	397	239		

#### Important Notes:

- 1) Functioning contingency processes and infrastructure are in place at Mule Creek to ensure that patients do not go without getting their prescribed medication.
- 2) The difference between the "Reported" and "Verified" totals amounts to the "unverified" missing prescriptions. The unverified missing prescriptions represent (from the Oct 07 source spreadsheet) the sum of Row 27: Refill request too early, plus Row 30: Drug is discontinued or order is expired.

# Communications - Pharmacy Services

## Missing Medication QI



# Appendix

# Pharmacy Conversion Prioritization Worksheet for Site Readiness

# Pharmacy Conversion Prioritization Worksheet for Site Readiness

Updated 10/11/07

### Pharmacy Conversion Prioritization Worksheet for Site Readiness

The pace will increase and schedule change as additional Maxor implementation teams are hired.

**Maxor Sites After MCSP and CMC**

Rate each factor as Weak (1), Average (2), Strong (3) IT Connectivity: Rate (1) Set up will take 9-12 weeks, Rate (2) Set up takes 3-6 weeks, Rate (3) Set up takes 1-2 weeks

REGION	CMC		Medical Management	Nursing Leadership	Nursing Workflow	Pharmacy Med. Equip	Pharmacy Leadership	Pharmacy Compliance	IT Connectivity	On-site Leaders
	Bela Site	FOL - Folsom - 6/4/07	1	1	1	1	1	1	2	9
Tracy		DM - Deuel Vocational Institute	1	1	1	3	2	2	1	12
Susanville	#3	CCC - CA Correctional Center - 4/21/07 simultaneous with #2	1	1	1	2	2	1	3	1
Vacaville		SOL - CA State Prison, Solano	1	2	1	2	2	2	2	1
	#6	SQ - San Quentin	1	2	2	1	1	1	2	3
Repressa	#1	SAC - CA State Prison, Sacramento - 3/3/07	2	2	2	2	1	1	3	2
Jamastown		SCC - Sierra Conservation Center	2	2	1	2	3	2	2	1
Vacaville		CMF - CA Medical Facility	3	2	2	2	2	1	3	2
Avenal		ASP - Avenal State Prison	1	1	1	2	2	2	1	1
Soledad		CTF - Correctional Training Facility	2	2	1	1	2	2	1	1
Soledad		SVSP - Salinas Valley State Prison	1	1	1	2	3	2	2	1
Coalinga		PVSP - Pleasant Valley State Prison	2	2	1	2	1	2	2	1
Delano		KVSP - Kern Valley State Prison	1	2	1	2	1	2	2	2
Corcoran	#5	SATF - CA Substance Abuse Treatment	1	2	1	2	3	2	1	1
Wasco		WSP - Wasco State Prison**	1	1	1	2	3	2	2	1
Delano		NKSP - North Kern State Prison	1	2	1	2	3	2	2	1
Chowchilla		VSPW - Valley State Prison for Women	3	3	2	2	1	1	1	1
Chino		CIM - CA Institute for Men	1	1	1	1	1	2	1	1
Calipatria		CAL - Calipatria State Prison	1	1	1	2	2	1	1	1
Blythe		ISP - Ironwood State Prison	1	1	1	2	2	1	1	1
Fehachapie		CCI - CA Correctional Institute	1	1	1	2	2	2	3	1
Lancaster		LAC - CA State Prison, Los Angeles	1	1	1	2	2	2	3	1
Imperial		CEN - Centinela State Prison	1	1	1	2	3	2	3	1
Norco		CRC - CA Rehabilitation Center	1	3	2	1	2	2	3	1

Legend:  
 \* No IT/Communication infrastructure for nursing  
 \*\* No PC in every yard

Clinical Disciplines Training  
Med Profile  
Refill  
Medical Administration  
Records

# Enter user name and password



User Name:

Password:

[Password Problems?](#)

## Click continue



Address <https://maxsource.maxor.com/cdcr/test.aspx>



Medication Review

+ Add Tab



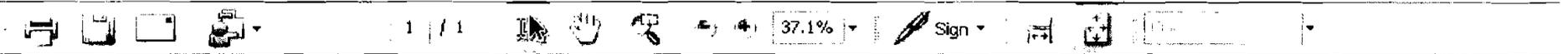
CDCR#:

[Refills](#) [MAR](#) [Medication Reconciliation](#)

Short Form

Full Form

Submit



... website page it will allow you to use th...

## Request Refills Request MARS Medication Reconciliation

... you select the wrong tool, just simply clic...  
... you to return back to this main page to

SEARCH FOR DOCUMENTS				
----------------------	----------------------	----------------------	----------------------	----------------------

Discussions not available on <https://maxsource.maxor.com/>



# Click on Refills

Refills MAR Medication Reconciliation

CDCR#

Short Form

Full Form

Submit

1 / 1

1

37.1%

Sign

1

---



---

2

---



---

3

---



---

4

---



---

5

---



---

6

---



---

7

---



---

8

---



---

9

---



---

10

---



---

11

---



---

12

---



---

13

---



---

14

---



---

15

---



---

16

---



---

17

---



---

18

---



---

19

---



---

20

---



---

21

---



---

22

---



---

23

---



---

24

---



---

25

---



---

26

---



---

27

---



---

28

---



---

29

---



---

30

---



---

31

---



---

32

---



---

33

---



---

34

---



---

35

---



---

36

---



---

37

---



---

38

---



---

39

---



---

40

---



---

41

---



---

42

---



---

43

---



---

44

---



---

45

---



---

46

---



---

47

---



---

48

---



---

49

---



---

50

---



---

51

---



---

52

---



---

53

---



---

54

---



---

55

---



---

56

---



---

57

---



---

58

---



---

59

---



---

60

---



---

61

---



---

62

---



---

63

---



---

64

---



---

65

---



---

66

---



---

67

---



---

68

---



---

69

---



---

70

---



---

71

---



---

72

---



---

73

---



---

74

---



---

75

---



---

76

---



---

77

---



---

78

---



---

79

---



---

80

---



---

81

---



---

82

---



---

83

---



---

84

---



---

85

---



---

86

---



---

87

---



---

88

---



---

89

---



---

90

---



---

91

---



---

92

---



---

93

---



---

94

---



---

95

---



---

96

---



---

97

---



---

98

---



---

99

---



---

100

---



---

101

---



---

102

---



---

103

---



---

104

---



---

105

---



---

106

---



---

107

---



---

108

---



---

109

---



---

110

---



---

111

---



---

112

---



---

113

---



---

114

---



---

115

---



---

116

---



---

117

---



---

118

---



---

119

---



---

120

---



---

121

---



---

122

---



---

123

---



---

124

---



---

125

---



---

126

---



---

127

---



---

128

---



---

129

---



---

130

---



---

131

---



---

132

---



---

133

---



---

134

---



---

135

---



---

136

---



---

137

---



---

138

---



---

139

---



---

140

---



---

141

---



---

142

---



---

143

---



---

144

---



---

145

---



---

146

---



---

147

---



---

148

---



---

149

---



---

150

---



---

151

---



---

152

---



---

153

---



---

154

---



---

155

---



---

156

---



---

157

---



---

158

---



---

159

---



---

160

---



---

161

---



---

162

---



---

163

---



---

164

---



---

165

---



---

166

---



---

167

---



---

168

---



---

169

---



---

170

---



---

171

---



---

172

---



---

173

---



---

174

---



---

175

---



---

176

---



---

177

---



---

178

---



---

179

---



---

180

---



---

181

---



---

182

---



---

183

---



---

184

---



---

185

---



---

186

---



---

187

---



---

188

---



---

189

---



---

190

---



---

191

---



---

192

---



---

193

---



---

194

---



---

195

---



---

196

---



---

197

---



---

198

---



---

199

---



---

200

---



---

201

---



---

202

---



---

203

---



---

204

---



---

205

---



---

206

---



---

207

---



---

208

---



---

209

---



---

210

---



---

211

---



---

212

---



---

213

---



---

214

---



---

215

---



---

216

---



---

217

---



---

218

---



---

219

---



---

220

---



---

221

---



---

222

---



---

223

---



---

224

---



---

225

---



---

226

---



---

227

---



---

228

---



---

229

---



---

230

---



---

231

---



---

232

---



---

233

---



---

234

---



---

235

---



---

236

---



---

237

---



---

238

---



---

239

---



---

240

---



---

241

---



---

242

---



---

243

---



---

244

---



---

245

---



---

246

---



---

247

---



---

248

---



---

249

---



---

250

---



---

251

---



---

252

---



---

253

---



---

254

---



---

255

---



---

256

---



---

257

---



---

258

---



---

259

---



---

260

---



---

261

---



---

262

---



---

263

---



---

264

---



---

265

---



---

266

---



---

267

---



---

268

---



---

269

---



---

270

---



---

271

---



---

272

---



---

273

---



---

274

---



---

275

---



---

276

---



---

277

---



---

278

---



---

279

---



---

280

---



---

281

---



---

282

---



---

283

---



---

284

---



---

285

---



---

286

---



---

287

---



---

288

---



---

289

---



---

290

---



---

291

---



---

292

---



---

293

---



---

294

---



---

295

---



---

296

---



---

297

---



---

298

---



---

299

---



---

300

---



---

301

---



---

302

---



---

303

---



---

304

---



---

305

---



---

306

---



---

307

---



---

308

---



---

309

---



---

310

---



---

311

---



---

312

---



---

313

---



---

314

---



---

315

---



---

316

---



---

317

---



---

318

---



---

319

---



---

320

---



---

321

---



---

322

---



---

323

---



---

324

---



---

325

---



---

326

---



---

327

---



---

328

---



---

329

---



---

330

---



---

331

---



---

332

---



---

333

---



---

334

---



---

335

---



---

336

---



---

337

---



---

338

---



---

339

---



---

340

---



---

341

---



---

342

---



---

343

---



---

344

---



---

345

---



---

346

---



---

347

---



---

348

---



---

349

---



---

350

---



---

351

---



---

352

---



---

353

---



---

354

---



---

355

---



---

356

---



---

357

---



---

358

---



---

359

---



---

360

---



---

361

---



---

362

---



---

363

---



---

364

---



---

365

---



---

366

---



---

367

---



---

368

---



---

369

---



---

370

---



---

371

---



---

372

---



---

373

---



---

374

---



---

375

---



---

376

---



---

377

---



---

378

---



---

379

---



---

380

---



---

381

---



---

382

---



---

383

---



---

384

---



---

385

---



---

386

---



---

387

---



---

388

---



---

389

---



---

390

---



---

391

---



---

392

---



---

393

---



---

394

---



---

395

---



---

396

---



---

397

---



---

398

---



---

399

---



---

400

---



---

401

---



---

402

---



---

403

---



---

404

---



---

405

---



---

406

---



---

407

---



---

408

---



---

409

---



---

410

---



---

411

---



---

412

---



---

413

---



---

414

---



---

415

---



---

416

---



---

417

---



---

418

---



---

419

---



---

420

---



---

421

---



---

422

---



---

423

---



---

424

---



---

425

---



---

426

---



---

427

---



---

428

---



---

429

---



---

430

---



---

431

---



---

432

---



---

433

---



---

434

---



---

435

---



---

436

---



---

437

---



---

438

---



---

439

---



---

440

---



---

441

---



---

442

---



---

443

---



---

444

---



---

445

---



---

446

---



---

447

---



---

448

---



---

449

---



---

450

---



---

451

---



---

452

---



---

453

---



---

454

---



---

455

---



---

456

---



---

457

---



---

458

---



---

459

---



---

460

---



---

461

---



---

462

---



---

463

---



---

464

---



---

465

---



---

466

---



---

467

---



---

468

---



---

469

---



---

470

---



---

471

---



---

472

---



---

473

---



---

474

---



---

475

---



---

476

---



---

477

---



---

478

---



---

479

---



---

480

---



---

481

---



---

482

---



---

483

---



---

484

---



---

485

---



---

486

---



---

487

---



---

488

---



---

489

---



---

490

---



---

491

---



---

492

---



---

493

---



---

494

---



---

495

---



---

496

---



---

497

---



---

498

---



---

499

---



---

500

---



---

501

---



---

502

---



---

503

---



---

504

---



---

505

---



---

506

---



---

507

---



---

508

---



---

509

---



---

510

---



---

511

---



---

512

---



---

513

---



---

514

---



---

515

---



---

516

---



---

517

---



---

518

---



---

519

---



---

520

---



---

521

---



---

522

---



---

523

---



---

524

---



---

525

---



---

526

---



---

527

---



---

528

---



---

529

---



---

530

---



---

531

---



---

532

---



---

533

---



---

534

---



---

535

---



---

536

---



---

537

---



---

538

---



---

539

---



---

540

---



---

541

---



---

542

---



---

543

---



---

544

---



---

545

---



---

546

---



---

547

---



---

548

---



---

549

---



---

550

---



---

551

---



---

552

---



---

553

---



---

554

---



---

555

---



---

556

---



---