



Charm® Oncology Management System Downtime Procedure

1. Purpose

The Oncology Management System (OMS) – Charm® is the endorsed OMS application for use within the WA Country Health Service (WACHS) and is critical to clinical and service delivery workflows for haematology and oncology cancer patients. The purpose of this document is to set out a clearly defined and comprehensive procedure for OMS users to follow in the event of the OMS being unavailable for use at any of the WACHS Designated Cancer Treatment Units (DCTUs), including Regional Cancer Units and TeleChemotherapy Units.

Charm® is the endorsed application for use within WACHS.

Downtime may be scheduled (planned) or unscheduled (unplanned). This document describes the communication, processes retrospective data entry requirements and templates to use during downtime.

The communication procedures are different for the two types of downtime. The downtime procedures, retrospective data entry and templates are the same for both types. This document is not intended to define the procedures of downtime for all system components e.g. WA Health or sitewide network and infrastructure is not within the scope of this policy.

2. Procedure

In the event of a downtime situation (e.g., the system is not available for use whether planned or unplanned), and when patient care activities are scheduled to occur, timely action must be undertaken in alignment with this document to ensure:

- patient safety is not compromised
- continuity of patient care is maintained
- medicines can be prescribed and administered during the period of downtime
- records of current and recently ceased medication orders are available
- retrospective entry of key information following restoration
- medications administered manually reconciled back into Charm
- retrospective completion of scheduling pathways
- subsequent appointments required are booked into the scheduler
- it is clear to users there was a system downtime when reviewing the electronic medicines administration view
- paper charts used during downtime are scanned into the Digital Medical Record (DMR)

2.1 Invocation of Downtime Procedures

This downtime procedure is to be invoked when there is an unavailability of the OMS. This procedure can only be invoked on advice by the:

- WACHS OMS System Administrator
- WACHS Regional Chief Pharmacist) (unscheduled or unexpected unavailability only)

2.2 Communication Procedure

Scheduled Downtime

Scheduled downtime, sometimes referred to as planned downtime, can occur due to maintenance or upgrade works either directly on Charm® or relating to the general technical infrastructure that facilitates delivery of Charm® to the end user.

For any scheduled downtime affecting functional availability of the Charm® application, it is expected that the OMS system administrator will:

- Establish a plan identifying required works and timeframes involved, ensuring time for adequate planning and approvals in partnership with South Metropolitan Health Services (SMHS)
- Ensure compliance with Information Management and Technology (IM&T) Change Management Procedure and ensure change is approved by the WACHS Change Advisory Board (CAB)
- Identify impacts to clinical and support services that use Charm®
- Engage with relevant and impacted stakeholders
- Establish a clear communication plan to keep users informed of downtime including reminders of outages as follows:
 - 2 to 4 weeks in advance: Notify Charm® users of the planned date, time, duration and impact via email, as per [Planned Outage Notification Template](#)
 - 48 hours prior: Reminder notice issued, as per [Planned Outage Reminder Template](#)

Where downtime extends beyond anticipated timeframes, Business Continuity Plan (BCP) procedures may be extended or invoked if not already in place, following the procedure detailed in unscheduled downtime below.

Unscheduled Downtime

Unscheduled downtime can result from a variety of reasons, with the impact and severity being variable. Typically, unscheduled downtime is a result of a technical incident, and may be sudden or require prompt action to resolve, which may result in an OMS outage with minimal notice to end users.

Examples include:

- scheduled downtime did not bring the system back to normal operation as expected
- unexpected power or network outage
- health infrastructure services down
- emergency software fixes
- state incident response.

Unscheduled downtime may be defined by a level which represents the anticipated length of the downtime ([Table 1](#)).

Level 0	Level 1	Level 2
0 to 15 minutes	15 to 60 minutes	Longer than 60 mins

Table 1: Unscheduled Downtime Levels

2.3 Recognition

Recognition of a problem is likely to arise from, but not limited to:

- Clinical
 - inability to login
 - inability to view clinical and patient information
- Technical
 - issues with webPAS integration
 - network issues.

2.4 Business Continuity Plan – Unscheduled Outages

On recognition that the OMS is not functioning normally e.g., user is unable to login, clinical data not visible or the application is not working as expected, staff must follow the steps outlined in the [Table 2](#). A [workflow diagram](#) has also been produced to support on-site staff, focusing on end user impact and clinical service delivery

Step		Action	Responsibility	Staff informed	Comments
1	User or System Assessment	Initiator checks with other team members at site to confirm if the issue affects more than one user.	Charm® end user	Other Charm® users at site	
2	ICT Notification	Senior clinical staff member (e.g. NUM) notifies WACHS ICT Help Desk (Phone: 1800 794 748) and Charm® System Administrator that Charm® is impacted.	Senior clinical staff member (e.g. NUM)	WACHS ICT Service Desk, Charm® System Administrator	If determined to be single user only, user is supported by WACHS HIAS and/ or Charm® System Administrator to resolve user profile issues.
3	Incident Logged	Issue logged and an incident raised in HPE Service Manager (HPSM), allocated to WACHS Health Information Application Support (HIAS).	WACHS ICT Service Desk or WACHS HIAS	Charm® System Administrator	WACHS ICT Service Desk reviews call against established question set and determines responsibility and priority
4	Incident Assessment	HIAS and/ or WACHS Charm® System Administrator confirms with other sites and/ or SMHS to establish if issue is site specific or affecting all Charm® users. Note: If outside of business hours – user advised that action will be taken at commencement of next business day	HIAS/ WACHS Charm® System Administrator	Other Charm® Users and SMHS Charm® System Administrator	HIAS collates basic info about the situation and engages with WACHS Charm® System Administrator for assistance. If necessary, escalate to Health Support Services (HSS)
7	HSS Issue Resolution	Await resolution of issue by HSS. HSS engage with internal resolver teams e.g. integration team, WACHS ICT and Charm® vendor as appropriate. WACHS ICT Service Desk to assist with troubleshooting if required by HSS e.g. WACHS firewall issue.	HSS	Magentus Help Desk WACHS ICT Service Desk	To assist with issue troubleshooting and resolution, the Charm® vendor may require a copy of the system database be provided to allow for in-depth investigation. HSS will facilitate the supply of a database copy to the Charm® vendor if required.
8	Impact Assessment	Charm® system administrator liaises with HSS to assess scope and impact of outage and determine estimated application restoration time	Charm® System Administrator	HSS	
9	Decision to Enact BCP Process	Level 2 Outage (>60mins) Confirmed: Charm® system administrator to instigate BCP (as outlined in Table 2 and 3 below), if clinically appropriate.	Charm® System Administrator	All Charm® users	Downtime procedure to be instigated if estimated application restoration time is greater than 60 minutes.

Step		Action	Responsibility	Staff informed	Comments
10	Access Clinical Information	<p>Nursing staff at affected sites to source information on all treatments in progress or scheduled for that day. In order of priority, this information should be obtained by one of the following sources:</p> <ol style="list-style-type: none"> 1. BCP Reports – Downloaded from Intranet Shared Drive (J:\Oncology\CHARMWACHS\PROD), configured and printed. <i>Please note: This link will only be accessible to users with access to the Charm System.</i> 2. Charm® System Administrator – accessing BCP reports from central office and/ or via SMHS intranet connection, and communicated back to site via an alternative means (e.g. fax or phone) 3. Download previous Medication Chart and/ or notes from last specialist review from patient's Digital Medical Record 	Nursing and pharmacy staff at site		
11	Continue Treatment Provision	<p>For treatments in progress, and BCP report printed: continue with treatment administration, recording all administration details on paper, in preparation for retrospective data entry back into Charm following restoration.</p> <p>For treatments not yet started, or BCP reports not able to be printed: request Consultant (or dedicated Senior Medical Practitioner where appropriate) review available clinical information obtained in previous step and transcribe medication orders to a paper MR170G Cancer Treatment Chart as clinically appropriate.</p> <p>Prioritisation of concurrent treatments, and/ or decision to reschedule will be made by nursing in consultation with patient's treatment doctor.</p> <p>All pre-treatment nursing assessments to be recorded on MR59C WACHS Cancer Services - Cancer Treatment Nursing Assessment & Care Plan</p>	Nursing staff at site, medical team		

Step		Action	Responsibility	Staff informed	Comments
		Pharmacy services to continue based on either the printed BCP reports, or the paper based 170G as above.			
12	Comms – Situation Update	Updates on situation to Charm® provided via email	Charm® System Administrator	All Charm® users	
13	Comms – Issue Resolved	Issue resolved. Contact users to advise of restoration of service via email.	WACHS HIAS (Or WACHS ICT after hour)	All Charm® users	
14	BAU Operations Recommence & Retrospective Data Entry/ Reconciliation	<p>Clinicians switch back to normal operations. Retrospective data is entered based on paper records kept during downtime for the following:</p> <p>Nursing:</p> <ul style="list-style-type: none"> • Patient’s height & weight • Patient toggle status • Pre-Anticancer Drug Checklist questionnaire • Manually administered medications into MAR – witness to cross check transcription and accuracy of administration times • Appointments booked into Charm® schedule • Completion of scheduling pathways • Appointment day completed <p>Medical:</p> <ul style="list-style-type: none"> • Electronic medication orders all entered and signed off • Pathways/ orders updated with any dose modifications <p>Pharmacy:</p> <ul style="list-style-type: none"> • Pathway orders are verified 	Charm® users	Charm® system administrator, NUM and compounding supervisor	
15	Comms – Post Incident Review	Communication providing a root cause of the issue sent to all Charm® users via email as appropriate.	Charm® system administrator	All Charm® users	

Table 2: Downtime Process - Unscheduled Outages

2.5 Equipment Availability

Each Cancer Unit has at least two Workstation on Wheels (WoWs) which have been configured and allocated for use. Each site also has one or more nominated red power-point(s) connected to essential power, to ensure WoWs can be charged in the event of a non-essential power failure.

During a non-essential power failure, it is recommended that each site ensure one of their WoWs is on charge at all times to ensure ongoing availability.

2.6 Business Continuity Plan Reports

Charm® Business Continuity Plan (BCP) reports automatically run at periodic intervals and are saved in J:\Oncology\CHARMWACHS\PROD.

The downtime reports may be accessed from any WACHS PC with DoH network access, by any user that has been provisioned with access to the Production Charm® environment.

Reports will require configuration and formatting by end users at site. A training package and [quick reference guide](#) has been produced to support users who are required to do this

Report Name	Description	Frequency File Updated
WACHS BCP – eMAR details for yesterday and today	A report containing all electronic administration records for treatments completed yesterday, currently in progress or scheduled for today.	Every 15 minutes
WACHS BCP - eMAR details for week ahead	A report containing all electronic administration records for treatments scheduled for completion in the next 7 days. Enables continuation of treatment planning, pharmacy ordering and verification	Every 240 minutes
WACHS BCP – expected appointments for today	A report containing information on all appointments for today	Every 30 minutes
WACHS BCP – expected appointments for week ahead	A report containing information on all appointments for the upcoming week, to enable continuation of treatment planning and scheduling, confirmation of patient's appointments for the coming week.	Every 240 minutes
WACHS BCP – Pharmacy Procurement details for today	A report containing key information related to medications required to be procured by Pharmacy for treatments scheduled for today.	Every 60 minutes
WACHS BCP – Pharmacy Procurement details for week ahead	A report containing key information related to medications required to be procured by Pharmacy for treatments scheduled for the next 7 days	Every 240 minutes

Table 3 BCP Reports

3. Roles and Responsibilities

The **Charm® System Administrator** is responsible for:

- supporting end users with resolving any user profile issues resulting in a single user being unable to access the system
- engagement with HIAS throughout the incident assessment process
- engage with HSS and / or Magentus throughout issue resolution

- coordination of communications to end users as per section **Error! Reference source not found.** [Communication Procedure](#)
- facilitation and communication of Post Incident Review.

Clerical staff are responsible for:

- supporting nursing staff in sourcing clinical information on all treatments in progress or scheduled for completion that day, to enable ongoing provision of care. This information should be obtained, wherever possible, from the BCP reports outlined in section 2.6 [Business Continuity Plan Reports](#).
- configuration and printing of BCP Reports.

Nursing staff are responsible for:

- where clerical staff not available - sourcing clinical information on all treatments in progress or scheduled for completion that day, to enable ongoing provision of care. This information should be obtained, wherever possible, from the BCP reports outlined in section 2.6 [Business Continuity Plan Reports](#)
- for treatments in progress, and BCP report printed: continuation of treatment administration, recording all administration details on paper, in preparation for retrospective data entry back into Charm following restoration.
- for treatments not yet started, or BCP reports not able to be printed: requesting Consultant (or dedicated Senior Medical Practitioner where appropriate) review and transcribe medication orders to a paper [MR170G Cancer Treatment Chart](#)
- prioritisation of concurrent treatments, and/ or decision to reschedule patient treatments not yet commenced in consultation with patient's treatment doctor.
- Recording all pre-treatment nursing assessments to on [MR59C WACHS Cancer Services - Cancer Treatment Nursing Assessment & Care Plan](#)
- following system restoration, retrospective data entry of the following information: patient's height and weight, toggle status, completion of Pre-Anticancer Drug Checklist questionnaire, recording of any manually administered medications into MAR (noting the requirement for a witness to cross check transcription and accuracy of administration times, appointments booked into Charm® schedule, completion of scheduling pathways and appointment day completed.

Medical staff are responsible for:

- reviewing and/ or transcribing medication orders onto a [MR170G Cancer Treatment Chart](#)
- ensuring all new orders are recorded on a [MR170G Cancer Treatment Chart](#)
- following system restoration, retrospective data entry of the following information: electronic medication orders entered and signed off, pathways/ orders updated with any dose modifications.

Pharmacy staff are responsible for:

- accessing BCP reports from nominated computers, configuring and printing as required
- continuation of clinical pharmacy services based on the BCP reports and/ or any paper based 170G charts in use
- following system restoration, retrospective data entry of the following information: pathway order verification

All staff are required to comply with the directions in WACHS policies and procedures as per their roles and responsibilities. Guidelines are the recommended course of action for WACHS and staff are expected to use this information to guide practice. If staff are unsure

which policies procedures and guidelines apply to their role or scope of practice, and/or are unsure of the application of directions they should consult their manager in the first instance.

4. Monitoring and Evaluation

Monitoring and evaluation of this procedure is the responsibility of the WACHS Cancer Clinical Governance Group (CCGG), WACHS OMS System Administrator and WACHS Cancer Services.

This document will be reviewed as required to determine effectiveness, relevance and currency. At a minimum, it will be reviewed every 3 years by the CCGG and endorsed by the WACHS Medication Safety Committee.

Any issues or concerns are to be escalated to the [WACHS Cancer Clinical Governance Group](#).

5. References

Australian Commission on Safety and Quality in Health Care. [Electronic Medication Management Systems: A Guide to Safe Implementation](#), 3rd edition. Sydney: ACSQHC; 2019

Australian Commission on Safety and Quality in Health Care. [Electronic Medication Management Systems Business Requirements](#), 3rd edition. Sydney: ACSQHC; 2019

6. Definitions

Term	Definition
Business Continuity Plan	A Business Continuity Plan (BCP) is a step-by-step process that users should follow to continue with service provision during a Level 2 outage (>60 minutes).
Business Continuity Plan Report	A Business Continuity Plan (BCP) Report is a CSV report automatically extracted from Charm® and placed in a shared folder location, to facilitate users to access the information required to ensure ongoing clinical service provision throughout an outage.
Oncology Management System	An Oncology Management System is an end-to-end medications management system supporting patient treatment for haematology and oncology patients. The system includes a central library of anticancer drug therapy pathways, pharmacy management, patient scheduler, and reporting.
Downtime	Downtime is an extended interruption of operations and business processes during the system's unavailability. Downtime affects the capacity to access and store information; and may lead to the loss of, or unavailability of critical clinical data.
Downtime Procedure(s)	Those procedures implemented by departments or clinicians when electronic or digital and ICT support systems are not functioning as expected.

Health Information Application Support	Health Information Application Support (HIAS) is the informatics team responsible for first line support and user provisioning for clinical applications in WACHS.
HPE Service Manager	HPE Service Manager (HPSM) is an Information Communications and Technology (ICT) help desk management application, managed by Health Support Services (HSS) that documents support requests, change and incident management.

7. Document Summary

Coverage	WACHS-wide
Audience	WACHS Cancer Units/Centres
Records Management	Non Clinical: Corporate Recordkeeping Compliance Policy Clinical: Health Record Management Policy
Related Legislation	Health Services Act 2016 (WA)
Related Mandatory Policies / Frameworks	<ul style="list-style-type: none"> • MP 0131/20 High Risk Medication Policy • MP 0144/20 Information Retention and Disposal Policy • MP 0078/18 Medication Chart Policy • MP 0104/19 Medication Review Policy • Clinical Governance, Safety and Quality Policy Framework • Public Health Framework
Related WACHS Policy Documents	<ul style="list-style-type: none"> • Anticancer Therapy Prescribing Procedure • Cancer Services Referral Procedure • High Risk Medications Procedure • Medication Prescribing and Administration Policy • Safe Handling and Administration of Monoclonal Antibodies Guideline • Systemic Anticancer Therapy Guideline • TeleChemotherapy Procedure
Other Related Documents	<ul style="list-style-type: none"> • DoH Business Continuity Management Framework • On-Site Resource – Downtime Workflow Diagram • Pharmacist Verification of Prescriptions for SACT Work Instruction • Quick Reference Guide – Formatting BCP Reports – WACHS • Template for Planned Outage Notification • Template for Planned Outage Reminder • Template for Unplanned Outage
Related Forms	<ul style="list-style-type: none"> • MR59C – WACHS Cancer Services - Nursing Assessment and Care Plan • MR170G – Generic Cancer Treatment Chart Outpatients
Related Training	<ul style="list-style-type: none"> • Charm Excel Reports
Aboriginal Health Impact Statement Declaration (ISD)	ISD Record ID: 3754
National Safety and Quality Health Service (NSQHS) Standards	1.07, 1.08, 4.01, 4.02
Aged Care Quality Standards	Nil

Chief Psychiatrist's Standards for Clinical Care	Nil
Other Standards	Nil

8. Document Control

Version	Published date	Current from	Summary of changes
1.00	14 November 2024	14 November 2024	New procedure

9. Approval

Policy Owner	Executive Director Nursing and Midwifery
Co-approver	Executive Director Clinical Excellence
Contact	Lead Pharmacist Cancer services - Charm System Administrator
Business Unit	Nursing & Midwifery - Cancer Service
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