Our Digital Future

IMAGINE WHAT'S POSSIBLE...

ieMR

ieMR Advanced

CHQ ieMR SurgiNet Anaesthesia Business Continuity (Downtime) Procedures

March 2018, Version 1.1

Queensland Government

Table of contents

Abbreviations

724 DTV	724Access Downtime Viewer
BCP	Business Continuity Plan
CEC	Current Encounter Chart
CDO	Chief Digital Officer
CHQ	Children's Health Queensland
CHQ DISPLAN	Children's Health Queensland Disaster and Emergency Incident Plan
EDHS	Executive Director Hospital Services
HEOC	Health Emergency Operations Centre
HHS	Hospital and Health Service
HIC	Health Incident Controller
HSCE	Health Service Chief Executive
IMT	Incident Management Team
ieMR	Integrated Electronic Medical Record
LCCH	Lady Cilento Children's Hospital
NDOC	Nursing Director On Call
MAR	Medication Administration Record
NUM	Nurse Unit Manager
PFNM	Patient Flow Nurse Manager
TL	Team Leader

SurgiNet Anaesthesia – Business Continuity Procedures

Purpose

The CHQ ieMR SurgiNet Anaesthesia Business Continuity Procedures detail the downtime processes, planned and unplanned, related to the Cerner Millennium ieMR SurgiNet Anaesthesia module and forms part of the broader CHQ Business Continuity Plan (BCP). This document provides detailed processes and responsibilities within clinical areas for an ieMR system outage or interruption that impacts standard business operations.

Scope

The scope of this document is to identify and define the downtime procedures applicable to the Surginet Anaesthesia module.

This document applies, but is not limited to:

- Theatres
- Anaesthetics

Supporting Documents

- CHQ Business Continuity Plan

1.0 Downtime and Recovery Checklist

In the event of a planned or unplanned downtime, the NUM/TL will coordinate the downtime and recovery response for the area and complete the following activities:-

Activity	
Staff Preparation (prior to downtime)	
• Each week complete the downtime checklist to ensure Downtime Viewer and Downtime Kit are ready. • Re-familiarise staff with Downtime procedures and quick reference guides	
Staff Preparation (at time of downtime)	
• Communicate to staff the downtime has commenced. • Open the downtime kit and ensure clinical staff have access to the contents to enable continued documentation of patient care. • Communicate to staff location of 724 Access Downtime Viewer and the Downtime kit. • Direct clinical staff to business continuity procedures.	
Patient Preparation (at time of downtime)	
• Ensure each patient has signage above the bed to indicate “Patient on Paper”.	
Clinical Documentation Preparation	

Planned Downtime
• Ensure any Paediatric Advanced Resuscitation Plans (PARP) and Advanced Health Directives are printed prior to the downtime and available in the Current Encounter Chart (CEC).
• Use HBCIS and/or ESM to print any relevant documentation:-
  • Patient Tracking List
  • Clinic List (OPD)
  • Theatre Lists
• Use ieMR to print:-
  • List of Orders – completed, pending
  • Patient Labels
Planned and Unplanned Downtime
• Ensure relevant paper medication charts are available for each patient in the end of bed chart.
• In the event of a Statewide planned downtime, access the Disaster Recovery Database via QHEPS. The 724 Access Downtime Viewer is NOT required to be used.
• If the event is not a Statewide planned downtime, access the 724Access Downtime Viewer <u>at the commencement</u> of downtime using the ward generic login and password.
• Print a patient list of current patients. Refer to the downtime viewer quick reference guide found in the downtime kit for printing instructions.	

Activity	
Clinical Documentation Preparation (continued)	
• Print the following for ALL patients on the patient list and place in each patient's end of bed chart:- 1) Medication Orders (current). This will print the patients MAR (Medication Administration Record) 2) Active Orders. This will print a list of outstanding/ active orders for all patients. Print the following tabs in the downtime viewer: o Orders (current) o Completed orders Other relevant clinical documentation can be accessed and printed as clinically indicated, for example:- 1) Documents 2) Intake and Output (Fluid Balance Chart) 3) Discontinued Medications 4) Patient Care Results 5) Vital Signs 6) Lab Results 7) Microbiology Results Refer to the downtime viewer quick reference guide found in the downtime kit for printing instructions. Reprinting of the MAR for patients is a risk in a downtime. The responsibility of printing and monitoring this activity is with the NUM/TL who will manage access to the Downtime Viewer during a downtime. Pre-printing preparation will depend on the predicted length of time of the Downtime and clinical need.	
Recovery (following the downtime)	
• Remove "Patient on Paper" signage • Coordinate the recovery response – ensure that clinicians retrospectively enter the required information into the ieMR. Refer to the downtime recovery column in the Business Continuity Procedures (Section 3.0). • The recovery plan is intended as a guide only. Patient safety principles take precedence. The decision to enter clinical information into the ieMR manually, or have the information scanned and reconciled upon discharge post a downtime event will be assessed after each downtime event by the HEOC (if assembled), and local line management in consultation with the NUM/TL and divisional director level. This will be dependent on the time of the downtime, length of the downtime, length, impact of the downtime and clinical requirements. • Replenish contents of the downtime kit and reseal the kit. Health Information Management Services has a supply of all approved downtime forms.	
Additional Staffing and Resource Requirements	
• The requirement for additional staff should be assessed during and after each downtime event. This will be assessed by the HEOC (if assembled), and local line management in consultation with the NUM/TL and divisional director level. This will be dependent on the time of the downtime, length of the downtime, impact of the downtime and clinical requirements. • Additional staffing of the recovery activity for medication reconciliation should be considered in the recovery phase post downtime • Additional staffing may be required in areas with high patient flow numbers and documentation requirements; e.g. ED, OPD and Theatre during the Downtime, as well as in the Recovery phase after the Downtime period.	

2.0 Roles and Responsibilities during Downtime

Clinical Staff

- Continue to care for patients.
- Follow any instructions given by the NUM/TL.
- Follow the downtime business continuity procedures found in the downtime kits.
- Document on paper forms found in the downtime kits.
- Ensure any completed paper forms are correctly labelled and placed in the patient's end of bed chart.
- Access the Downtime Viewer for additional patient information that is not already printed and available in the patient's end of bed chart.
- When notified that the ieMR has been restored, ensure information that needs to retrospectively entered, as per the business continuity procedures, is entered.

Administrative Staff

- Continue to admit, transfer and discharge patients in HBCIS.
- Maintain a documentation log of all admissions, transfers and discharges of patients during the downtime period.
- Ensure adequate patient labels in each end of bed chart for clinical staff to complete their documentation.
- Print HBCIS labels as required.
- Follow any instructions given by the NUM/TL.

NUM/Team Leader

- Refer to Section 1.0 – Downtime and Recovery Checklist

Digital Downtime Support Team

- Digital Downtime Support Team is stood up to support and coordinate activities during downtime events. This group reports to CHQ Executive and/or the HEOC (if activated) during this time.
- Provides updates and recommendations to the CHQ Executive and/or the HEOC, as required.
- Provides a link to operational staff (ieMR users) via phone and at elbow support.
- The team will comprise ieMR, HIS, Clinical and IT staff as required, dependent on the time of the downtime, length of the downtime, impact of the downtime and clinical requirements.

ieMR Digital Future (ieMR) Team

- As per the Digital Downtime Support Team

Health Information Management Services

- Supports the Digital Downtime Support Team during downtime.
- Responsible for records governance decision making during and following downtime.
- Stock a supply of all approved downtime kit contents to assist with the replenishment of downtime kits following downtime.
- Validation and maintenance of data in the digital medical record following downtime.

ICT Department

- Participate in code yellow incident management
- Liaise with DAS ieMR
- Escalate within CHQ (& send Telstra messaging notifications as needed)
- Perform system checks
- Provide device hardware access & support
- Redistribute & deploy DTV devices where needed
- Coordinate DTV device re-loads & monitor as appropriate
- Coordinate PIR (post incident review)

Patient Safety and Quality

- Manage reported patient safety incidents during and following downtime.
- Support service during downtime, as required.
- Evaluation of performance and debrief to capture lessons learnt.
- Assist with post incident review process.

Patient Flow and Safety Unit (PFSU)

- First Responder of a potential code yellow incident.
- Undertakes the initial response and investigate/define the required response to the incident.
- Notifies Clinical Services or NDOC, who briefs the CHQ HSCE or EDHS.
- Facilitates communication to all team leaders notifying of the downtime.

3.0 Business Continuity Procedures

3.1 Paper based functions

A number of functions will still be managed using paper forms. These include (but are not limited to):

- Paediatric Advanced Resuscitation Plan (PARP)
- Advanced Health Directives
- Consent Forms

These functions are not included in the continuity procedures below and these forms will not be included within the Downtime Kits.

3.2 ieMR Downtime and Recovery Plan

During the event of a planned or unplanned downtime a number of continuity procedures will need to be completed to ensure that patient care and safety is maintained for the duration of the event. These procedures are shown below. Please note these procedures do not include supporting system downtime except where the downtime directly impacts the ieMR.

These procedures are focussed on access to and the recording of information within a patient's chart – patient safety and care should take priority. All paper forms completed during downtime are to be stored in the patient's end of bed chart.

The recovery plan is intended as a guide only. Patient safety principles take precedence. The decision to enter clinical information into the ieMR manually, or have the information scanned and reconciled upon discharge post a downtime event will be at the discretion of the local line reporting manager in consultation with the divisional director level.

3.3 724Access Downtime Viewer

There may be situations where the 724Access Downtime Viewer is:-

- Unavailable/Down during an ieMR Downtime;
- Does not have the required clinical information needed during downtime;
- Has no information for particular areas e.g. ESM, Outpatients, Community

If a planned downtime is State-wide, historical ieMR clinical documentation is available in the Disaster Recovery Database. The link to access this database would be published on QHEPS by DAS-ieMR. The 724Access Downtime Viewers are NOT required to be used in this situation.

During all other downtime events, historical clinical documentation is accessible via other clinical information systems including, but not limited to:-

- The Viewer
- QRIS
- PACS
- AUSCARE

- eLMS
- iPharmacy
- AUSLAB
- Enterprise Discharge Summary (EDS)

These systems should be accessed where appropriate and BAU procedures should be followed to view clinical information within these systems.

3.3.1 Medications Management – truncation of medication orders

During downtime, when accessing medication orders information via the Medication Downtime Report in the 724Access Downtime Viewer, complex IV fluids/medications orders may be truncated.

If a complex medication/IV fluid order is truncated, a secondary report called the MAR Batch Report can be accessed to ensure clarity of the order. The MAR Batch Report is available via an icon (MAR Batch Report) on the 724Access Downtime Viewer desktop. This report can be viewed and/or printed.

Updated patient medication information is pulled hourly from the ieMR (when not in downtime) into this report with the exception of the Emergency Department that receive up to date information 10 minutely. To ensure the report is updated following a downtime event, the NUM/TL should ensure that the DTV is logged off.

3.4 Table of Contents – Business Continuity Procedures

Issue	Indicator of Issue	Impact	Downtime Contingency	Downtime Recovery	Responsibility
Phillips Network/Server Outage	No new patient vitals data appearing in SAA in the context of the Philips monitor – SAA and Philips monitor both individually remain fully functional Location icon not visible in top left corner of Philips monitor No patient vitals charting occurring/updating in SAA and unable to restore vitals charting by manually re-associating the Philips device	SAA remains operational so Anaesthetic procedure charting can continue in the ieMR. Patient monitors remain active so the patient can continue to be monitored. The impact is that the Vitals data from monitors does not flow through into the SAA chart and subsequently into the Anaesthesia summary when the case is finalised.	Manually enter vitals data into SAA. .	N/A	Anaesthetic staff

Issue	Indicator of Issue	Impact	Downtime Contingency	Downtime Recovery	Responsibility
Cerner Network/Server Outage, CHQ Virtual Desktop general Failure	Network – SAA (includes VDI failure) closes unexpectedly and cannot be reopened. Cerner connection failure – all ieMR functions not available (PowerChart, SurgiNet, etc.) Virtual Desktop failure – other ieMR functions operating, all SAA VDI's not operating ADU and Patient monitor continue to operate in isolation	Patient monitoring continues to function but access to any form of electronic charting in ieMR is lost. No ability to chart in SAA in any form including vitals data from monitors.	Utilise the following forms as required during downtime: Anaesthesia record, NIMC, IV Fluid Therapy, Pain prescription, postoperative orders, including observations/special instructions, fluids and medications. These forms are in the downtime boxes on the anaesthetic drug trolleys. (**NOTE:** If there are none in the trolleys, the forms will be located in the stationery cupboard) Continue to use the following paper based forms as per BAU: Consent for anaesthesia, Paper Anaesthetic record, Request for anaesthetic pre-assessment, Request and consent for CVAD, PICU Elective Booking Form, High Acuity Close Obs Booking Form	If the downtime period ends before the patient leaves the operating theatre, any critical anaesthetic data recorded on paper should be retrospectively entered into the ieMR (as determined by the Anaesthetist). The record should at a minimum refer to the downtime record scanned into the ieMR and contain start and stop anaesthetic time and ASA data. A brief description of the outage should be included. All information recorded on paper during the downtime is to be scanned into ieMR.	Anaesthetic staff

Issue	Indicator of Issue	Impact	Downtime Contingency	Downtime Recovery	Responsibility
Power Failure (Standard/Planned Outages)	No indicator as ADU/Philips/WoW on essential power.	Patient monitoring continues to function but access to any form of electronic charting in ieMR is lost. No ability to chart in SAA in any form including vitals data from monitors.	Emergency surgical procedures and any surgical procedures already underway continue to progress as per Power Failure (Essential Power Outage)	As per Power Failure (Essential Power Outage)	Anaesthetic staff

Issue	Indicator of Issue	Impact	Downtime Contingency	Downtime Recovery	Responsibility
Power Failure (Essential Power Outage)	Battery icon on ADU screen No indicator on Philips monitor	Patient monitoring continues to function but access to any form of electronic charting in ieMR is lost. No ability to chart in SAA in any form including vitals data from monitors.	ADU will run on ADU battery. Philips monitor will also run on ADU battery. VDI may also run off ADU battery however this **must be** disconnected to ensure adequate battery power for essential monitoring. If used, WoW has 8hrs of battery backup, although this would be redundant necessitating paper record if the network is affected by the essential power outage – if this is the case, use paper downtime process. Utilise the following forms as required during downtime: Anaesthesia record, NIMC, IV Fluid Therapy, Pain prescription, postoperative orders, including observations/special instructions, fluids and medications. These forms are in the downtime boxes on the anaesthetic drug trolleys. (**NOTE:** If there are none in the trolleys, the forms will be located in the stationery cupboard) Continue to use the following paper based forms as per BAU: Consent for anaesthesia, Paper Anaesthetic record, Request for anaesthetic pre-assessment, Request and consent for CVAD, PICU Elective Booking Form, High Acuity Close Obs Booking Form	If the downtime period ends before the patient leaves the operating theatre, any critical anaesthetic data recorded on paper should be retrospectively entered into the ieMR (as determined by the Anaesthetist). The record should at a minimum refer to the downtime record scanned into the ieMR and contain start and stop anaesthetic time and ASA data. A brief description of the outage should be included. All information recorded on paper during the downtime is to be scanned into ieMR.	Anaesthetic staff

Issue	Indicator of Issue	Impact	Downtime Contingency	Downtime Recovery	Responsibility
Philips Device Failure (Partial/Complete)	Malfunction of Philips device (Philips device unserviceable/not fit for clinical monitoring e.g. screen display blank)	Patient monitoring not able to be undertaken, or continued if a procedure is already underway.	Replace Philips monitor or ADU complex. There is redundancy to allow for this. Do not commence anaesthesia where possible until Philips/ADU replaced. If anaesthesia has already commenced, replace the relevant faulty component as appropriate to ensure continuity of patient monitoring. If anaesthesia must be commenced, use paper downtime process. Utilise the following forms as required during downtime: Anaesthesia record, NIMC, IV Fluid Therapy, Pain prescription, postoperative orders, including observations/special instructions, fluids and medications. These forms are in the downtime boxes on the anaesthetic drug trolleys. (**NOTE:** If there are none in the trolleys, the forms will be located in the stationery cupboard) Continue to use the following paper based forms as per BAU: Consent for anaesthesia, Paper Anaesthetic record, Request for anaesthetic pre-assessment, Request and consent for CVAD, PICU Elective Booking Form, High Acuity Close Obs Booking Form.	If the downtime period ends before the patient leaves the operating theatre, any critical anaesthetic data recorded on paper should be retrospectively entered into the ieMR (as determined by the Anaesthetist). The record should at a minimum refer to the downtime record scanned into the ieMR and contain start and stop anaesthetic time and ASA data. A brief description of the outage should be included. All information recorded on paper during the downtime is to be scanned into ieMR.	Anaesthetic staff

Issue	Indicator of Issue	Impact	Downtime Contingency	Downtime Recovery	Responsibility
VDI Component Failure or Intractable WoW Failure	Malfunction of VDI hardware component or WoW.	Unable to access ieMR SAA via Anaesthetic VDI device. Full patient monitoring continues to operate, and monitoring data will be flowing to ieMR.	Replace defective VDI component or replace entire ADU. Retrieve new WoW from the pool of Anaesthetic WoWs (also an option for VDI component failure, ie, an Anaesthetic WOW can substitute for an attached VDI unit.) Scanning of the replacement device to obtain association of the Philips device to SAA may be necessary. If replacement is not possible, treat as per Cerner Network/Server Outage, CHQ Virtual Desktop general Failure.	Patient vitals should be entered manually into SAA, or documented on paper if SAA unavailable due to VDI failure.	Anaesthetic staff

Document Version History

Date	Version.	Author	Description of revision
17/01/2018	0.1	Patricia Boucher	Initial draft
15/02/2018	0.2	Patricia Boucher	Revisions provided by ieMR Business Analysts, ieMR Subject Matter Experts, and ieMR Clinical Governance Working Groups
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