



Ready When the Lights Go Out: The Downtime Optimization Project

2025 CHA Disaster Planning Conference

Introductions

Disclosures

All planners and presenters report no relevant financial relationships or relationships with ineligible companies of any amount during the past 24 months.

References to specific commercial products does not constitute as sponsorship or endorsement of those items on behalf of CHLA or the speakers



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Learning Objectives

- At the end of this session, participants will be able to:
 - Define the opportunities for improving health care downtime readiness and response as identified by Children's Hospital Los Angeles (CHLA)
 - List the strategies implemented by CHLA to standardize workflows, resources, and education as well as improving resource accessibility
 - Apply strategies to enhance their organization's downtime readiness and response capabilities

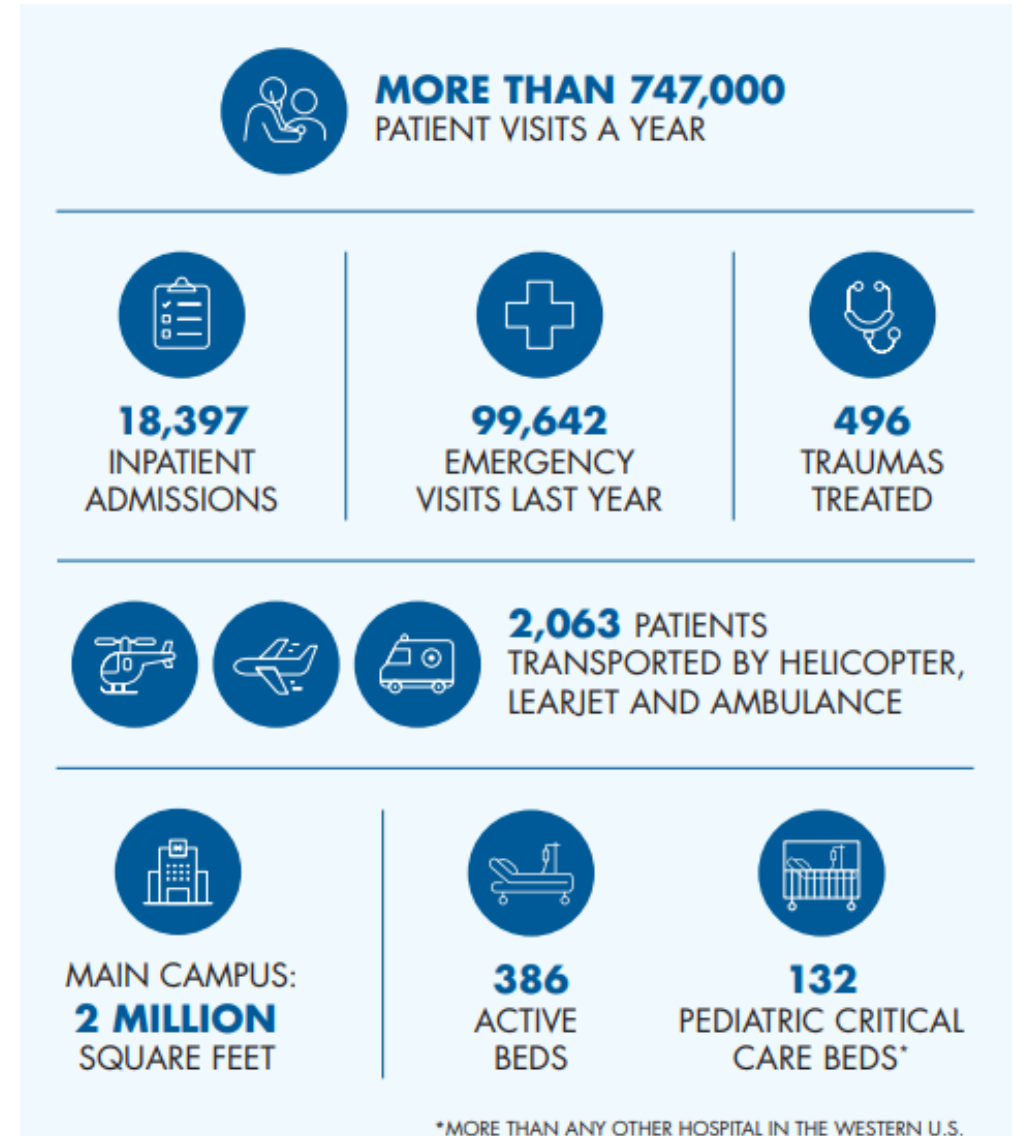
About Children's Hospital Los Angeles (CHLA)



Level I Pediatric Trauma and Burn Resource Center

Level IV Newborn and Infant Critical Care Unit (NICCU)

LA County's Pediatric Disaster Training & Resource Center



Why focus on Cybersecurity and Downtime?

Situation / Background

In 2023, the health sector experienced the largest share of ransomware attacks of 16 infrastructure sectors considered vital to national security or safety, according to an FBI report on internet crimes. In March, the federal Department of Health and Human Services said reported large breaches involving ransomware had jumped by 264% over the past five years.

A cyberattack this year on Change Healthcare, a unit of UnitedHealth Group's Optum division that processes billions of health care transactions every year, crippled the business of providers, pharmacies, and hospitals.

Cyberattacks on Hospitals Are Likely to Increase, Putting Lives at Risk, Experts Warn

Cybersecurity experts are warning that hospitals around the United States are at risk for attacks such as the one that's crippling operations at a premier Midwestern children's hospital



Southern California Hospital at Hollywood is one of the hospitals that is part of Prospect Medical Holdings, which was hit by a cyberattack this week. Damian Dovarganes/Associated Press

Hospitals: 'The No.1 target of ransomware'

"We've started to think about these as public health issues and disasters on the scale of earthquakes or hurricanes," said Jeff Tully, a co-director of the Center for Healthcare Cybersecurity at the University of California-San Diego. "These types of cybersecurity incidents should be thought of as a matter of when, and not if."

Josh Corman, a cybersecurity expert and advocate, said ransom crews regard hospitals as the perfect prey: "They have terrible security and they'll pay. So almost immediately, hospitals went to the No. 1 target of ransomware."

Annual Hazard Vulnerability Assessment (HVA)

	FY25 HVA	FY26 HVA
1	Generator Failure	Cyber/IS System Failure
2	Cyber	Unplanned Electrical Failure
3	Electrical Failure	Mass Casualty Incident (non-HAZMAT)
4	Internal Flood	Major Earthquake
5	Information Systems (IS) Failure	Supply Shortage

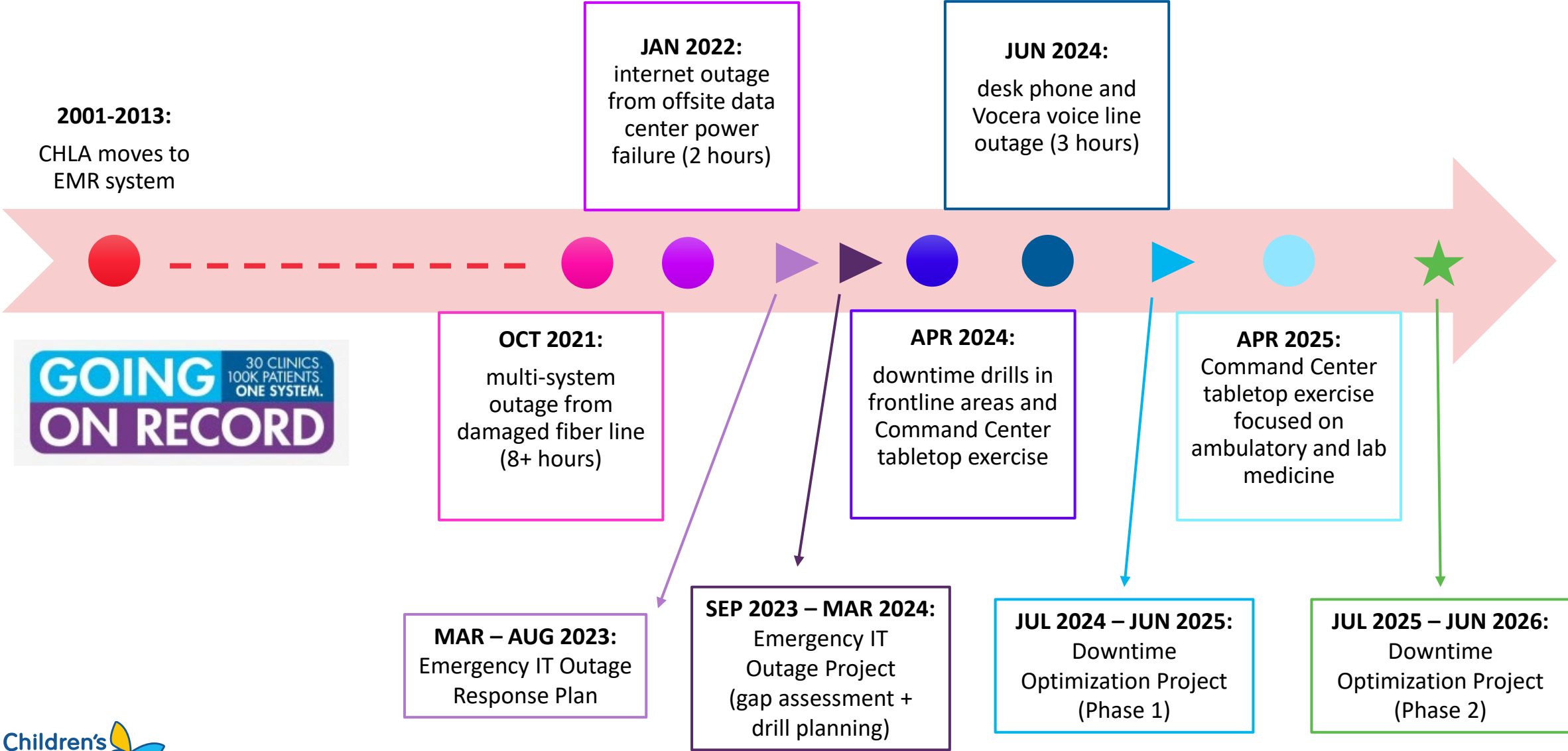
Unplanned IS System Outage (Downtime)

- Any unplanned outage of Information Services technologies
 - Phones and Email
 - Electronic Medical Record (EMR)
 - Other communication and collaboration platforms
- Requires specialized response considerations
 - Alternate communication modalities
 - Downtime charting



How did we get here?

The Evolution of Downtime Readiness



Key Lessons Learned (2021 – 2022)

- Downtime plans for IS systems are reliant on a single point of failure
 - Dependent on other IS systems to be functional
- Most team members are not fluent in “IS terminology”
 - Rhapsody is down → data won’t feed into EMR (integration engine)
- Paper copies of the provider on-call schedule and pharmacy drug book were not readily available
- IS Service Restoration Team activities were not coordinated effectively with the Hospital Command Center

Improvement Actions (2023 – 2024)

- New “Emergency IT Outage Response Plan” drafted and approved
 - Command Center procedures to supplement (not replace) standard IS runbooks
 - Plan addresses response procedures for systems with **critical impact potential** to **direct patient care** operations
- FY24 goal to validate new plan
 - Develop and implement an annual education plan for IT Outages/Downtime and conduct a downtime drill with at least one direct patient care area by June 2024
 - Deliverables: Knowledge gap assessment, curriculum development, and drills
 - ✓
 - ✗
 - ✓
 - No-notice drills conducted in 1 inpatient med-surg unit & 2 ambulatory clinics (dialysis + GI) – focus: transition to downtime and contact IS Service Desk

Key Lessons Learned (2023 – 2024)

- Knowledge gap assessment
 - Did not know downtime computer location, how to log in, and its limitations
 - Did not know the location of downtime documents, forms, and paperwork
 - 43% said “strongly or somewhat agree” re: comfort with paper charting
 - Overall concerns about outdated downtime paperwork and lack of standardized response resources
- Downtime drills
 - Frontline team members appreciated opportunity to practice transitioning to downtime and requested more drills
 - Downtime resources need to be **standardized** across the organization
 - Downtime computers need to work when needed and team members need to know how to use them

Re-Evaluation of Current State (May – June 2024)

- **Downtime policies** – not aligned or standardized
 - Each department had their own policy and definitions differed
- **Downtime computers** – not located in all patient care areas
 - All inpatient areas but only some ambulatory areas
 - Departments managing independently with no oversight and no standardized expectations
- **Downtime resources** – no centralized ownership of job aids
 - SuperKIDS committee typically pushes out new charting features, etc.
- **Downtime education** – no standardized requirement
 - In 2023, one-time education done for new Emergency IT Outage Response Plan

Example: Policy Inconsistencies

DEFINITION:

1. Downtime is a period of time when one or more CHLA computer systems (e.g., KIDS, STAR, PN) will be out of service and unavailable for use. There are two types of downtime:
 - a. **Scheduled** - to be used for backups, upgrades, and maintenance. The system is not available for use during this period of time. Users will be notified in advance so they can prepare for the downtime.
 - b. **Unscheduled** - an unforeseen failure. When the computer system is noted to be down, but no announcement has been made, staff may call the CHLA Service Desk at x14444
2. There are two levels of downtime, based on the duration and level of impact on normal procedures.
 - a. **Level I** - Expected downtime is less than 6 hours. Manual procedures (e.g., documentation, orders) will be used for all affected departments. All data listed below during this downtime **will** need to be entered into the system once it is available.
 - i. All orders will be entered into the system (except lab that has been drawn x-rays that are done during downtime)
 - ii. All medications administered will be backloaded
 - iii. I&O totals
 - iv. VS - all
 - v. All other patient information will be available manually
 - b. **Level II** - Downtime exceeding 6 hours. Manual procedures (e.g., documentation, orders) will be used for all affected departments. The following items will need to be back loaded into the system.

DEFINITIONS:

There are two types of downtime:

1. **Scheduled** - to be used for backups, upgrades, and maintenance. The system is not available for use during this period of time. Users' will be notified in advance so they can prepare for the downtime.
2. **Unscheduled** - an unforeseen system failure. When the computer system is noted to be down, but no announcement has been made, *staff* may call the Service Desk at x14444.

There are three levels of downtime, based on the duration and level of impact on normal procedures.

1. **Level I** - Expected downtime is of short duration and does not impact report generation. Manual procedures for some processes (e.g., documentation, new orders, and label generation) will be used if necessary.
2. **Level II** - Expected downtime significantly impacts report generation. Manual procedures will be used for some or all processes.
3. **Catastrophic** - All systems, including power, are down for an extended period of time. Major impact on report generation. Manual procedures will be used for all processes.
4. All information collected during this downtime related to medication orders **will** need to be entered into the computer system once it is available.

How do we address all of these
gaps?

The Downtime Optimization Project

Objectives

- Standardize downtime response, resources, and education
- Streamline transition to downtime
- Minimize impacts of downtime on patient care and operational efficiency
- Enhance/upgrade existing resources
- Reduce team member anxiety towards downtime

Deliverables

- Audit of downtime computers
- Organization wide preparedness assessment
- Standardized template(s) for downtime resource binders, including job aids and guides
- Educational module (iLearn)
- Policy revisions
 - Downtime computer check requirements

Complexity of Downtime Optimization

IN SCOPE (Phase 1)

- Crosswalk of downtime policies
 - New downtime readiness policy
- Development of standardized downtime education module and resources (binder)
- Audit of downtime computers
- Inpatient units, Ambulatory Clinics (except procedural areas*), ED

OUT OF SCOPE (Phase 2)

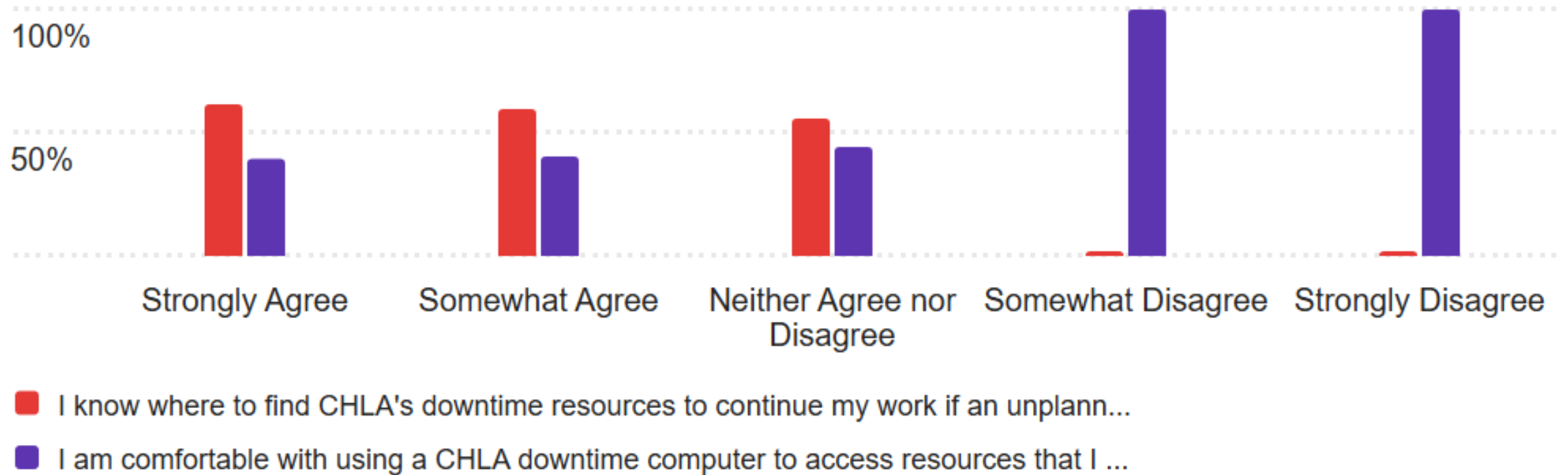
- Revision of existing downtime response/recovery policies
 - Procedures for extended downtime
- Procedures for other EMR and clinical IS systems
- Procedural and ancillary areas
 - Perioperative areas
 - *Radiology & other procedural areas
 - Lab, Clinical Nutrition, Social Work

How do we know our current state of preparedness?

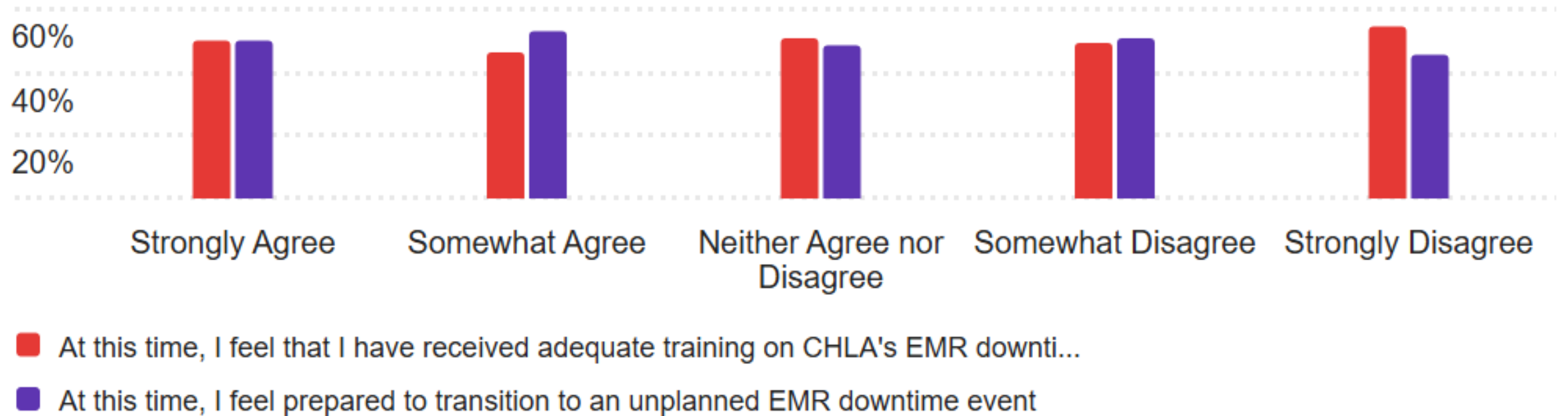
Perceptions of Downtime Preparedness Survey

- I know where to find CHLA's downtime resources to continue my work if an unplanned EMR downtime event occurred.
- I am comfortable with using a CHLA downtime computer to access resources that I would need during an unplanned EMR downtime event.
- At this time, I feel that I have received adequate training on CHLA's EMR downtime procedures.
- At this time, I feel prepared to transition to an unplanned EMR downtime event.
- If there was an unplanned EMR downtime event, what are your biggest concerns?
- How could we better support and/or train you so that you feel more prepared to respond to unplanned EMR downtimes?

Pre-Intervention Survey Results Overview



Pre-Intervention Survey Results Overview



What are your biggest concerns during downtime?

- “I don’t know what to do”
- Coordinating care between departments, i.e. lab, imaging, etc.
- Unsure where resources are located or how to use them
- Patient safety and care delays – result delays, medication errors, entering new orders, miscommunications
- How to paper chart

How could we better support and/or train you?

- Provide more required training, such as an annual iLearn
- Educate team members on binders
- Downtime drills/mock downtime events
- Provide communication plans
- Checklists and job aids

How do we know the downtime
computers are ready for use?

How do we ensure they remain ready
for use?

Downtime Computer Maintenance

Key Challenges

- Not maintained or managed by a central team
 - Outdated and several computers missing
- Audit showed that 100% of the computers had issues
 - Not updating patient lists
 - Unable to connect to printer
 - Not restarted for extended periods – no updates

	New Asset	Serial Number	Hardware	Kids Downtime Name	Old Asset Tag	Old Serial Number	Department	Build Floor
16								
1	N45264	MJ0CXR80	Lenovo T490s	2W-N45264	2W-H31572	MJ04XJES	CVACute	AP 2nd Floor West
2	N45292	MJ0CXZF7	Lenovo T490s	3W-N45292	3W-H21368	3JYSYQ1	NICCU	AP 3rd Floor West
3	N45293	MJ0CXR7Z	Lenovo T490s	4W-N45293	4W-N23483	MJ0115N7	4 West	AP 4th Floor West
4	N45294	MJ0CYNP8	Lenovo T490s	5W-N45294	5W-N23494	MJ0115NQ	5 West	AP 5th Floor West
5	N45295	MJ0CYNP7	Lenovo T490s	6W-N45295	6W-N23375	MJ0115PL	6 West	AP 6th Floor West
5	N45296	MJ0CYNPA	Lenovo T490s	AC-N45296	AC-N29566	MJ03GF5T	Access Center	AP 5th Floor
7	N45297	MJ0CYNP9	Lenovo T490s	D6-N45297	D6-H27197	MJ01ZSKF	Duq 6 Rehab	Duq 6th Floor
3	N45301	MJ0CXZF9	Lenovo T490s	OP3-N45301	OP3-H26464	MJ007RQ2	Allergy / Immune	OPT 3rd Floor East
3	N45302	MJ0CXZF8	Lenovo T490s	ADM-N45302	ADM-N33342	MJ06773R	Adol Med	5000 Sunset 4th Floor
2	N45303	MJ0CXZFA	Lenovo T490s	BMT-N45303	BMT-N30480	MJ03YYVX	BMT	AP 4th Floor West
1	N45072	PC1GXX4T	Lenovo T490s	CCC-N45072	CCC-H26445	MJ007RQJ	All in Patient units	Page 2nd floor
2	N45141	PC1JJB54	Lenovo T490s	CRD-N45141	CRD-N23434	MJ0115NX	Cardiology Main	AP 2nf Floor West
3	N45142	PC1JJB51	Lenovo T490s	OP5-N45142	OP5-N44034	MJ0C5RPX	Hem Onc	OPT 5th Floor
4	N45143	PC1JJB44	Lenovo T490s	MC5-N45143	MC5-N15474	MJ7982K	Nephrology Main	MCS 5th Floor
5	N45144	PC1JJB4N	Lenovo T490s	IC-N45144	H24239	MJ03TYKE	Infusion Center	Duque 4th floor
5	N45145	PC1JJB5B	Lenovo T490s	HPB-N45145	HPB-H31576	MJ04XJEA	NeuroSurgery / Boone Fetter	Hollywood Pres 9th floor
7	N45146	PC1JJB5G	Lenovo T490s	ED-N45146	ED-N23270	MJ00Y0ZA	ED	East Nurse Work Room
3	N45147	PC1JJB57	Lenovo T490s	ED-N45147	ED-N27821	MJ02GVNQ	ED	AP Ground West Triage
				ED-N41113			ED	ED MD Triage
				Asset Tag	Serial Number	Department	Build Floor	
17								
1	N37200	PC0P53P7	Lenovo T470	2E-N37200	2E-N17632	MJ0115QX	CTICU	AP 2nd Floor East
2	N39229	PC0QAD0J	Lenovo T470	3E-N39229	3E-N22392	MJ0115NA	PICU	AP 3rd Floor East
3	N38526	PC0X7W6T	Lenovo T470	4E-N38526	4E-N30124	MJ140PZ	4 East	AP 4th Floor East
4	N39316	PC0QACYG	Lenovo T470	5E-N39316	5E-N44064	MJ0C5RP6	5 East	AP 5th Floor East
5	N39335	PC0QAD0N	Lenovo T470	6E-N39335	6E-N30503	MJ03YYW0	6 East	AP 6 Floor East
5	N39385	PC0QA7EH	Lenovo T470	AC-N39385	AC-N29884	MJ03MGGB	Access Center	AP 5th floor
7	N52711	PC11Q6LQ	Lenovo T480	ACC-N52711s	ACC-N29587	MJ03HA7F	Arcadia Clinic	Arcadia Clinic
3	N41116	PC14RMV8	Lenovo T480	D4-N41116	D4-N27379	MJ02AYZ2	Duque 4 East	Duq 4th Floor
3	N52665	PC11Q6N6	Lenovo T480	D5-N52665	D5-N23479	MJ0115Q7	Duque 5	Duq 5th Floor
2	N41113	PC14RMTX	Lenovo T480	ED-N41113	ED-N22475	MJ00FHME	ED	AP Ground Floor (Triage Room 2)
1	N37239	PC0P53P0	Lenovo T470	MC3-N37239	MC3-N37239		Endo	McAlister 3rd
2	N45549	MJ0D0VJ2	Lenovo M9200	N45549	N45549	MJ0D0VJ2	PACU / Main OR	Anderson Gateway 2nd (PACU Physician Work Room)
3	N32862	PC0L29C0	Lenovo T470	PHA-N32862	PHA-H30376	PHA-H30376	Anderson Gateway 1st	Pharmacy
4	N37833	PC0Q7E9J	Lenovo T470	SA-N37833	SA-N37833	PC0Q7E9J	Surgical Admit	Gateway 1st Floor
5	N43440	PC17VV52	Lenovo T480	SBC-N33440	SBC-N43400	PC17VV52	Main nurse station	South Bay Clinic
5	N36796	PC0N39P6	Lenovo T470	SM-N36796	SMC-N44060	MJ0C5RND	Santa Monica Clinic	Santa Monica
7	N33400	PC0U0XR8	Lenovo T470	VC-N33400	VC-N31487	PC0U0XR8	Valencia Clinic	Valencia Clinic
								Bakersfield ACC?
				GI-N44518			GI Clinic	McCalister 2nd Floor / GI Clinic
							Adolescent Clinic	

Downtime Computer Checks

Instructions for Weekly Downtime Computer Checks

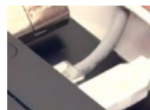
Purpose: This guide outlines the weekly steps for team members checking their downtime computer to ensure its continuous readiness for a major IS outage.

Step 1: Verify the Computer is Powered On

- Locate the downtime computer in your work area. It should be labeled "Downtime Computer".
- Check if the screen is on. The downtime computer should always be on.
 - If the screen is blank, move the mouse or press a key to attempt to wake it up.
- If the computer is powered off, press the power button and allow it to fully reboot.
- If the computer does not turn on after pressing the power button, check that the power cable is attached to the computer and plugged into an electrical outlet.
- If the computer is connected to power but still does not turn on, report the issue to the IS Service Desk by calling 323-361-4444 (ext. 14444). Then proceed to Step 10 of this guide.

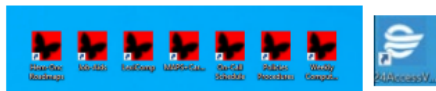
Step 2: Log Into the Computer

- Enter your CHLA username and password (that you use to log into computers anytime you work)
- If you cannot log in, verify that the caps lock key is not on and retry.
- If you are still unable to log in, ensure that the network cable is plugged into the computer – this will be a grey, blue, or white ethernet cable (as seen in the picture to the right)
- If the network cable is plugged in but login issues persist, report the issue to the IS Service Desk by calling ext. 14444. Then proceed to Step 10 of this guide.
 - NOTE: this may indicate that there is a network outage, so it is important to alert the IS Service Desk as soon as possible.



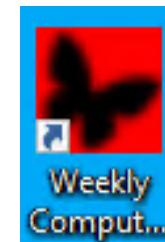
Step 3: Confirm that all of the icons for Downtime Resources are Present

- Downtime Resource Folders are identified with a special icon (red box with butterfly shadow). Meanwhile, the 724Access Viewer application is a blue box with a white icon (see below).
- Check the desktop for each of the following downtime applications icons:
 1. Weekly Downtime Computer Check Form
 2. Downtime Job Aids
 3. LexiComp
 4. MAPS + CarePlans
 5. Hem-Onc Roadmaps
 6. On-Call Schedule
 7. Policies and Procedures
 8. 724Access Viewer
- If any icons are missing, please flag this as an issue to report to the IS Service Desk once you complete the rest of your weekly check.
 - NOTE: each downtime computer may have a slightly different layout on the desktop. Therefore, it is OK if all the icons do not appear exactly like the image above.



Step 10: Document Findings and Actions Taken

1. Return to the downtime computer desktop and locate the "Weekly Downtime Computer Check Form" downtime icon
 - If the computer did not power on, you can access the form by using this QR code (on any mobile device) or entering this web address into any internet browser (<https://forms.office.com/r/rCxTG26GNb>).
2. Open the form and document your completion of the weekly downtime computer check.
 - If there are any issues to report to the IS Service Desk, you must do so by calling them at 323-361-1444 before submitting the form (as you will be asked to provide the ticket number). If there are multiple issues, you can group them into a single ticket for ease of reporting and tracking.
 - NOTE: a weekly report containing a list of completed downtime computer checks will be emailed to your department leadership every Monday at 5 a.m. Please ensure that your weekly check is completed before that time.
 - The downtime computers are also scheduled to have an automatic restart every Friday at 11:59 p.m. You may wish to avoid performing your weekly check at that time (so you are not interrupted).





Downtime Computer Checks

Submission Date

6/1/2025 8/4/2025

Submission Date - Start of Week

- Select all
- 6/2/2025
- 6/9/2025
- 6/16/2025
- 6/23/2025
- 6/30/2025

I.S. Ticket Number Search

All

Downtime Computer Location

- Select all
- 3250 Wilshire - Adolescent Me...
- Anderson 2nd Floor - Cardiol...
- Anderson 2nd Floor - CTICU
- Anderson 2nd Floor - CV Acute
- Anderson 3rd Floor - NICCU
- Anderson 3rd Floor - PICU
- Anderson 4th Floor - 4 East
- Anderson 4th Floor - 4 West
- Anderson 4th Floor - BMT
- Anderson 5th Floor - 5 East
- Anderson 5th Floor - 5 West
- Anderson 5th Floor - Access Ce...

Weekly Check Compliance

4-Week Look Back

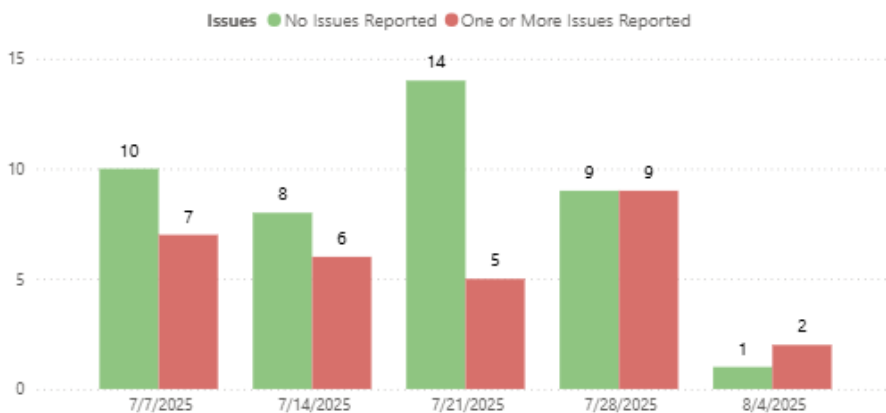
Locations	7/7/2025	7/14/2025	7/21/2025	7/28/2025
3250 Wilshire - Adolescent Medicine	Checked	Not Checked	Checked	Checked
Anderson 2nd Floor - Cardiology Clinic	Not Checked	Not Checked	Not Checked	Not Checked
Anderson 2nd Floor - CTICU	Checked	Checked	Checked	Checked
Anderson 2nd Floor - CV Acute	Not Checked	Not Checked	Checked	Checked
Anderson 3rd Floor - NICCU	Checked	Checked	Checked	Checked
Anderson 3rd Floor - PICU	Not Checked	Not Checked	Not Checked	Not Checked
Anderson 4th Floor - 4 East	Checked	Checked	Checked	Checked
Anderson 4th Floor - 4 West	Checked	Checked	Checked	Checked
Anderson 4th Floor - BMT	Checked	Not Checked	Checked	Not Checked
Anderson 5th Floor - 5 East	Not Checked	Not Checked	Checked	Checked
Anderson 5th Floor - 5 West	Not Checked	Not Checked	Not Checked	Not Checked
Anderson 5th Floor - Access Center (N39385)	Checked	Checked	Not Checked	Not Checked
Anderson 5th Floor - Access Center (N45296)	Checked	Checked	Not Checked	Not Checked

Most Recent Submission

Locations	Most Recent Submission
Anderson 2nd Floor - Cardiology Clinic	
Anderson 3rd Floor - PICU	
Anderson 5th Floor - 5 West	
Duque 6th Floor - Duque 6 Rehab	
Gateway 1st Floor - Outpatient Pharmacy	
Gateway 2nd Floor - Pre-op/PACU (Main OR)	
Page 2nd Floor - GI Clinic	
Page 2nd Floor - Page PICU	
SCC - Encino	
Duque 4th Floor - Infusion Center	6/20/2025
OPT 3rd Floor - Allergy and Immunology	6/25/2025
SCC - South Bay	7/14/2025
Anderson Ground - Emergency Department Station 2	7/22/2025
Anderson Ground - Emergency Department Station 5	7/22/2025
Anderson 6th Floor - 6 West	7/24/2025

Weekly Computer Status

4-Week Look Back



I.S. Ticket Numbers

Submission Date	Location of Downtime Computer	I.S. Ticket Number
8/4/2025	Anderson 6th Floor - 6 East	
8/4/2025	Anderson 5th Floor - Access Center (N45296)	
8/4/2025	Anderson 5th Floor - Access Center (N39385)	1873242
8/3/2025	Anderson 6th Floor - 6 East	
8/2/2025	Anderson 6th Floor - 6 East	
8/1/2025	Anderson 6th Floor - 6 East	
8/1/2025	McAllister 3rd Floor - Endocrinology and Spina Bifida	
8/1/2025	SCC - Santa Monica	1863042
8/1/2025	OPT 5th Floor - Hem-Onc/TCT Clinic	n/a
7/31/2025	3250 Wilshire - Adolescent Medicine	
7/31/2025	Anderson 2nd Floor - CV Acute	
7/31/2025	Anderson 6th Floor - 6 East	

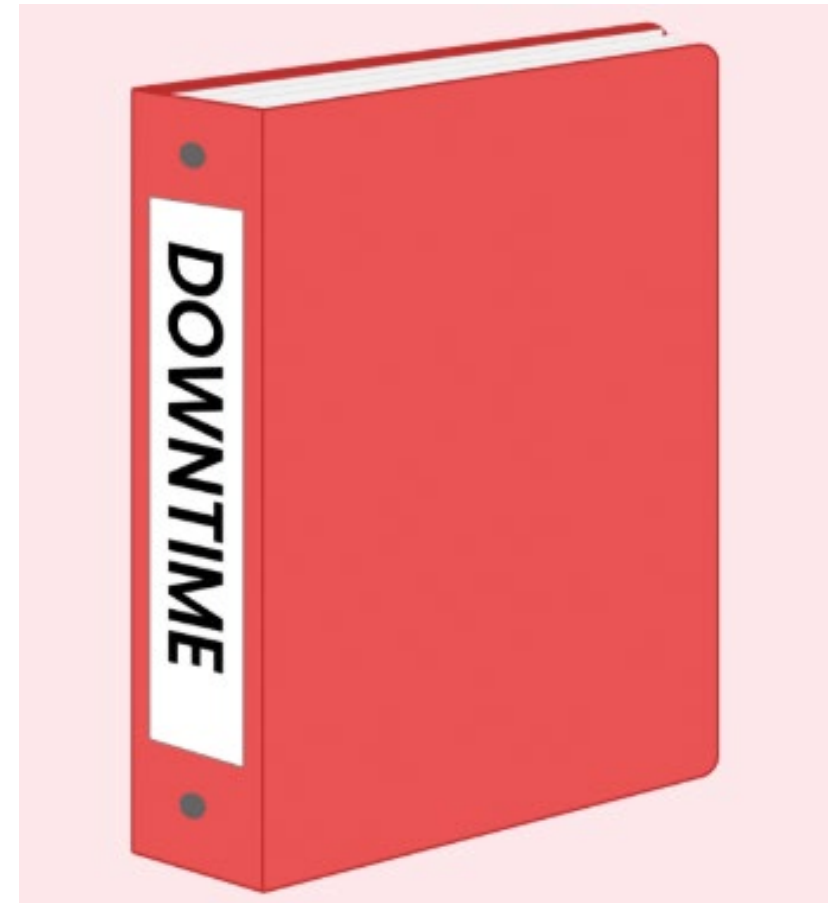
How do we ensure essential
downtime resources are readily
available and kept up-to-date?

Downtime Binders

- Some areas independently created binders
 - No standardization across organization
- Counterpart to Department Emergency Red Binders
 - Contain Department Emergency Action and Business Continuity Plans

Binder Contents

1. Preparedness Procedures (Ongoing – Before Downtime)
2. Resources and Procedures (During Downtime)
3. Recovery Procedures (After Downtime)
4. Frequently Asked Questions
5. Downtime Packets (Masters) and Form Reordering
6. Phone and Fax Numbers



Downtime Binder Assembly Guide

This document provides guidance to assist leaders with assembling their department's downtime binder. The binder should contain essential policies, procedures, and forms to ensure continuity of care and operations during downtime. Please follow these steps to ensure that all appropriate policies, forms, and other documents are included for your team(s).

NOTE: leaders are encouraged to review each document/resource carefully during assembly to ensure that you are also familiar with CHLA's downtime processes.

Table of Contents

TAB 1: ONGOING PREPAREDNESS PROCEDURES (BEFORE DOWNTIME)	1
TAB 2: RESOURCES AND PROCEDURES (DURING DOWNTIME).....	1
TAB 3: RECOVERY PROCEDURES (AFTER DOWNTIME)	2
TAB 4: FREQUENTLY ASKED QUESTIONS	2
TAB 5: DOWNTIME PACKETS (MASTERS) AND FORM REORDERING	3
TAB 6: PHONE AND FAX NUMBERS	3

TAB 1: ONGOING PREPAREDNESS PROCEDURES (BEFORE DOWNTIME)

Ensure the following are included in your binder:

Document	Where to find
EMR Downtime Readiness Policy	Policy Library – COMING SOON
Weekly Downtime Computer Check Instructions	IS Knowledge Base – KIDS Library (KIDS Downtime Resources)

TAB 2: RESOURCES AND PROCEDURES (DURING DOWNTIME)

Include these critical resources, as appropriate for your team(s):

Document(s)	Where to find
EMR Downtime Response Policy	Policy Library – COMING SOON
Registration Downtime Response Policy	
EP 105.0 – Emergency IT Outage Response Plan EP 105.1 – Alternative IT Systems Table	Emergency Management SharePoint

KIDS Downtime Job Aid	IS Knowledge Base – KIDS Library (KIDS Downtime Resources)
FirstNet Downtime Job Aid	IS Knowledge Base – KIDS Library (KIDS Downtime Resources) – COMING SOON
STAR (Allscripts) Downtime Job Aid	
Example of Completed Nursing Kardex <i>This is a tool for inpatient nurses to track active orders. This form is NOT intended as a location for patient charting.</i>	IS Knowledge Base – KIDS Library (KIDS Downtime Resources) – COMING SOON NOTE: A paper copy may be printed for this section of your binder as a reference; however, the Kardex forms used during downtime should be ordered from the Mail Room and printed on heavy cardstock (and stored in Tab 5).
Example of Completed Downtime Charting Forms	HIM Central Forms Repository NOTE: review your standard charting requirements to ensure that all critical forms are included. Recommended inclusions are listed in the section below for Tab 5.
<i>TIP: label Examples of Completed Forms with Post-It tabs for easy reference during downtime.</i>	

Note: If unable to find needed forms or additional downtime forms are needed for your area, please contact HIM Associate Director Alex Nuno (anuno@chla.usc.edu).

TAB 3: RECOVERY PROCEDURES (AFTER DOWNTIME)

Document	Where to find
EMR and Registration Downtime Recovery Policy	Policy Library – COMING SOON

TAB 4: FREQUENTLY ASKED QUESTIONS

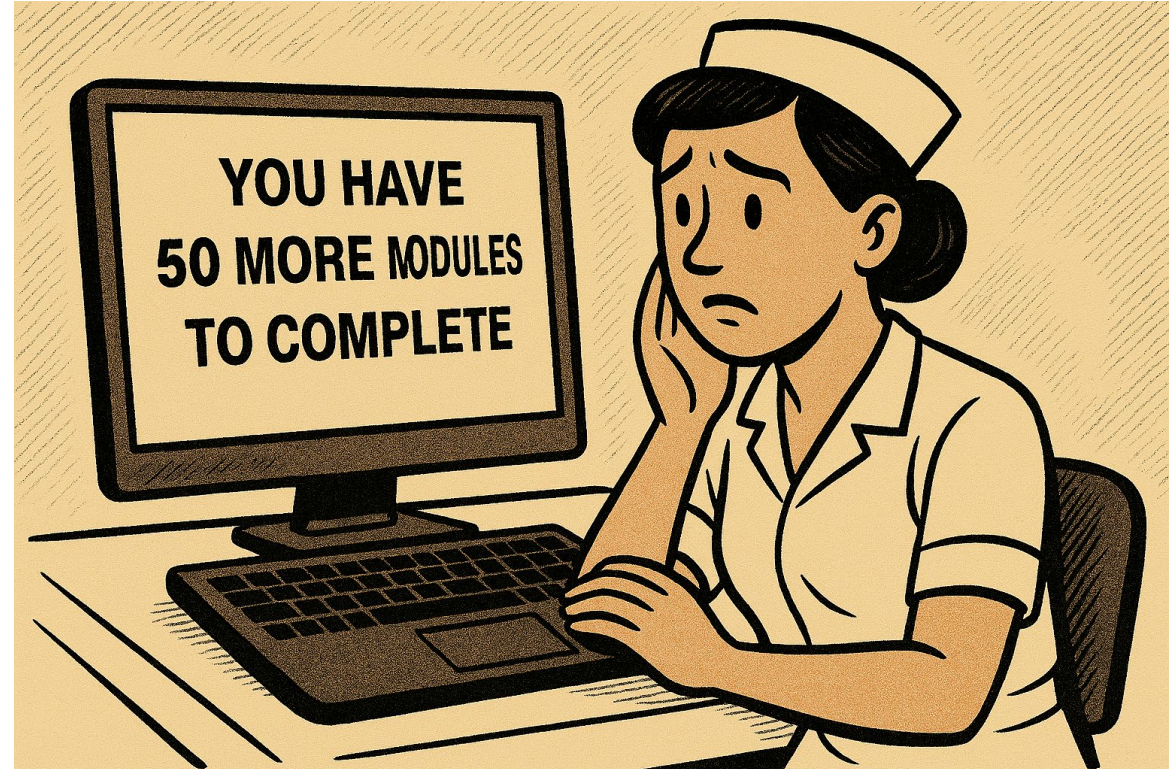
Document	Where to find
Frequently Asked Downtime Questions	IS Knowledge Base – KIDS Library (KIDS Downtime Resources)

Note: reach out to Vicky Olson (volson@chla.usc.edu) and Melanie Forne (mforne@chla.usc.edu) if there are additional FAQs that need to be added.

How do we educate team members
and socialize new resources?

Downtime Education

- Focus on transition to downtime
- Goals:
 - Avoid “iLearn fatigue”
 - Provide frontline team members with guidance for transitioning to downtime, then where to find resources to enable them to respond in their specific areas



What is Downtime?

Downtime is a period where **one or more CHLA computer systems is out of service and unavailable for use**. There are two types of downtime; **scheduled** and **unscheduled**.

Scheduled vs. Unscheduled Downtime:

<u>Scheduled Downtime</u>	<u>Unscheduled Downtime</u>
<p>Scheduled downtime includes scheduled backups, upgrades, and maintenance to a computer system. The system is not available for use during the scheduled timeframe.</p> <p>Prior to a scheduled downtime, Information Services will send out an IS Alert informing users of when a system is scheduled for downtime.</p>	<p>Unscheduled downtime is an unscheduled disruption or failure of a computer system. The system is not available for use and the downtime will last for an unknown duration of time. Users will not be notified in advance as these are unforeseen system disruptions.</p> <p>Some signs that an unscheduled downtime may have occurred include; inability to log into KIDS, kicked out of KIDS and unable to log back in, error messages etc.</p>

Going to Paper:

Paper charting requirements will vary based on your specific work area. For detailed instructions on necessary forms and charting procedures, refer to your downtime binder. Additionally, your department SuperKIDS representatives and your Department Disaster Leader(s) are available to provide training on paper charting techniques and other important downtime reminders.

If you have any questions about the downtime binder or downtime preparedness, **contact a SuperKIDS representative or Department Disaster Leader**.

About the Downtime Computer

When CHLA's EMR system is not working, downtime computers are available for accessing information to allow for the continuity of safe patient care. Downtime computers are located in most patient care areas and must be checked on a weekly basis to ensure that they are functioning appropriately.

These weekly checks will include the following:

- Computer is plugged into a emergency power (red) outlet and is powered on at all times
- The user is able to log into the computer using their CHLA username and password (also known as Active Directory or AD)
- The computer is connected to a printer and the printer cable is present (unless the downtime computer is designated as view-only)
- The downtime computer desktop is not missing any downtime resources (see below)

About the Downtime Binder:

In addition to the downtime computer, all work areas maintain an additional resource – a **Downtime binder**.

IMPORTANT: Similar to your *Department Emergency Action Plan binder*, the Downtime binder is **red** – but is a separate resource. The Downtime binder should be located near your downtime computer or your *Department Emergency Action Plan*.



Department Disaster Leaders

- **General Role:** to support emergency preparedness and response efforts
 - Understand and apply procedures in Department Emergency Action Plan
 - Conduct emergency training for team members and monitor compliance with annual training requirements
 - During an emergency, direct other team members, assign duties, and coordinate response procedures for work area; report to Command Center for additional assignments if requested

Direct Patient Care/Patient Facing Areas

This training package is intended for DDLs working in patient care units, clinics, and other locations where patients/families may be physically present and have the potential need for evacuation or relocation during a disaster.

Educational topics within the below package include evacuation equipment training, downtime readiness training, and general disaster procedures.

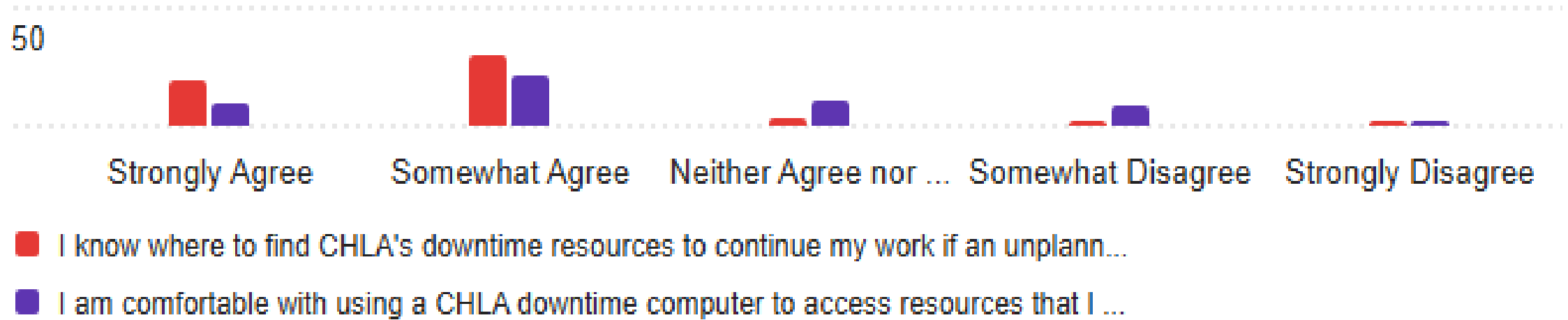


DDL Training Package for Direct Patient Care and Patient Facing Teams

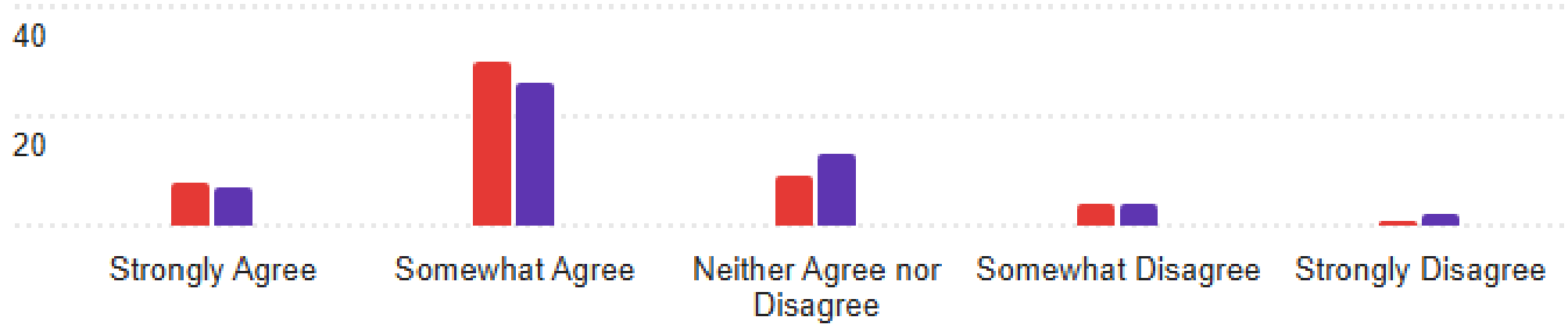
- Provide feedback on available resources
- Assist with weekly computer checks
- Be a resource during downtime response

How do we know our
interventions were effective?

Post-Intervention Survey Results Overview



Post-Intervention Survey Results Overview



- At this time, I feel that I have received adequate training on CHLA's EMR downtime...
- At this time, I feel prepared to transition to an unplanned EMR downtime event

Where do we go from here?

What's Next (Phase 2)

Downtime Computers

- Reconfigure existing computers with more location-based patient lists
- Add computers to newly identified locations (balancing fiscal responsibility and stewardship)
- Assess effectiveness of weekly computer checks (based on new dashboard and new Downtime Readiness Policy)

Downtime Binders/Forms

- Revise downtime forms (based on new downtime procedures)
- Streamline process for accessing/ordering downtime forms (in partnership with HIM and Mail/Copy Room)

Downtime Education and Gap Analysis

- Validate effectiveness of supplemental downtime education (by Department Disaster Leaders in each unit/area)

Downtime Policies/Procedures

- Define minimum downtime documentation requirements and back-charting expectations
- Centralize downtime policies (registration response & recovery and clinical documentation response & recovery)

Downtime Policies and Procedures

- **High-level policies (with area-specific procedures as attachments)**



- Preparedness/readiness policy

- *Maintenance of downtime computers and other resources*



- Response and recovery policies

- *Patient registration*
- *Clinical documentation*

- **Challenges:** unclear regulatory guidance (on minimum charting standards) and extended downtime implications (especially for back-charting)

Minimum Charting and Back-charting

- **CDPH Program Flex (COVID – Surge Standards for Nursing Documentation)**
 - Patient assessments by exception and abnormal findings/clinical status changes
 - Critical lab values/results, vital signs, and clinically relevant intake/output
 - Medications and treatments administered (including insertion of invasive lines)
 - Key patient information (allergies, ht/wt, DNR, etc.) and clinically relevant medical provider communications
 - Restraints, isolation precautions, patient discharge education, and shift note
 - Other nursing care documentation – by exception, shift note, or hybrid approach
- **Extended Downtime Implications**
 - Back-charted in the system vs. scanned documents in EMR
 - Who is responsible for back-charting and in what timeframe
 - What feeds into automated facility and provider charges (financial reimbursements)

What did we learn and how can
this help you?

Lessons Learned

- Do not assume you know the current state of preparedness
 - Take time to understand the “whole picture” and if there are ongoing project siloes happening already
- Keep it simple – what do frontline team members **need** to know so they can continue to provide patient care?
- Involve key stakeholders early and create an enthusiastic workgroup that will assist with driving deliverables forward
 - Can always remove team members from workgroup but cannot add back information that would have been valuable to know from the beginning
- Be flexible and accept that things may move slowly
 - Large projects will take time and things may frequently change

Essential Tasks

1. Obtain buy-in
2. Gap assessment prior to intervention
3. Ensure you are including all stakeholders
4. Evaluate the current state of existing resources – forms, computers, etc.
5. Create a workgroup and delegate
6. Determine an effective approach for your organization
7. Develop education and/or a socialization strategy

Stakeholders

- Information Services
- Health Information Management
- Clinical Services
 - Inpatient, Ambulatory, Procedural, Emergency Department, Pathology and Laboratory Medicine, Imaging
- Emergency Management
- Ancillary Services
 - Guest Services
- Organization Leadership

Questions?

Thank You!

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Appendix

Downtime Binder Assembly Guide

Downtime Binder Assembly Guide

This document provides guidance to assist leaders with assembling their department's downtime binder. The binder should contain essential policies, procedures, and forms to ensure continuity of care and operations during downtime. Please follow these steps to ensure that all appropriate policies, forms, and other documents are included for your team(s).

NOTE: leaders are encouraged to review each document/resource carefully during assembly to ensure that you are also familiar with CHLA's downtime processes.

Table of Contents

TAB 1: ONGOING PREPAREDNESS PROCEDURES (BEFORE DOWNTIME)	1
TAB 2: RESOURCES AND PROCEDURES (DURING DOWNTIME).....	1
TAB 3: RECOVERY PROCEDURES (AFTER DOWNTIME)	2
TAB 4: FREQUENTLY ASKED QUESTIONS	2
TAB 5: DOWNTIME PACKETS (MASTERS) AND FORM REORDERING	3
TAB 6: PHONE AND FAX NUMBERS	4

TAB 1: ONGOING PREPAREDNESS PROCEDURES (BEFORE DOWNTIME)

Ensure the following are included in your binder:

Document	Where to find
EMR Downtime Readiness Policy	Policy Library
Weekly Downtime Computer Check Instructions	IS Knowledge Base – KIDS Library (KIDS Downtime Resources)

TAB 2: RESOURCES AND PROCEDURES (DURING DOWNTIME)

Include these critical resources, as appropriate for your team(s):

Document(s)	Where to find
EMR Downtime Response Policy	Policy Library – COMING SOON
Registration Downtime Response Policy	
EP 105.0 – Emergency IT Outage Response Plan	Emergency Management SharePoint
EP 105.1 – Alternative IT Systems Table	

Version: August 2025

Page 1 of 4

KIDS Downtime Job Aid	IS Knowledge Base – KIDS Library (KIDS Downtime Resources)
FirstNet Downtime Job Aid	IS Knowledge Base – KIDS Library (KIDS Downtime Resources) – COMING SOON
STAR (Allscripts) Downtime Job Aid	
Example of Completed Nursing Kardex <i>This is a tool for inpatient nurses to track active orders. This form is NOT intended as a location for patient charting.</i>	IS Knowledge Base – KIDS Library (KIDS Downtime Resources) <ul style="list-style-type: none"> Print a paper copy and complete it as a reference tool. Then place sample in this section of the binder. Order copies of the Kardex (for use during an actual downtime event) from the Mail Room using the Copy Center Request Form (check the box for heavy cardstock). These Kardex copies should be stored with your other downtime forms.
Example of Completed Downtime Charting Forms	HIM Central Forms Repository NOTE: review your standard charting requirements to ensure that all critical forms are included. Recommended inclusions are listed in the section below for Tab 5.
<i>TIP: label Examples of Completed Forms with Post-It tabs for easy reference during downtime.</i>	

Note: If unable to find needed forms or additional downtime forms are needed for your area, please contact HIM Associate Director Alex Nuno (anuno@chla.usc.edu).

TAB 3: RECOVERY PROCEDURES (AFTER DOWNTIME)

Document	Where to find
EMR and Registration Downtime Recovery Policy	Policy Library – COMING SOON

TAB 4: FREQUENTLY ASKED QUESTIONS

Document	Where to find
Frequently Asked Downtime Questions	IS Knowledge Base – KIDS Library (KIDS Downtime Resources)

Note: reach out to Vicky Olson (volson@chla.usc.edu) and Melanie Forme (mforme@chla.usc.edu) if there are additional FAQs that need to be added.

Version: August 2025

Page 2 of 4

Downtime Binder Assembly Guide

TAB 5: DOWNTIME PACKETS (MASTERS) AND FORM REORDERING

Documents	Where to find
Downtime Packet (Master Copies) <i>These downtime packets are blank copies of your downtime forms and other documents.</i>	HIM Central Forms Repository Order from the Mailroom/Copy Center using the Copy Center Request Form on the Mailroom/Copy Center SharePoint Site
List of Downtime Form Names, Supply Number, and Reordering information <i>This is a comprehensive list of downtime forms and a guide to assist with obtaining</i>	IS Knowledge Base – KIDS Library (KIDS Downtime Resources) – COMING SOON

Some examples of items that should be included in the packet are below.

Ordering Information:

- **Plain forms** can be printed directly from the Repository
- **Forms with a "Proof" watermark** must be ordered from the Mail Room using the Copy Center Request Form

Inpatient Downtime Packets	<ul style="list-style-type: none"> • Admission Data Base • Progress Notes • Provider Order Forms • Medication Administration Record • Lab Requisition Form • Condition of Admission • Clinical Documentation Flowsheet • Prescriptions (may also be phoned in) • Nursing Kardex
Ambulatory Downtime Packets	<ul style="list-style-type: none"> • Intake form • Consents • Progress Notes • Provider Order Forms • Clinical Documentation Flowsheet • Prescriptions (may also be phoned in)
Emergency Department/Procedural Areas Downtime Packet	<ul style="list-style-type: none"> • History & Physical Form • Discharge Instructions • Emergency Documentation Flowsheet • ED Nursing Flowsheet • Preprocedural Checklist

TAB 6: PHONE AND FAX NUMBERS

Documents	Where to find
Downtime Phone and Fax Directory for Areas with PCS Impact.	IS Knowledge Base – KIDS Library (KIDS Downtime Resources)

For any additional questions or assistance, please contact
 Vicky Olson (volson@chla.usc.edu) or Melanie Forne (mforne@chla.usc.edu)

Department Disaster Leader Training Package



Department Disaster Response Training Process Summary
Direct Patient Care/Patient Facing Areas



Department Disaster Response Training Process Summary
Direct Patient Care/Patient Facing Areas

Process Summary for Department Disaster Leaders (DDLs)

Frontline Team Member Training

PART ONE: Prepare to conduct trainings.

1. Schedule a minimum of two (2) sessions per calendar year (30 minutes each) to conduct department disaster response training for all team members on the following topics.
 - *NOTE: These trainings can be done during staff meetings, or they can be done at random by frontline DDLs during their shift (independent sessions).*
 - *Whenever possible, the sessions should be scheduled at 6-month intervals to promote ongoing readiness (e.g., spring/fall, or summer/winter)*

Required Annual Didactic Topics:

- Topic 1: Hospital Evacuation
- Topic 2: Electronic Medical Record (EMR) Downtime
- Topic 3: General Disaster Response Procedures and Location of Department Disaster Resources
 - i. *NOTE: this topic is embedded within both didactic lectures listed above*

Recommended Hands-On Training:

- Evacuation resources (Medsled, med-evac basket, [Ferno](#) Evac Chair, and/or Evac123 tags) – use videos embedded on the [EM Training SharePoint](#) or in the evacuation-focused didactic lecture
- Use of handheld radios/walkie-talkies – use [this handheld radio job aide](#)
- Use of emergency red phone – see [this red phone job aide](#)
- Review of EMR Downtime Binder

2. Track the annual completion of disaster response training for your team members (electronic MS Form recommended; paper sign-in sheets are also acceptable).

Version: May 2025

Page 1 of 3

- a. If desired, use this duplication link for [this MS form template](#) to create an electronic sign-in sheet for team members to complete. If you are unfamiliar with MS forms, please see this [IS Training SharePoint page](#).
 - b. Once the form is customized, it is ready for use. To collect responses, you will need to click on the “collect responses” button to obtain the distribution hyperlink and/or QR code.
 - i. *IMPORTANT: department leadership are responsible for ensuring that all team members are signed off on the required topics (at minimum) annually. Of note, these training logs do not have to be submitted to Emergency Management (EM), however, the EM team may request them at any time for regulatory/compliance purposes.*
3. Download and review the resources linked below. Feel free to customize the presentations as appropriate for you and your department / team, but please ensure that all vital concepts relevant to your team are addressed. Suggested scripting and presenter notes are included in the speaker notes.
 - [DDL Presentation – Evacuation Focus](#)
 - [DDL Presentation - Downtime Focus](#)
 - [Scavenger hunt for disaster resources](#)

If you have any questions about how to conduct department disaster response training, please email EmergencyManagement@chla.usc.edu.

Version: May 2025

Page 2 of 3



Department Disaster Leader Training Package



Department Disaster Response Training Process Summary
Direct Patient Care/Patient Facing Areas

PART TWO: Conduct training sessions and document team member participation.

1. Conduct training sessions using the suggested formats and agendas below.

EVACUATION FOCUSED TRAINING:

- a. **Didactic Lecture (20 minutes)**
 - DDL Presentation – Evacuation Focus
- b. **Split group into teams of 3-4 (5 to 10 minutes)**
 - Disaster Resources Scavenger Hunt

DOWNTIME FOCUSED TRAINING:

- a. **Didactic Lecture (20 minutes)**
 - DDL Presentation – Downtime Focus (20 minutes)
- b. **Split group in half (5 to 10 minutes)**
 - Hands-on training with downtime computer and downtime forms
 - Hands-on training with handheld radios and emergency red phones

2. Document team member participation with sign in sheet.

3. As previously mentioned, we also highly encourage facilitating hands-on training with evacuation equipment. This typically takes at least 20 minutes, so it may need to be scheduled as separate training time (from the two recommended sessions above). Hands-on training can also be accomplished if you have additional time during a staff meeting or skills day, or during a regularly scheduled shift.