

TEMPERATURE LOGS

Vaccines for Children
Jennifer Dean- Vaccine Supply
Chain Quality Assurance Assessor
01/16/2024

HOUSEKEEPING

- QA Team:

- Please ensure you are muted throughout the presentation unless you are speaking.
- Please monitor the chat for questions.

- Attendees:

- Please enter all questions into the chat, as these will be answered at the end of the presentation.
- Today's session is being recorded. Slides and webinar recordings will be uploaded to:
<https://health.hawaii.gov/docd/for-healthcare-providers/vaccination-resources/vaccines-for-children-program-vfc/>
- To be added to the Hawaii VFC Program email list, please email your request to hawaiiivfc@doh.hawaii.gov. In the subject line of the email, please write EMAIL LIST.

OBJECTIVES

By the end of this presentation, attendees should be able to:

- Be familiar with Temperature Log protocol and processes
- Properly fill out monthly Temperature Logs
- Understand Digital Data Logger (DDL) requirements
- Know when to report Temperature Excursions

TERMS/DEFINITIONS

Digital Data Logger (DDL): An electronic device that records data digitally over time or in relation to location either with a built-in or external instrument or sensor.

Minimum/Maximum Temperature: A vaccine storage unit's coldest and warmest temperature readings during a set period of time.

Temperature Excursion: Any temperature reading that is outside the recommended range for vaccine storage as defined in the manufacturer's package insert.

Viability: A vaccine's effectiveness; viability refers to a vaccine's response to environmental conditions.

PURPOSE OF TEMPERATURE LOGS

- Temperatures are checked twice (morning and afternoon/evening) each work day to ensure storage units are maintaining in-range temperatures and vaccines are kept at appropriate temperatures.
- Parameters for storage units:
 - Refrigerator: 2°C to 8 °C (36° F and 46° F)
 - Freezer: -50 °C to -15 °C (-58° F and +5° F)
 - Ultra-cold Freezer: -90 °C to -60 °C (-130° F and -76° F)
- Temperature Logs are submitted monthly for all storage units that house VFC vaccines to ensure viability and maintain compliance with VFC program.
- Please note that temperature logs must be up to date in order for vaccine orders to be processed. Any missing temperature logs could cause delays in processing your order.

HOW TO PROPERLY FILL OUT TEMPERATURE LOGS

- Ensure temperature logs are filled out in their entirety and include the following:
 - Minimum and maximum temperatures logged once each work day
 - Current temperature logged twice each work day
 - *If closed/holiday, please notate that on the temperature log
 - Exact time
 - Staff initials
 - Include negative (-) symbol in front of numbers when logging freezer temperatures
 - Include decimal points when writing temperatures when needed
 - Please write the actual temperature instead of an “X”

SAMPLE



Temperature Log for Refrigerator – Celsius DAYS 1-15

Month/Year NOV 00 2022 VFC PIN # [REDACTED]
Facility Name [REDACTED]

Monitor temperatures closely!

1. Write your initials below in "Staff Initials," and note the time in "Exact Time."
2. Record temps twice each workday (AM/PM).
3. Record the min/max temps once each workday – preferably in the morning.
4. Put an "X" in the row that corresponds to the refrigerator's temperature.
5. If any out-of-range temp, see instructions to the right.
6. After each month has ended, save each month's log for 3 years.
7. Fax/email completed temperature logs to the Hawaii VFC Program at the end of each month.

Take action if temp is out of range – too warm (above 8°C) or too cold (below 2°C).

1. Label exposed vaccine "do not use," and store it under proper conditions as quickly as possible. Do not discard vaccines unless directed to by the Hawaii VFC Program.
2. Record the out-of-range temps and the room temp in the "Action" area on the bottom of the log.
3. Troubleshoot to determine reason for excursion (if possible). For example, was the door left ajar? Is the temperature probe placed correctly?
4. Notify your vaccine coordinator and contact vaccine manufacturers to determine vaccine viability.
5. Call the Hawaii VFC Program to report the temperature excursion.
6. Document excursion details and the action taken on the "Vaccine Storage Troubleshooting Record."

Day of Month	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15	
Staff Initials	[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]	
Exact Time	[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]	
Min/Max Temp (since previous reading)	[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]		[Handwritten]	
Danger! Temperatures above 8°C are too warm! Write any out-of-range temps and room temp on the lines below and follow instructions above immediately!																														
TEMPERATURES	8°C																													
	7°C																													
	6°C																													
	5°C	[Handwritten: 6.1, 5.4, 5.5, 5.4, 5.4, 5.1, 5.4, 5.4, 5.4, 5.1, 5.4]																												
	4°C																													
ACCEPTABLE	3°C																													
	2°C																													
	Danger! Temperatures below 2°C are too cold! Write any out-of-range temps and room temp on the lines below and follow instructions above immediately!																													
ACTION	Write any out-of-range temps (above 8°C or below 2°C) here:																													
	Room Temperature																													

If you have a vaccine storage issue, also complete "Vaccine Storage Troubleshooting Record."

Hawaii Vaccines For Children Program
Tel: (808) 586-8300
Toll-Free: 1-800-933-4832
Fax: (808) 586-8302
Email: hawaiiivfc@doh.hawaii.gov



SAMPLE



Temperature Log for Freezer – Celsius DAYS 1–15

Month/Year NOV 01 2023 VFC PIN # [REDACTED]
 Facility Name [REDACTED]

Monitor temperatures closely!

1. Write your initials below in "Staff Initials," and note the time in "Exact Time."
2. Record temps twice each workday (AM/PM).
3. Record the min/max temps once each workday—preferably in the morning.
4. Put an "X" in the row that corresponds to the freezer's temperature.
5. If any out-of-range temp, see instructions to the right.
6. After each month has ended, save each month's log for 3 years.
7. Fax/email completed temperature logs to the Hawaii VFC Program at the end of each month.

Take action if temp is out of range—too warm (above -15°C) or too cold (below -50°C).

1. Label exposed vaccine "do not use," and store it under proper conditions as quickly as possible. Do not discard vaccines unless directed to by the Hawaii VFC Program.
2. Record the out-of-range temps and the room temp in the "Action" area on the bottom of the log.
3. Troubleshoot to determine the reason for the excursion (if possible). For example, was the door left ajar? Is the temperature probe placed correctly?
4. Notify your vaccine coordinator and contact vaccine manufacturers to determine vaccine viability.
5. Call the Hawaii VFC Program to report the temperature excursion.
6. Document the action taken on the "Vaccine Storage Troubleshooting Record."

Day of Month	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Staff Initials	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA
Exact Time	8:00	11:00	8:14	12:30	8:00	2:40	7:50	11:30			8:10	12:30	8:16	11:00	8:09	2:11	8:07	2:21							8:34	1:50	8:11	1:20	8:10	1:30
Min/Max Temp (since previous reading)	-12.6 -15.6		-15.0 -12.9		-15.9 -11.9		-16.1 -11.9				-16.1 -11.1		-15.1 -12.6		-16.1 -11.9		-15.6 -10.0									-15.9 -12.9		-15.1 -12.1		-15.6 -12.9
Danger! Temperatures above -15°C are too warm! Write any out-of-range temps and room temp on the lines below and follow instructions above immediately!																														
ACCEPTABLE TEMPERATURES	-15°C																													
	-16°C																													
	-17°C																													
	-18°C																													
	-19°C																													
	-20°C																													
	-21°C																													
	-22°C																													
ACTION	-50°C to -23°C	15.1-25.6	15.6-25.8	15.5-25.3	15.9-26.0						12.1-25.0	15.0-25.4	15.1-24.9	15.1-25.0	12.1-25.1	15.1-25.1	15.1-25.0								12.1-25.1	15.1-25.0	15.1-25.0	15.1-25.0	15.1-25.0	
	Write any out-of-range temps (above -15°C or below -50°C) here.																													
	Room Temperature																													

If you have a vaccine storage issue, also complete "Vaccine Storage Troubleshooting Record."

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Temperature Log adapted from <http://www.immunize.org/catg.d/p3038c.pdf> on 11/29/2017. We thank the Immunization Action Coalition.

BERLINGER DDL



- Ensure buffered probe is placed in the center of the unit two hours prior to plugging in and activating the DDL.
- Using the velcro provided, securely place the external sensor outside of the storage unit.
- Downloading DDL Data – Berlinger:
 - Plug the Fridge-tag into any computer via USB interface. Make sure the device is plugged in properly.
 - Data may take a couple minutes to process.
 - Do not remove until the “OK” symbol appears on the display screen.
 - Select the file generated by Fridge-tag.
 - There are two files generated; .txt and .pdf
 - .txt report provides info on the readings recorded every 5 minutes
 - Please be sure to download the .pdf file, not the .txt file
 - If you receive an “error” message, open the file in a web browser
 - To disconnect the device properly, please always use the function “Safely Remove Hardware” on your PC/Mac.

SENSOSCIENTIFIC

- Place conditioned Senso Probe in storage unit prior to activating the Sens
- Secure Senso Node on the exterior of the storage unit.
- Downloading Senso Data:
 - Log into Senso portal with your username and password.
 - Click on “Report” tab.
 - Select “All Nodes” → Enter dates → “Show Report”



* Please note that these are not provided by the VFC program and must be purchased by the provider.

SAMPLE

Audit Node Report

Company Name: SAMPLE

Company Address: SAMPLE

Node Selected: SAMPLE

Start Date: 12/01/2023 00:30

End Date: 12/31/2023 23:55

Created By: Jennifer Dean

DateTime: 1/4/2024 9:26:23 AM (HST)

User	Node Name	Location	Min	Max	Current Reading	Prior Audit Time	Current Audit Time
jennifer.dean.nsw@doh.hawaii.gov	Audit Node 1	Sample	5.3 °C	7 °C	5.4 °C	12/28/2023 3:08:40 PM	12/29/2023 3:53:22 PM
jennifer.dean.nsw@doh.hawaii.gov	Audit Node 1	Sample	5.4 °C	5.6 °C	5.5 °C	12/28/2023 8:14:20 AM	12/28/2023 3:08:40 PM
jennifer.dean.nsw@doh.hawaii.gov	Audit Node 1	Sample	5.3 °C	5.4 °C	5.4 °C	12/27/2023 4:09:57 PM	12/28/2023 8:14:20 AM
jennifer.dean.nsw@doh.hawaii.gov	Audit Node 1	Sample	5.4 °C	5.5 °C	5.4 °C	12/27/2023 8:15:36 AM	12/27/2023 4:09:57 PM
jennifer.dean.nsw@doh.hawaii.gov	Audit Node 1	Sample	5.3 °C	5.5 °C	5.5 °C	12/23/2023 8:37:07 AM	12/27/2023 8:15:36 AM
jennifer.dean.nsw@doh.hawaii.gov	Audit Node 1	Sample	5.4 °C	5.4 °C	5.4 °C	12/26/2023 3:00:37 PM	12/26/2023 3:00:38 PM

Two Point Monitoring

Company Name: Department of Health

Company Address: Sample

Node Selected: Sample

Start Date: 12/01/2023

Sample 1: 12:00 AM

Sample 2: 12:00 AM

End Date: 12/31/2023

Created By: jennifer.dean.nsw@doh.hawaii.gov

DateTime: 1/5/2024 2:46:39 PM (HST)

Name	Location	Type	Min	Unit	Max	Date	Hour	Value	Avg
SAMPLE	SAMPLE	Temperature	5.8	°C	5.9	12/31/2023	12:00 AM	5.9	5.8
SAMPLE	SAMPLE	Temperature	5.7	°C	5.8	12/30/2023	12:00 AM	5.7	5.7
SAMPLE	SAMPLE	Temperature	5.8	°C	5.9	12/29/2023	12:00 AM	5.9	5.9
SAMPLE	SAMPLE	Temperature	5.8	°C	5.9	12/28/2023	12:00 AM	5.8	5.9
SAMPLE	SAMPLE	Temperature	5.7	°C	5.8	12/27/2023	12:00 AM	5.7	5.7

KEY REMINDERS

- Temperatures should be checked and logged twice during each work day.
 - Address temperature excursions promptly
 - Reduce the amount of spoiled vaccines should an excursion occur
- Download and save DDL data routinely- every two weeks.
 - Per CDC requirements, accessibility of temperature data are critical for determining whether vaccine has been properly stored and for assessing usability of vaccine involved in a temperature excursion.
- Please only use one DDL per unit, either the built in temperature monitoring device (if applicable- i.e. Accuvax), or a DDL- do not use both.
- Temperature logs are to be submitting at the end of each month for all storage units containing VFC vaccines.
- Certificate of Calibration must be valid and current.
- Report temperature excursions as soon as possible.
- Submit temperature logs monthly.
 - Do not send in bulk
 - Do not send only when submitting a vaccine order
- A hold or delay may be placed on vaccine orders if temperature logs are not received or missing for any previous months.
- Providers must have backup DDLs for each VFC storage unit with current Certificates of Calibration.

TEMPERATURE EXCURSIONS

- Fill out Troubleshooting Log
- Place exposed vaccines in separate bag and label clearly “Do not use”
- Notify coordinator, backup coordinator, or supervisor, in addition to the VFC program
- Filled out Troubleshooting Log and DDL data must be sent to the Hawaii VFC program at HawaiiVFC@doh.Hawaii.gov – Please be as detailed as possible when filling out the log
- Contact manufacturer for guidance or use viability calculator

EXPIRED/SPOILED VACCINES



In the event that vaccines are no longer viable, providers must complete the following:



- Report vaccine loss in HIR; or



- Send Vaccine Loss Reporting form to HawaiiVFC@doh.Hawaii.gov

RESOURCES



Temperature Logs:

Refrigerator: [Temperature Log for Refrigerator -- Celsius \(hawaii.gov\)](#)

Freezer: [Temperature Log for Freezer -- Celsius \(hawaii.gov\)](#)



VFC Toolkit: [VFC-Toolkit-List.pdf \(hawaii.gov\)](#)

Section 3: Vaccine Storage and Temperature Monitoring Equipment

[Vaccine Storage and Handling Toolkit \(hawaii.gov\)](#)



[Berlinger DDL User Manual](#)



[SensoScientific DDL User Manual](#)

QUESTIONS?

For HIR technical/login issues please contact Registry Help Desk at (808) 586-4665, 1-888-447-1023 (toll-free), or registryhelp@doh.Hawaii.gov

For Immunization Clinical Consultation, please call the Hawai'i Immunization Branch at (808)286-8349

For any VFC-related questions/concerns, feel free to contact any member of our VFC QA Team

Name	Email	Phone
Josephine Araki, RN	Josephine.araki@doh.Hawaii.gov	(808) 723-1601
Kealohi Corpos	Kealohi.corpos.nsw@doh.Hawaii.gov	(808) 723-0091
Jennifer Dean	Jennifer.dean.nsw@doh.Hawaii.gov	(808) 723-0366
Jennifer Endo	Jennifer.endo@doh.Hawaii.gov	(808) 594-8566
Lorraine Lim, RN	Lorraine.lim@doh.Hawaii.gov	(808) 723-0018
Sisilia Meli	Sisilia.meli.nsw@doh.Hawaii.gov	(808) 587-6588
Heather Winfield-Smith	H.Winfield-smith@doh.Hawaii.gov	(808) 586-8348

POST WEBINAR SURVEY

Please use the following link to complete the satisfaction survey:

<https://forms.office.com/g/XStX9ewn6e>