



Temperature Monitoring and Excursions

Lisa Goins & Laura Hageman | June 2023

The following will be discussed:

- Why is temperature monitoring important?
- How to monitor the temperature of a storage unit.
- What is a temperature excursion?
- How to determine if there is a temperature excursion.
- What to do if there is a temperature excursion?
- Best practices to prevent a temperature excursion.



Why is monitoring the temperature of the vaccine unit important?

Ensuring that proper storage and monitoring equipment is set up correctly and repaired as needed:

- Protects patients from receiving compromised vaccine
- Protects the facility against costs of revaccinating patients
- Protects the facility from replacing expensive vaccines
- Avoids losing patient confidence in your practice
- **It is required by CDC and the Kansas Immunization Program (KIP)**



Daily Temperature Monitoring and Recording



- Providers are required to use a digital data logger (DDL) for temp monitoring
- Providers are required to record the actual temperature of the unit twice daily.
- Providers should review the minimum and maximum (min/max) temperatures twice daily, recording the temperatures at the beginning of the day.
- By reviewing the temperatures (pressing the “READ” and “SET” buttons), the DDL will record a “time stamp”.
- CDC recommends checking the current temperature of the storage unit prior to accessing and administering vaccine.

Documenting a temperature reading and information to include when documenting a temperature reading

- At least two min/max temperature reading per day at the beginning of the workday and at least an hour before the clinic closes.
- Time and date of each reading
- The actual temperature of the storage unit at the time that you are reading the DDL
- Name or initials of the person who assessed and recorded the reading
- The paper log should be posted on each vaccine storage unit door or nearby in a readily accessible and visible location

Refrigerators should maintain temperatures between 2° C and 8° C (36° F and 46° F)* .

Freezers should maintain temperatures between -50° C and -15° C (-58° F and +5° F).

Ultra-cold freezers should maintain temperatures between -90° C and -60° C (-130° F and -76° F) .

Temperature Monitoring and Excursions

****IMMEDIATE ACTION SHOULD BE TAKEN IF TEMPERATURES ARE IN THE SHADED AREAS****

KIP DL Temperature Log for Vaccines (Celsius) VFC PIN #: 0000 Refrigerator Name: RA Freezer Name: FA Month/ Year: 6/2023

Day of Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Exact Time	AM PM 801 1645	AM PM 817 1705	AM PM 755 1702	AM PM 804 1655	AM PM 814 1657	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM
Current Refrigerator Max/Min	5.2 4.3	5.3 4.2	5.5 4.2	5.2 4.0	5.2 4.4	/	/	/	/	/	/	/	/	/	/
Previous day Refrigerator Max/Min	5.5 4.2	5.3 4.0	5.2 4.1	5.4 4.1	5.3 4.2	/	/	/	/	/	/	/	/	/	/
Refrigerator Temp	5.0	5.2	5.2	5.3	5.3										
4°	4.4	4.3	4.2	4.3	4.4										
3°															
2°															
1°															
0°															
<.1°															
Freezer Temp															
≥-12°															
-13°															
-14°															
-15°															
-16°															
-17°															
-18°															
-19°	-19.4			-19.3	-19.0	-19.2	-19.0								
≤-20°	-20.0	-20.2 -20.0	-20.5 -19.7												
Current Freezer Max/Min	-20.2 -19.3	-20.0 -19.4	-21.0 -19.5	-20.2 -19.6	-20.5 -19.2	/	/	/	/	/	/	/	/	/	/
Previous day Freezer Max/Min	-20.0 -19.2	-19.2 -19.0	-19.2 -19.0	-21.0 -19.2	-20.2 -18.7	/	/	/	/	/	/	/	/	/	/
Staff Initials	LG LG	LH LH	LG LG	LH LH	LG LG										

Temperature Monitoring and Excursions

****IMMEDIATE ACTION SHOULD BE TAKEN IF TEMPERATURES ARE IN THE SHADED AREAS****

Instructions for Manual Temperature Monitoring and Recording Using the Fridge Tag® 2L Data Loggers

When the clinic opens:

1. For each storage unit, view the data logger for any alarms as indicated by an "X" or "⚠️".
2. Record the temperature displayed on the data logger in the "AM" space provided. **Do not write X in place of the actual temperature.**
3. Press the "Read" button to view the maximum temperature since midnight and record this information.
4. Press the "Read" button a second time to view the minimum temperature since midnight and record this information.
5. Press the "Read" button a third time to view the maximum temperature for the previous day and record this information.
6. Press the "Read" button a fourth time to view the minimum temperature for the previous day and record this information.
7. Repeat the steps above for any additional days the clinic was closed (i.e. weekends and Holidays). **No more than 3 consecutive days are allowed without recorded daily and maximum/minimum temperatures.** Record this information on the temperature log for each additional day being monitored.
8. Record the exact time the data logger information was reviewed (in military time as indicated on the data logger).
9. Record the initials of the person completing the manual temperature reading.

At least 1 hour prior to clinic closure:

1. For each storage unit, view the data logger for any alarms as indicated by an "X" or "⚠️".
2. Press the "Read" button twice to review the maximum and minimum temperatures (does not need to be documented) and then press "Set." This action will time stamp your data logger report.
3. Record the temperature displayed on the data logger into the "PM" space provided. **Do not write X in place of the actual temperature.**
4. Record the exact time the data logger information was reviewed (in military time as indicated on the data logger).
5. Record the initials of the person completing the manual temperature reading.

Action should be taken any time a data logger displays a temperature out of the recommended range of 2°C to 8°C for refrigerator units and -50°C to -15°C for freezer units. Out of range temperature readings may be found while reviewing the twice daily manual temperature readings or while reviewing the minimum/maximum temperatures. Assess for reasons the unit would be out of range (i.e., frequent opening and closing of door, door ajar, placing or counting inventory) and take appropriate and immediate action. Anytime a storage unit goes out of temperature range, quarantine the vaccine, label the vaccine "Do Not Use," contact your Regional Immunization Consultant or the Consultant On-Call at 877-296-0464, and follow the instructions found on the temperature excursion worksheet which can be located in the KIP Vaccines for Children Policy and Procedure Manual.

NOTES:

Digital Data Loggers (DDLs)

- Kansas Immunization Program provides data loggers which serve as the primary temperature monitoring system.
- Digital data loggers **must** always be with the vaccine. If vaccine is moved for any reason the data logger **must** be moved with the vaccine.
- Data logger probes must be positioned in the center of the vaccine storage unit, away from fans.
- Data loggers do not eliminate the requirement for documenting and maintaining a manual temperature log.

What is a temperature excursion?

- Any temperature reading that is outside the recommended range in the manufacturers' package inserts is considered a temperature excursion.
- Temperature excursions or inappropriate storage conditions for any vaccine require immediate action.

TE:
Temperature
Excursion

How to determine if you have a temperature excursion?

- The temperature will display on the datalogger along with a check mark if the temperatures are within range.
- If the temperature of the unit has gone out of range an X will appear on the datalogger.



Datalogger Issues: Connection Error

After 10 minutes (factory standard) without a connection between the device and the external sensor the following display appears and:

- The buzzer will beep twice at intervals of three minutes for a maximum of 168 hours (7 days).
- The whole display starts blinking.
- Any confirmation will stop the display from blinking.
- The buzzer only stops if the connection error is corrected. If the error still exists, the buzzer continuously beeps at a three-minute interval for 168 hours (7 days).



Display status:
external sensor error

Please check the following two points:

1. If the external sensors properly connected with the device?
2. Does if the external sensor cable have any defects?

Note: As soon as the error(s) have been cleared, the measuring will continue and the connection error buzzer stops to beep automatically. During max. 1 minute after the connection no temperature is displayed on the screen.



During a connection error no data will be recorded.

Source: https://www.berlinger.com/fileadmin/user_upload/temperature-monitoring/training_and_support/user_manuals/fridge-tag_2_L/201805_User_Manual_Fridge_tag_2L_EN_V2.pdf

Temperature Monitoring and Excursions

DDL Temperature Logs: PDF

No.	Date (MM/dd/yyyy)	Events	Average temp.	Lower alarm limit				Upper alarm limit				Ext. sensor connection error			Signature / notes Action taken
				Status	Min temp.	Cumulative daily time below the limit	Alarm trigger time	Status	Max temp.	Cumulative daily time above the limit	Alarm trigger time	Status	Duration	Alarm trigger time	
1	Today		+5.6°C	In progress	+5.2°C	0min		In progress	+6.1°C	0min		ALARM	55min	06:40h	
2	04/10/2019		+4.9°C	ok	+2.7°C	0min		ALARM	+10.3°C	2h 2min	16:01h	ok	0min		
3	04/09/2019		+4.9°C	ok	+3.1°C	0min		ok	+8.0°C	0min		ok	0min		
4	04/08/2019		+4.3°C	ok	+2.9°C	0min		ok	+5.9°C	0min		ok	0min		
5	04/07/2019		+3.7°C	ok	+2.9°C	0min		ok	+6.4°C	0min		ok	0min		
6	04/06/2019		+3.8°C	ok	+3.2°C	0min		ok	+6.6°C	0min		ok	0min		
7	04/05/2019	17:03	+5.0°C	ok	+3.6°C	0min		ok	+8.3°C	4min		ok	0min		
8	04/04/2019	08:03	+4.5°C	ok	+3.7°C	0min		ok	+5.8°C	0min		ok	0min		
9	04/03/2019	06:52	+4.0°C	ok	+3.0°C	0min		ok	+4.8°C	0min		ok	0min		
10	04/02/2019	16:56	+3.2°C	ok	+2.4°C	0min		ok	+7.2°C	0min		ok	0min		
11	04/01/2019	13:30	+3.8°C	ok	+2.5°C	0min		ok	+5.8°C	0min		ok	0min		
12	03/31/2019		+3.6°C	ok	+2.7°C	0min		ok	+4.5°C	0min		ok	0min		
13	03/30/2019		+3.8°C	ok	+3.5°C	0min		ok	+4.2°C	0min		ok	0min		
14	03/29/2019	10:52	+5.7°C	ok	+4.0°C	0min		ALARM	+10.1°C	1h 4min	08:42h	ok	0min		
15	03/28/2019		+6.6°C	ok	+5.0°C	0min		ALARM	+9.5°C	4h 49min	17:30h	ok	1min		
16	03/27/2019	07:58	+4.6°C	ok	+3.1°C	0min		ok	+6.7°C	0min		ok	0min		
17	03/26/2019	07:31	+5.4°C	ok	+3.7°C	0min		ok	+9.8°C	59min		ok	0min		
18	03/25/2019	07:42	+11.5°C	ok	+6.1°C	0min		ALARM	+16.2°C	15h 57min	00:00h	ok	0min		
19	03/24/2019		+13.4°C	ok	+10.8°C	0min		ALARM	+16.5°C	1d	00:00h	ok	0min		
20	03/23/2019		+9.1°C	ok	+6.1°C	0min		ALARM	+14.5°C	10h 22min	14:39h	ok	0min		
21	03/22/2019		+5.1°C	ok	+4.1°C	0min		ok	+6.3°C	0min		ok	0min		
22	03/21/2019		+4.5°C	ok	+2.7°C	0min		ok	+8.2°C	10min		ok	0min		
23	03/20/2019		+3.1°C	ok	+2.0°C	0min		ok	+6.4°C	0min		ok	0min		
24	03/19/2019	13:22	+3.5°C	ok	+2.8°C	0min		ok	+7.4°C	0min		ok	0min		
25	03/18/2019		+3.8°C	ok	+2.5°C	0min		ok	+7.7°C	0min		ok	0min		
26	03/17/2019		+2.9°C	ok	+2.2°C	0min		ok	+5.9°C	0min		ok	0min		
27	03/16/2019		+3.3°C	ok	+2.5°C	0min		ok	+6.3°C	0min		ok	0min		
28	03/15/2019		+3.6°C	ok	+2.9°C	0min		ok	+6.5°C	0min		ok	0min		

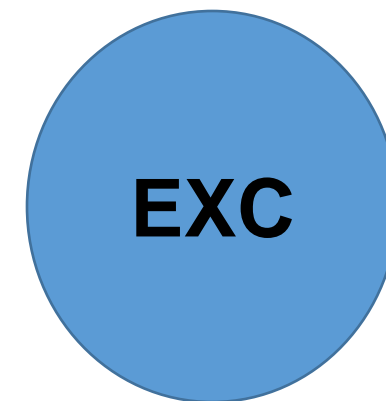
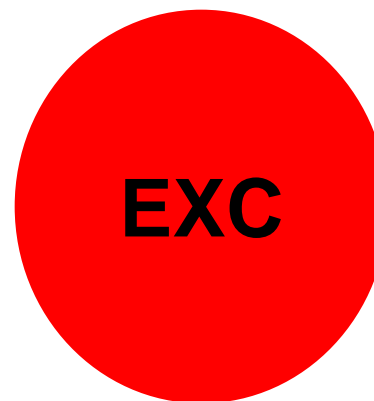
Temperature Monitoring and Excursions

DDL Temperature Logs: TXT

2021-12-15	13:48	4.5	
2021-12-15	13:53	4.1	
2021-12-15	13:59	4.8	
2021-12-15	14:04	6.6	
2021-12-15	14:09	8.1	x
2021-12-15	14:13	9.0	x
2021-12-15	14:18	8.7	x
2021-12-15	14:23	8.4	x
2021-12-15	14:28	8.1	x
2021-12-15	14:33	7.6	
2021-12-15	14:38	7.8	
2021-12-15	14:43	7.6	
2021-12-15	14:48	7.1	
2021-12-15	14:53	6.8	
2021-12-15	14:58	6.3	

What to do if a temp excursion occurs?

1. Any staff who hears an alarm or notices a temperature excursion on the DDL should notify the primary or backup vaccine coordinator immediately or report the problem to their supervisor. (Do not panic.)
2. Notify staff by labeling exposed vaccines “**DO NOT USE**” and keep them in the storage unit under appropriate temperatures.



What to do if a temp excursion occurs?

3. The vaccine coordinator, supervisor, or if necessary, the person reporting the problem, should begin to document the event with the following information:

- Date and time of the temperature excursion
- Storage unit temperature as well as room temperature, if available (including min/max temps during the time of the event, if available)
- Description of the event
- What steps were taken after the temperature excursion was found
- The length of time vaccine may have been affected.

What to do if a temp excursion occurs?

- Inventory of affected vaccine (quantity and lot number)
- List of items in the unit (including water bottles) other than vaccines
- Any problems with the storage unit and/or affected vaccines before the event
- Any temperature adjustments made to the unit
- Other relevant information

4. Implement your facility SOPs to adjust unit temperature to the appropriate range.

5. Check the DDL probe to make sure it is appropriately placed in the center of the vaccines.

What to do if a temp excursion occurs continued...

6. Contact your Regional Immunization Consultant to determine cumulative time of temp excursion (***Required***)
7. Contact the manufacturers to determine viability of the vaccine. Request written recommendations.
8. Do not panic!

Documenting a temperature excursion:

1. Action taken

- What you did with vaccine and how long it took to act
- Whom you contacted, and instructions received
- What you did to prevent a similar future event

2. Results

- Final disposition of affected vaccines (shortened expiration date per manufacturer, discarded, returned)
- Other comments

Temperature Monitoring and Excursions

Documenting a temperature excursion:

Temperature Excursion Worksheet

|
IF TEMPERATURES ARE OUT OF RANGE, TAKE IMMEDIATE ACTION!

Refrigerator Store between 2°C and 8°C (36°F and 46°F) (Aim for 5°C or 40°F)	Freezer Store between -50°C and -15°C (-58°F and +5°F) (Aim for -18°C or -1°F or colder)	Ultra-Cold Store between -80°C and -60°C (-112°F and -76°F) Thermal shipper storage between -90°C and -60°C (-130°F and -76°F)
Reportable: <input type="checkbox"/> >8°C or higher for 60 minutes or more <input type="checkbox"/> <2°C for any period of time <input type="checkbox"/> "X" on KIP Data Logger <input type="checkbox"/> Any out of range temperature (above or below recommended range) if open multi dose vials are present	Reportable: <input type="checkbox"/> >-15°C or higher for 60 minutes or more <input type="checkbox"/> <-50°C for any period of time <input type="checkbox"/> "X" on KIP Data Logger	Reportable: <input type="checkbox"/> >-60°C for any period of time <input type="checkbox"/> <-96°C for any period of time

Vaccines for Children (VFC) providers must use the Kansas Immunization Program (KIP)-supplied digital data loggers for monitoring temperatures of refrigerator and freezer storage units housing publicly-funded vaccine. VFC providers must receive KIP approval before using another temperature monitoring device.

If a unit is not functioning properly or is not in proper temperature range IMMEDIATELY FOLLOW YOUR [VACCINE STORAGE AND HANDLING PLAN WITH EMERGENCY RESPONSE PLAN](#). IF NEEDED, TRANSPORT VACCINE TO YOUR PRE-DETERMINED BACKUP EMERGENCY LOCATION.

NON-REPORTABLE TEMPERATURE EXCURSION (TE): If temperatures are out of range but have not yet reached the reportable range, temperature adjustments need to be made. Begin to stabilize temperatures. Secure unit doors and check the power source. If needed, make a slight adjustment to the thermostat. Continue to monitor temperatures every 30 minutes until stable. If the excursion occurs at the end of clinic day, DO NOT leave vaccine in the unit. Move your vaccine to another unit that is monitored according to VFC requirements or to your backup emergency location. *Adjusting temperatures prior to the close of a clinic day and leaving vaccines in a unit with temperature out of range could lead to an "avoidable" waste.*

REPORTABLE TEMPERATURE EXCURSION: If the storage unit is now working properly and is in the appropriate temperature range then take the following actions.

- QUARANTINE THE AFFECTED VACCINE AND MARK "DO NOT USE." DO NOT USE UNTIL APPROVED BY THE KIP
- CONTACT YOUR IMMUNIZATION CONSULTANT OR THE CONSULTANT ON-CALL AT 877-296-0464
- CONTINUE TO STORE VACCINES UNDER IN THE RECOMMENDED TEMPERATURE RANGE UNTIL VIABILITY IS DETERMINED. DO NOT DISCARD AFFECTED VACCINE, ASSUMING IT HAS BEEN COMPROMISED.
- CONTACT THE VACCINE MANUFACTURER FOR WRITTEN RECOMMENDATIONS ON THE VACCINE VIABILITY.
- DOWNLOAD AND SUBMIT KIP SUPPLIED DDL REPORTS (.PDF AND .TXT) AND/OR OTHER TEMPERATURE MONITORING DEVICE DOCUMENTATION AND SEND TO YOUR IMMUNIZATION CONSULTANT OR CONSULTANT ON-CALL.

PROVIDER NAME: _____ PIN: _____ DATE: _____

Printable TE Form - Revision 1/2023

Temperature Monitoring and Excursions

Documenting a temperature excursion:

Temperature Excursion Worksheet				
OTHER VACCINES	VACCINES	CASE #	COMMENTS	
AstraZeneca 800-236-9933 Option 1	<input type="checkbox"/> FluMist			<input type="checkbox"/> Viable <input type="checkbox"/> Non-viable
Dynavax Technologies (Medical Information Department) 844-375-4728	<input type="checkbox"/> Hcpilisav-B			<input type="checkbox"/> Viable <input type="checkbox"/> Non-viable
GlaxoSmithKline (GSK) (Medical Information Department) 877-356-8368 Vaccine Stability Calculator	<input type="checkbox"/> Bexsero <input type="checkbox"/> Infanrix <input type="checkbox"/> Boostrix <input type="checkbox"/> Kinrix <input type="checkbox"/> Engerix-B <input type="checkbox"/> Menveo <input type="checkbox"/> Fluarix <input type="checkbox"/> Pediarix <input type="checkbox"/> Flulaval <input type="checkbox"/> Priorix <input type="checkbox"/> Havrix <input type="checkbox"/> Rotarix <input type="checkbox"/> Hiberix <input type="checkbox"/> Shingrix <input type="checkbox"/> <input type="checkbox"/> Twinrix			<input type="checkbox"/> Viable <input type="checkbox"/> Non-viable
Merck @ Co, Inc. 800-672-6372 Option 2 Vaccine Stability Calculator	<input type="checkbox"/> Gardasil <input type="checkbox"/> Rotateq <input type="checkbox"/> MMR II <input type="checkbox"/> Vaqta <input type="checkbox"/> PedvaxHIB <input type="checkbox"/> Varivax <input type="checkbox"/> Pneumovax 23 <input type="checkbox"/> Vaxelis <input type="checkbox"/> Proquad <input type="checkbox"/> VAXNEUVANCE <input type="checkbox"/> Recombivax HB <input type="checkbox"/> Zostavax			<input type="checkbox"/> Viable <input type="checkbox"/> Non-viable
Pfizer/Wyeth 800-438-1985 Option 3 Vaccine Stability Calculator	<input type="checkbox"/> Prevnar 13 <input type="checkbox"/> Trumemba <input type="checkbox"/> Prevnar 20			<input type="checkbox"/> Viable <input type="checkbox"/> Non-viable
Sanofi Pasteur 800-822-2463 Vaccine Stability Calculator	<input type="checkbox"/> ActHib <input type="checkbox"/> Menactra <input type="checkbox"/> Adacel <input type="checkbox"/> MenQuadfi <input type="checkbox"/> Daptacel <input type="checkbox"/> Pentacel <input type="checkbox"/> Fluzone <input type="checkbox"/> Quadracel <input type="checkbox"/> IPOL <input type="checkbox"/> Td			<input type="checkbox"/> Viable <input type="checkbox"/> Non-viable
Seqirus 855-358-8966 Option 1	<input type="checkbox"/> Afluria <input type="checkbox"/> Fluad <input type="checkbox"/> Fluclelvax			<input type="checkbox"/> Viable <input type="checkbox"/> Non-viable

*For JYNNEOS excursions, please call 877-296-0464

- Providers experiencing a temperature excursion will be suspended from vaccine administration and ordering until all requested information is submitted and reviewed. Providers will be notified when they may resume vaccinating and ordering. If non-viable vaccines were administered, patients may need to be revaccinated. Your Immunization Consultant will work with your clinic to make this determination.
- Vaccines exposed to out of range temperatures should be labeled with an excursion sticker. Excursion stickers can be ordered from the KIP Order Center.

PROVIDER NAME: _____ PIN: _____ DATE: _____

Printable TE Form - Revision 1/2023

Temperature Excursion Questions

- Vaccine involved and how long has it been in the clinic's inventory?
- Cumulative exposure time of high and low out of range temperatures for each vaccine involved.
- Do you keep your MMR in the freezer or refrigerator?
- Open MDV polio in inventory?

Always report to your Regional Immunization Consultant what happened, even if it's minor and all resolved.

KIP Temperature Excursion Requirements

- Data logger PDF and TXT reports
- Manual temperature logs
- Is there vaccine in inventory that has been exposed in multiple TE's
- The failure reports need to be completed in KSWebIZ
- Manufacturers report of viability in writing on each vaccine that was affected
- Temperature excursion worksheet completed by provider

What happens next?

- Do not administer VFC vaccine at all until approval is received from KIP
- KIP staff will look through everything to determine if issue is taken care of and to ensure that a temp excursion doesn't occur again
- KIP staff determine if vaccine is considered viable using the manufacturer recommendations
- Ordering is placed on hold
- Once issue is mediated, KIP will let provider know if temp excursion was avoidable/unavoidable and when they may resume administration of VFC vaccine.

Avoidable/Unavoidable loss

Avoidable – Could have been avoided or prevented (For example, vaccine left out on the counter or leaving the door ajar)

Unavoidable – Not able to be avoided, prevented, or ignored. (For example, power outage)

The KIP is responsible for determining when a VFC provider has had an *avoidable loss of vaccine*. If the loss is determined to be avoidable, the VFC provider may be required to replace the lost vaccine with privately purchased vaccine on a dose-for-dose basis.

Examples: Avoidable Vaccine Loss - Restitution

Vaccine loss repayment will be dependent on but not limited to:

- Size of the loss
- Number of past wastage incidences by a specific clinic/organization
- Provider's response to the temperature excursion
- Provider's response to education and corrective action plan

Avoidable Vaccine Loss - Restitution

- VFC providers must submit a paid invoice for the privately purchased vaccine reflecting the dose-for-dose replacement to the KIP within 90-days of the vaccine loss.
- VFC providers will not be able to order the specific publicly funded vaccine they are required to replace, until documentation has been provided showing all wasted vaccine has been replaced dose-for-dose.
- Replacement vaccine must be entered into KSWebIZ as “wastage repayment”.
- VFC providers with ongoing avoidable wasted vaccine may be placed *on vaccine hold from ordering*. If wastage patterns continue and corrective actions are not taken, the provider could be *unenrolled* from the VFC program.

Temperature Excursion Follow-up

- May have to revaccinate patients if non-viable vaccine was administered.
- Non-viable vaccine must be returned to McKesson through the vaccine return section in KSWebIZ within 72 hours.
- Having the storage unit serviced might be recommended as a best practice to prevent future excursions.
- Staff training on proper storage and handling practices.
- Submitting manual, Txt, and PDF temperature logs for 3 months after the TE.

Best Practices to Avoid a Temp Excursion

- Monitor unit temps as required.
- Review storage unit temp readings and DDL software weekly for changes in temp trends.
- If there appears to be a temp fluctuation, troubleshoot the problem immediately.
- Conduct routine maintenance on all vaccine storage units and equipment.
- Budget to replace units and equipment as needed.

Cost Share Program

KIP has a cost share program to help cover the cost of new storage units.

If you would like more information on this contact your Regional Immunization Consultant or email kdhe.vaccine@ks.gov.

Resources

CDC Storage and Handling Toolkit [cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf](https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf)

Kansas Immunization Program VFC Policy and Procedure Manual
kdhe.ks.gov/DocumentCenter/View/432/

KDHE Temperature Logs

Temperature Log for Vaccines (Celsius) and Temperature Log for Vaccines (Fahrenheit)

KDHE Temperature Excursion Worksheet

kdhe.ks.gov/DocumentCenter/View/23157 (printable)

kdhe.ks.gov/DocumentCenter/View/438

Resources

KDHE Immunization Materials: kdhe.myprintdesk.net/DSF/

KDHE Vaccine Storage & Handling website: kdhe.ks.gov/233/



Temperature Monitoring and Excursions

Contacts

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Thank you/Questions

