



**Department  
of Health**

# **NYS Vaccines for Children (VFC) Program Training Series 10: Monitoring Vaccine Storage Unit Temperatures**

New York State Department of Health  
Bureau of Immunization

Hello and welcome.

This training is intended to provide guidance to New York State Vaccines for Children (or VFC) providers on monitoring temperatures inside their vaccine storage units.

# NYS VFC Program

## Requirements for Monitoring Temperatures

1. Check current temperatures twice daily in every storage unit that stores publicly-funded vaccine. Check min/max temperatures once daily.
2. Enter all temperatures into the NYSIIS Temperature log.
  - Minimum of four (4) temperature readings documented in NYSIIS for each day that your office is open:
    - Current temperature reading when office opens
    - Minimum temperature reading when office opens – new requirement effective January 1, 2018
    - Maximum temperature reading when office opens – new requirement effective January 1, 2018
    - Current temperature reading before office closes for the day
  - Can transfer from paper log into NYSIIS (at least every 14 days)
    - Link to paper temperature log: <http://www.immunize.org/handouts/temperature-logs.asp>



Providers enrolled in the NYS VFC Program are required to manually check the current temperature of all refrigerator and freezer units where publicly-funded vaccine is stored twice daily; when the office opens and again when it closes for the day.

Additionally, beginning in January 2018, VFC providers are required to check the minimum and maximum temperatures in the storage units at least once per day, preferably when the office first opens.

VFC Providers are required to enter a minimum of four (4) temperature readings into the New York State Immunization Information System or NYSIIS Temperature Log for each day that your office is open. This includes: a current temperature reading when the office opens, a minimum temperature reading when the office opens, a maximum temperature reading when the office opens and a current temperature reading before the office closes for the day.

Providers are required to enter the information into the New York State Immunization Information System or NYSIIS temperature log within 14 days of the date the temperature was read, although it is recommended that temperatures are recorded in NYSIIS at the time of the reading. Providers can use the Immunization Action Coalition's paper temperature log to document temperatures then transfer those temperatures into the NYSIIS temperature log.

## NYS VFC Program Requirements for Monitoring Temperatures

3. Report all out of range temperatures to NYS VFC program at 1-800-543-7468
  - Current and min/max readings that were out of range
4. Keep temperature data not in NYSIIS for a minimum of 3 years
  - Downloaded data logger data
  - Excursion information
  - Paper temperature logs not in NYSIIS



VFC providers are required to report all out of range temperatures to the NYS VFC Program at the number listed on this slide. This includes current and min/max temperature readings that were out of range.

VFC Providers should maintain all temperature related data for a minimum of three years, including downloaded data logger data, information on excursions and any paper temperature logs not in NYSIIS.

Use of any continuous temperature monitoring device or data logger, or the use of an alert or alarm system does not replace your twice daily temperature checks or entry of temperatures into the NYSIIS temperature log.

# Monitoring Temperatures

Who is responsible?

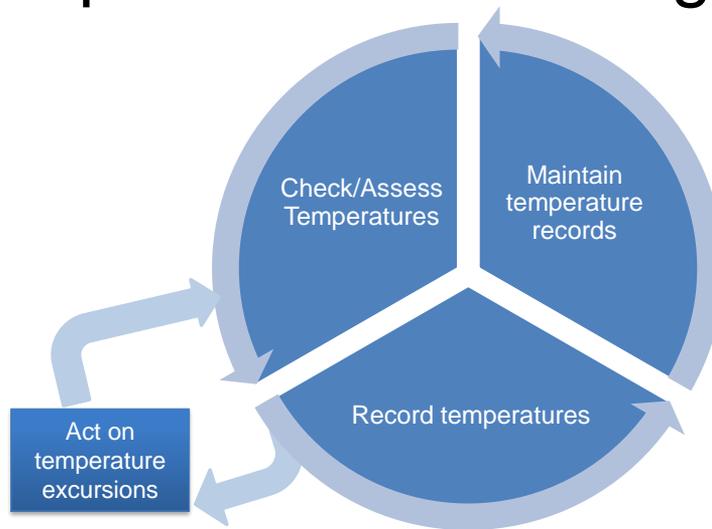
- Vaccine coordinator and back-up coordinator
- Designated staff in absence of coordinator or back-up
- All staff should be trained



The vaccine coordinator at each VFC provider office is primarily responsible for monitoring and recording temperatures within each of the vaccine storage units, with the back-up coordinator assuming responsibility in their absence.

An alternate staff person **MUST** be designated to monitor temperatures in the event that both the coordinator and back-up are absent. Additionally, all staff who are involved in monitoring temperatures should be trained to recognize acceptable temperature ranges and be aware of proper procedure in the event of a temperature excursion.

# Temperature Monitoring Process



The temperature monitoring process consists of three interconnected parts: checking and assessing temperatures, recording temperatures and storing or maintaining records that include temperature data.

When excursions are identified during temperature assessment, they should be recorded and acted upon.

# Temperature Monitoring Process

## 1. Check Temperatures

- Check/assess temperatures
  - Current
    - Twice daily
  - Minimum and maximum (min/max)
    - Required to check and document in NYSIIS at least once per day
- Act on any out of range temperatures
- Download and review data logger data weekly
- Data loggers/continuous temperature monitoring systems don't take the place of twice daily temperature checks



The vaccine coordinator should use a certified calibrated temperature monitoring device to check temperatures in each vaccine storage unit.

The temperatures need to be checked twice daily, when the practice first opens and right before closing. Note that this rule applies even if the practice is only open for a half day or only open for a few hours.

The coordinator should check the current temperatures at least twice a day and the min/max readings at least once per day and enter those readings into NYSIIS.

When checking temperatures, assess whether the current, minimum or maximum temperatures displayed are outside of the allowable range for refrigerated or frozen vaccine. Such out of range temperature readings are referred to as temperature excursions.

In addition to reviewing and recording temperatures twice daily, vaccine coordinators are responsible for downloading data from continuous temperature monitoring devices and reviewing that data on a weekly basis.

Please note that use of the data logger or continuous temperature monitoring system does not take the place of the twice daily temperature checks or entering into the temperature log in NYSIIS.

## Temperature Monitoring Devices with Min/Max Feature

- Detect excursions between twice-daily readings
- Check and clear min/max temperatures at least once a day
  - Some devices clear automatically, some require extra step
  - Check with vendor
  - State-supplied Fridge-Tag2L Data loggers clear automatically every night at midnight
- Min/max indicators can vary
  - Up arrow (▲) or down arrow (▼)
  - Text such as “min” or “max” or “high” or “low”
  - Review device instructions
- If the minimum or maximum is not within the acceptable temperature range, an excursion has occurred.



Min/max temperature readings can detect excursions that can occur between your twice daily temperature readings.

You should check and clear the min/max temperatures at least once a day. This allows the device to record more current min and max temperatures. Some temperature monitoring devices will clear the min and max temperatures automatically after you check them, and some require a manual clearing process.

Refer to the product manual or consult the vendor for instructions that are specific to your device.

The state-supplied Fridge-Tag2L Data loggers automatically clear or refresh the min/max temperatures every night at midnight.

While the displays for different types of temperature monitoring devices vary, the minimum and maximum temperatures are usually indicated by a symbol such as an up or down arrow, text such as “high” or “low”, or text that reads “min” or

“max” that displays next to the temperature value.

Consult the user manual for the device or contact the vendor if you have any questions about the capability or how to use your device.

Minimum and maximum values are actual temperatures measured in your storage unit, therefore they should read within acceptable temperature ranges. If either the minimum or the maximum temperature is not within the acceptable temperature range, an excursion has occurred.

## Understanding Min/Max Temperatures

Definition: The coldest (minimum) and the warmest (maximum) temperatures inside of the storage unit that were recorded by the temperature monitoring device over a period of time

- Devices have different functionalities depending on brand/model
  - MIN/MAX, HI/LO, up/down arrows
  - Some refresh min/max readings daily or when a button is pressed
    - **The FridgeTag2L resets min/max readings every night at midnight**
- Min/max temperature readings are actual temperature readings from inside your unit
  - Should be within acceptable temperature ranges
  - **Any min/max reading outside of acceptable range is considered a temperature excursion and must be reported to the NYS VFC Program at 1-800-543-7468.**



The minimum and maximum temperatures can be defined as: the coldest (or minimum) and the warmest (or maximum) temperatures inside of the storage unit that were recorded by the temperature monitoring device over a period of time.

Min/max readings can help to detect fluctuations caused by usage or defrost cycles.

Temperature monitoring devices have different display functionalities depending on the brand or model. Some depict min/max readings with text such as MIN or MAX or HI or LOW. Some depict them with up and down arrows. Devices also reset or refresh the min/max readings in a variety of ways. Some devices refresh the min/max temperatures automatically and some refresh with a button press. The state-supplied Fridge-Tag®2L data loggers automatically reset the min/max readings every night at midnight. Therefore, when you perform a check when the office first opens, the min/max will show warmest/coldest temperatures your storage unit has had since midnight. You will need to go back and review min/max temperatures from the day before, and to review temperatures from days when your office was closed, such as over the weekend. Even if the

temperatures were not out of range, you can make any needed adjustments to your storage unit if you find the units are running too cold or too warm. This may help the temperatures from going out of range and can help prevent the loss of vaccine.

Min/max temperature readings should be between acceptable temperature ranges\*

Any min/max reading outside of acceptable range is considered a temperature excursion and must be reported to the NYS VFC Program at 1-800-543-7468.

# Temperature Monitoring Process

## 2. Record Temperatures

- **Temperatures must be entered in NYSIIS**
- Even if using a data logger or other continuous temperature monitoring system
- You will not receive VFC orders if temperatures are missing
- Record on paper temperature log twice daily then enter into NYSIIS Temperature Log on a weekly basis
- Ideal to enter temperatures directly into NYSIIS at time of reading



You are required to record the temperature readings taken from your twice daily temperature checks into NYSIIS.

This must be done even if your practice uses data loggers or other continuous temperature monitoring systems.

If temperatures are missing from NYSIIS your vaccine orders will be rejected or held until temperature recordings in the log are up to date within no more than 14 days.

The Vaccine Coordinator can record temperatures on a paper temperature log twice daily then transfer those temperatures into the NYSIIS Temperature Log.

It is ideal if temperatures are entered directly into NYSIIS at the time of the reading, but it is recommended that temperatures are recorded in NYSIIS at least weekly.

# Temperature Monitoring Process

## 2a. Record Temperatures

- Required daily temperature readings in NYSIIS as of January 1, 2018 (4 readings required, for each day that your office is open):
  1. Current temp reading when office opens
  2. Minimum reading when office first opens
  3. Maximum reading when office first opens
  4. Current temp reading when office closes for day
- If temps above not recorded in NYSIIS, orders will be denied



As of January 1, 2018, you will need to record four temperature readings into NYSIIS for each day that your office is open.

This includes:

a current temperature reading when the office first opens

A minimum reading when the office first opens

A maximum reading when the office first opens

And a current temperature reading when the office closes for the day.

Your vaccine orders will be denied if temperatures are not entered into NYSIIS>

# Temperature Monitoring Process

## 2a. Act on Excursions

- Take immediate action if readings are outside of the acceptable temperature range
  - Minimum, maximum, current temperature readings or readings found in data logger download
  - Refer to your emergency plan
  - Report all excursions to the VFC Program within one business day
  - See additional training “Temperature Excursions”
  - Record all temperatures, including out of range temperatures



If your assessment shows that any out of range temperatures occurred, take immediate action. Out of range temperatures may be observed as current, minimum or maximum readings or can be found when downloading data logger data.

Refer to your practice's emergency plan for standard operating procedures during temperature excursions.

All excursions must be reported to the NYS VFC Program within 1 business day. Review Training #11 for complete information on the actions you will need to take when a temperature excursion happens. A link to this training is available on the resources slide at the end of this training.

Do not delay recording out of range temperatures, all temperature readings must be documented in NYSIIS. Complete temperature logs will allow NYS VFC Program staff to better assist you in understanding and resolving excursions.

# Entering temperatures into NYSIIS

- Required by NYS VFC Program
- Access separate training
  - Click [here](#)
  - How to use NYSIIS Temp Log
- If using FridgeTag2L Data logger, refer to guidance document
- For excursions
  - Include comments:
    - Nature of the excursion
    - Action taken

Date	Office Closed	Time	Current	Min	Max
06/19/2015 AM	<input type="checkbox"/>				
06/18/2015 AM	<input type="checkbox"/>				
06/17/2015 AM	<input type="checkbox"/>				
06/16/2015 AM	<input type="checkbox"/>				
06/15/2015 AM	<input type="checkbox"/>				
06/14/2015 AM	<input type="checkbox"/>				
06/13/2015 AM	<input type="checkbox"/>				

Image obtained from the New York State Immunization Information System (NYSIIS) Temperature Log



As mentioned previously, NYS VFC Providers are required to enter their twice daily temperature readings into NYSIIS as of January 1, 2015.

If you require training on how to record temperatures in the NYSIIS temperature log module, follow the link on this slide to view a separate training which gives detailed step by step instructions.

A link to these trainings is also available by visiting the Resources slide at the end of this training module.

Remember, if you are recording an out of range temperature in NYSIIS a comment is required. To expedite the process, briefly summarize the nature of the problem and action taken.

## Link:

<https://meetny.webex.com/tc3000/trainingcenter/record/downloadViewAction.do?actionType=view&recordId=27240022&siteurl=meetny&setted=102&internalRky=4832534b00000002ae0e0bd64041b04c7f8eca5676354b7fed63d6623c0d9ee9677f74f285e67545&RCID=3333270f5c624046ac790fc871054872>

# Completing the Paper Temperature Log

**Temperature Log for Refrigerator – Fahrenheit** Month/Year 1/2015 VFC PIN or other ID # 00000 Page 1 of 3  
 DAYS 1–15 Facility Name NYS Dept. of Health

**Monitor temperatures closely!**

1. Write your initials below in "Staff Initials," and note the time in "Exact Time."
2. Record temp twice each workday.
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 temps, see instructions to the right.
6. After each month has ended, save each month's log for 3 years, unless state/local jurisdictions require a longer period.

**Take action if temp is out of range—too warm (above 40°F) or too cold (below 35°F).**

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 your state/local health department and/or the manufacturer(s).
2. Record the out-of-range temps and the room temp in the "Action" area on the bottom of the log.
3. Notify your vaccine coordinator, or call the immunization program at your state or local health department for guidance.
4. Document the action taken on a "Vaccine Storage Troubleshooting Record" on page 3.

Day of Month: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15  
 Staff Initials: AS  
 Exact Time: 8:30 AM 4:30 PM  
 Min/Max Temp (other previous readings): 39 40 43 38 41 38 40 39 42 39 41 38 40 39 41 38  
 Danger! Temperatures above 46°F are too warm! Write any out-of-range temps and room temp on the lines below and call your state or local health department immediately!  
 46°F  
 45°F  
 44°F  
 43°F  
 42°F  
 41°F  
 Aim for 40°F  
 39°F  
 38°F  
 37°F  
 36°F  
 35°F  
 Danger! Temperatures below 35°F are too cold! Write any out-of-range temps and room temp on the lines below and call your state or local health department immediately!  
 ACTION: Write any out-of-range temps (above 46°F or below 35°F) here:  
 Room Temperature: 47  
69  
 If you have a vaccine storage issue, also complete "Vaccine Storage Troubleshooting Record" found on page 3.  
 DISTRIBUTED BY: IHL IMMUNIZATION ACTION COALITION 1573 Selby Avenue • St. Paul, MN 55104 • 651-647-9009 • www.immunize.org • www.vaccineinformation.org  
 Adapted with permission from California Department of Public Health. Technical content reviewed by the Centers for Disease Control and Prevention. www.immunize.org/leg\_d/10372.pdf#ann=9#P0227 (8/13)

Download blank logs using the links on the Resources slide at the end of this presentation

The image in this slide displays an example of a completed version of the Immunization Action Coalition's paper refrigerator temperature log in Fahrenheit. The Immunization Action Coalition's paper temperature log found in the links on the resource slide

Each page of the log holds half of a month or about two weeks of twice daily temperatures.

Detailed instructions on how to use the log are available at the top of the form. A brief outline of actions to take when an out of range temperature is observed is included at the top of the sheet for quick reference.

The last page of each temperature log is a vaccine storage and handling troubleshooting record used to record actions taken due to out of range temperatures. These include examples of how the troubleshooting record is used.

Again, temperatures from the completed paper log must be entered into NYSIS at least every 2 weeks.



# Temperature Monitoring Process

## 3. Maintain temperature records

- Maintain ongoing file of temperature data
  - For three (3) years
    - NYSIIS Temp Log -or-
      - Temperature Log hard copies e.g. IAC's paper Temp Log
    - Keep downloaded data logger data even if entered into NYSIIS



NYS VFC providers are required to maintain temperature records for at least three years.

Once you have started entering temperatures in the NYSIIS temperature log, you are not required to keep paper back-ups for the dates entered in NYSIIS.

This may mean that you are saving a combination of paper logs and NYSIIS temp logs.

If you have a form of continuous temperature monitoring system such as a digital data logger, you should keep all outputted data logger data for 3 years even if you have documented your twice daily temperatures in NYSIIS.

# Key Messages: Monitoring Vaccine Storage Unit Temperatures

- Requirements:
  - Check current temperatures twice daily and min/max temperature once per day, when office first opens
  - If current, minimum or maximum temperatures are out of range , **immediate action is required**
    - **Contact the VFC Program to report temperature excursions at 1-800-543-7468.**
  - Record temperatures into NYSIIS temperature log weekly
  - Maintain temperature records for at least three years.



Let's review the key messages on temperature monitoring:

In terms of NYS VFC Program requirements:

You are required to perform a manual temperature check inside each vaccine storage unit twice daily, once right after the office opens and once right before closing. This includes checking the current temperature twice daily and the min/max temperatures once per day.

Current and minimum and maximum readings should be within acceptable ranges. Immediate action should be taken when any of these temperatures are out of range.

You must record temperature readings in the NYSIIS temperature log

You have the option of recording temperatures on IAC paper log then entering them into NYSIIS on a weekly basis or entering temperatures directly into NYSIIS.

NYS VFC providers are required to maintain paper temperature records for at least three years. This includes copies of all temperature logs and also any downloaded data from a digital data logger.

# Resources

## **NYS Vaccines for Children (VFC) Program**

Daily Procedure for Monitoring Temperatures using the FridgeTag2L Data Logger

Temperature Monitoring Requirements

[http://www.health.ny.gov/prevention/immunization/vaccines\\_for\\_children/docs/temp\\_monitor\\_device\\_guidance.pdf](http://www.health.ny.gov/prevention/immunization/vaccines_for_children/docs/temp_monitor_device_guidance.pdf)

## **Immunization Action Coalition (IAC)**

Temperature Log for Refrigerator [Fahrenheit Celsius](#)

Temperature Log for Freezer [Fahrenheit Celsius](#)

## **New York State Immunization Information System (NYSIIS)**

[Temperature Log Tutorial](#)



Here is a listing of available resources.

# Additional Training for NYS VFC Providers

**Next: NYS VFC Program Training Series #11: Temperature Excursions**



There are a number of additional trainings available.

The next training in this series is #11: Temperature Excursions.