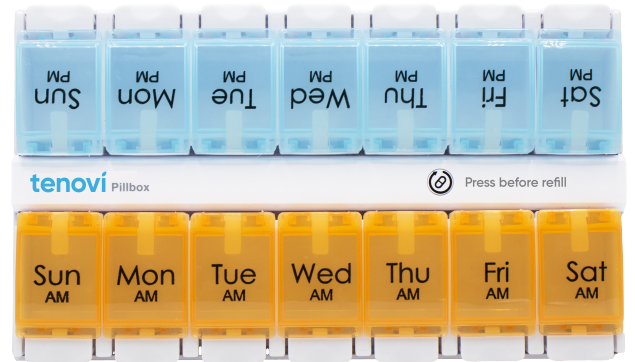


An overview of the Tenovi Pillbox

The Tenovi Pillbox is a medical device designed to enhance medication adherence while seamlessly integrating into remote therapeutic monitoring programs. With a familiar 7-day AM/PM layout, the pillbox features 14 clearly labeled compartments, ensuring easy organization and access.



Using the Tenovi Pillbox is intuitive: patients press the corresponding compartment for the day and time (AM or PM) to retrieve their medication. To further aid compliance, pillbox illuminates the container corresponding to the current day and time, providing a visual cue for added convenience.

Each compartment is equipped with sensors that record "open events," capturing detailed data such as the specific container opened and the exact time of the event. Refilling is straightforward—patients press the "Press Before Refill" button before restocking their pillbox, ensuring accurate categorization of refill activities.

The Tenovi Pillbox securely stores all event data locally (up to 50 events), transmitting it to the Tenovi Gateway when within a 30-foot range and in an active state. The Gateway then uses its cellular modem to send the data to Tenovi's servers, providing reliable, real-time insights to support effective remote therapeutic monitoring.

Visualizing Medication Adherence

Page 2 shows an example visualization of the incoming Tenovi Pillbox data. Key elements of the graph include:

a) Daily Cumulative Open Events: The total number of open events for AM and PM containers, tracked separately for each day.

b) Daily Cumulative "Outside Current Time" Open Events: The total number of open events occurring outside the current day and time, highlighting instances of container usage outside the current time window.

c) Daily Cumulative Refill Events: The number of refill events recorded on a specific day.

d) Medication Changes: Days when medication was added or modified, represented by a red circle on the corresponding date.

In this example, the patient refilled their pillbox on December 2nd, as indicated by 14 recorded refill events. On December 5th, there were five instances the patient accessed the AM container corresponding to the current time and day. On that day, there were also four instances where the patient opened compartments not corresponding with the current time and day. Additionally, the patient's medication was updated on December 8th, noted by a recorded event on that day.

DECEMBER	1	2	3	4	5	6	7	8	9	10
AM		1	3	1	5	1	1	1	1	1
PM		1	1	1	2	2	2			
Outside Current Time			2		4	1	1			
Refill Event		14						4		

An associated table can be populated to link time of day with medication taken. By combining open events with the medication table, it is easy to clearly associate an open event with a particular medication taken. A history of medication taken can be saved and displayed.

MEDICATIONS	AM	PM
Celebrex	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Metformin	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lisinopril	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Add Medication		

For further clarity, we also include a table that shows all the events for more granular review.

Date/Time	Slot Opened	Matches Current Time
Wednesday, 12/11/24 @ 7:06 PM	Wednesday PM	YES
Wednesday, 12/11/24 @ 7:31 AM	Wednesday AM	YES
Tuesday, 12/10/24 @ 6:13 PM	Tuesday PM	YES
Tuesday, 12/10/24 @ 7:30 AM	Tuesday AM	YES
Monday, 12/9/24 @ 8:40 PM	Monday PM	YES
Monday, 12/9/24 @ 7:31 AM	Monday AM	YES
Sunday, 12/8/24 @ 5:54 PM	Saturday PM	NO
Sunday, 12/8/24 @ 8:25 AM	Sunday AM	YES
Saturday, 12/7/24 @ 8:12 PM	Saturday AM	NO
Saturday, 12/7/24 @ 12:13 PM	Saturday PM	YES

A calendar view of this data could also be useful for care managers and clinicians when reviewing a patient's data. This would help in finding patterns of adherence and to have a month long view.

Tenovi Pillbox API Introduction

The Tenovi Pillbox is able to capture medication adherence metrics from a patient with information on what compartment they opened to help aid in RTM.

Activating/Requesting a Pillbox by API

The Tenovi Pillbox can be activated/requested using the same endpoint as our other devices:

POST Create HWI Device

https://api2.tenovi.com/hwi-redoc/#operation/hwi-devices_create

The JSON object used for this API call is very similar to all our other device types. If you are working with bulk shipments and will be handling fulfillment of the pillbox to the patient, your JSON object will look like this:

```
{
  "device": "Tenovi Pillbox",
  "hardware_uuid": "123412341234",
  "fulfillment_request": {
    "client_will_fulfill": true
  },
  "patient": {
    "external_id": "abcdefg"
  }
}
```

If you wish to have Tenovi dropship devices to your patients, you can make use of a JSON object like this:

```
{
  "device": "Tenovi Pillbox",
  "hardware_uuid": "123412341234", // use null if patient doesn't have a gateway
  already
  "fulfillment_request": {
    "shipping_name": "Ziggy Stardust",
    "shipping_address": "123 Infinity Lane",
    "shipping_city": "Seattle",
    "shipping_state": "WA",
    "shipping_zip_code": "99353"
  },
  "patient": {
    "external_id": "abcdefg"
  }
}
```

Once the Pillbox is with the patient and they take their first measurement, metrics will start to flow through the webhooks defined for the specific account the Pillbox is associated with.

Metrics Collected by Tenovi Pillbox

There are four main metrics that are collected with the Pillbox:

Open Event

API Metric Name: pillbox_opened

Value 1: Day of Compartment (1=Sun, 7=Sat)

Value 2: AM vs PM Compartment (1=AM, 2=PM)

This event is triggered when a compartment is opened. Using the two values, you can pinpoint which compartment was opened. For example, if `value_1` is `3` and `value_2` is `1`, the Tuesday AM compartment was opened.

Refill Initiated Event

API Metric Name: pillbox_refill_initiated

Value 1: 1

Value 2: 0

This event is triggered when the button on the top of the Pillbox is pressed, allowing the patient to refill all the compartments (this effectively places the Pillbox in a 'refill mode').

Once the refill is initiated, the patient will have 20 minutes to refill the compartments before the pillbox resumes detecting individual compartment open events. Or once the refill is complete, the patient can press the refill button on the top of the Pillbox to have it resume compartment detection again.

Compartment Refilled

API Metric Name: pillbox_refilled

Value 1: Day of Compartment (1=Sun, 7=Sat)

Value 2: AM vs PM Compartment (1=AM, 2=PM)

This event is triggered when the pillbox is in 'refill mode' and a compartment is opened. Similar to the Open Event, value 1 and value 2 are used to describe which compartment has been refilled. For example, if 'value_1' is '7' and 'value_2' is '2', the Saturday PM compartment was refilled.

Battery Level

API Metric Name: battery_percentage

Value 1: Battery Life, percentage

Value 2: N/A

This is a non-vital metric that helps keep track of the battery life of the device. This can be useful information to track in case batteries need to be replaced to ensure measurements can be tracked.

Filter Parameters Available

Along with these metrics for the Pillbox, there is also a new filter parameter available to help discern which compartment was opened by the patient.

API Filter Parameter Name: compartment

Possible Values: "Sunday AM", "Sunday PM", "Monday AM", etc

This is a human readable value that describes which compartment was opened during the Open Event.

For more information, please reach out to your Tenovi account manager or message us at support@tenovi.com.