



Community Health Toolkit Core Framework Feature: Muting

User Stories

Muting Families

- As a CHW, I want to mute a particular family if they move from the area or refuse services so that I don't continue to receive tasks that can never be fulfilled and poorly affect my performance.
- As a CHW, I want the ability to silence notifications for an entire family so that I do not have to silence all schedules individually.
- As a CHW, I want the ability to unmute the entire family and resume services if the family returns so that I don't have to re-register everyone individually.

Muting Individuals

- As a CHW, I want to mute all schedules for an individual person if they move from the area so that I don't receive tasks for them but can resume service if they move back to the area.
- As a nurse, I want to take an action on a person belonging to a family that has been muted by a CHW so that if they show up at my clinic, I can help them.

Muting Workflow Overview

- **Muting Is A New Way Of Temporarily Quieting A Person / Place Or Group**

Muted people / places are not deleted and all historical data remains in the app.

- **Muting Is Accomplished By Submitting A Muting Form**

The form is accessible from people / place profiles on the People tab or from the Reports tab.

- **You Can Mute Individual People, Entire Families, Or Entire Places**

Muting a place (family, clinic, district, etc) mutes all the people / places at that place AND all the people / places below it in the hierarchy.

- **Users Won't Receive New Tasks Or SMS Reminders For Muted Contacts**

Any open schedules aren't deleted or paused, merely quieted.

- **Forms Can Still Be Submitted While The Contact Is Muted**

The user see a warning that no tasks will be generated until the person / place is un-muted.

- **Muted People / Places Can Be Unmuted At Any Time**

Any schedules the person / place was enrolled in will resume on track.

Muting Technical Overview

- **Muting Is “Online” Only**

The user needs to be online in order for the server to know about any changes. A CHW can mute someone at any time but will continue to receive tasks until the CHW connects to the server to sync.

- **It Works For Both Web-app And SMS Workflows**

Note: We aren't managing families over SMS yet, but may in the future.

- **Manager Approval Is Configurable**

Manager approval is not required, but can be configured. If desired, this just requires an additional form for confirmation that the manager will submit which is set as the muting form.

- **Muting Can Happen At Any Place Level In A Hierarchy**

Muting is supported at any place level. Muting a place mutes all the people / places at that place and below in the hierarchy. For example, muting a family will also mute all individuals in a household.

- **There Is No Such Thing As An Unmuted Person In A Muted Place**

When muting is set at the place level, it applies to all people / places beneath that place. If a person in a muted family is unmuted, the entire family is unmuted.

Muting Technical Overview (DB Updates)

- **Mute State Is Stored On Person And Place Documents**

When a contact is muted, a 'muted' key will be added to all relevant contacts. The value of that key will be set to the date that the mute form was synced to the server, not the date that the mute form was submitted. This is because muting is achieved through sentinel transitions and transitions only run on the server. Unmuting a contact will entirely remove the muted key from the contact. To check if a contact is currently muted, you can simply check for the existence of the muted key.

- **Mute History Is Stored On The Corresponding -info Doc In Medic-Sentinel**

While the mute state is stored on the relevant contact and can tell you the contact's current mute state, it doesn't tell you the periods of time the contact was muted. You can see the history of muting and unmuting from the -info doc for the contact. -info docs are stored in the medic-sentinel database in Couch.

- **Muting An Already Muted Contact Will Not Update Anything**

Since we want to know when the contact started to be muted, muting an already muted contact will not update the timestamp on their mute state, nor will it update the mute history. The same is true for unmuting a contact that is not currently muted... we will not update the last unmute timestamp.

Muting Vs. Death Reporting

A project may support both death reporting and muting - they are not mutually exclusive. Death reporting moves the deceased person to a different part of the family members list and does not allow actions. Muting keeps the person in the family members list and allows actions, just not schedules.

Death Reporting

- Permanent state
- Only allowed at the individual level
- Removes schedules
- A deceased individual is removed from the family list
- No new actions can be performed except for one - reverse the death
- Manager confirmation configurable

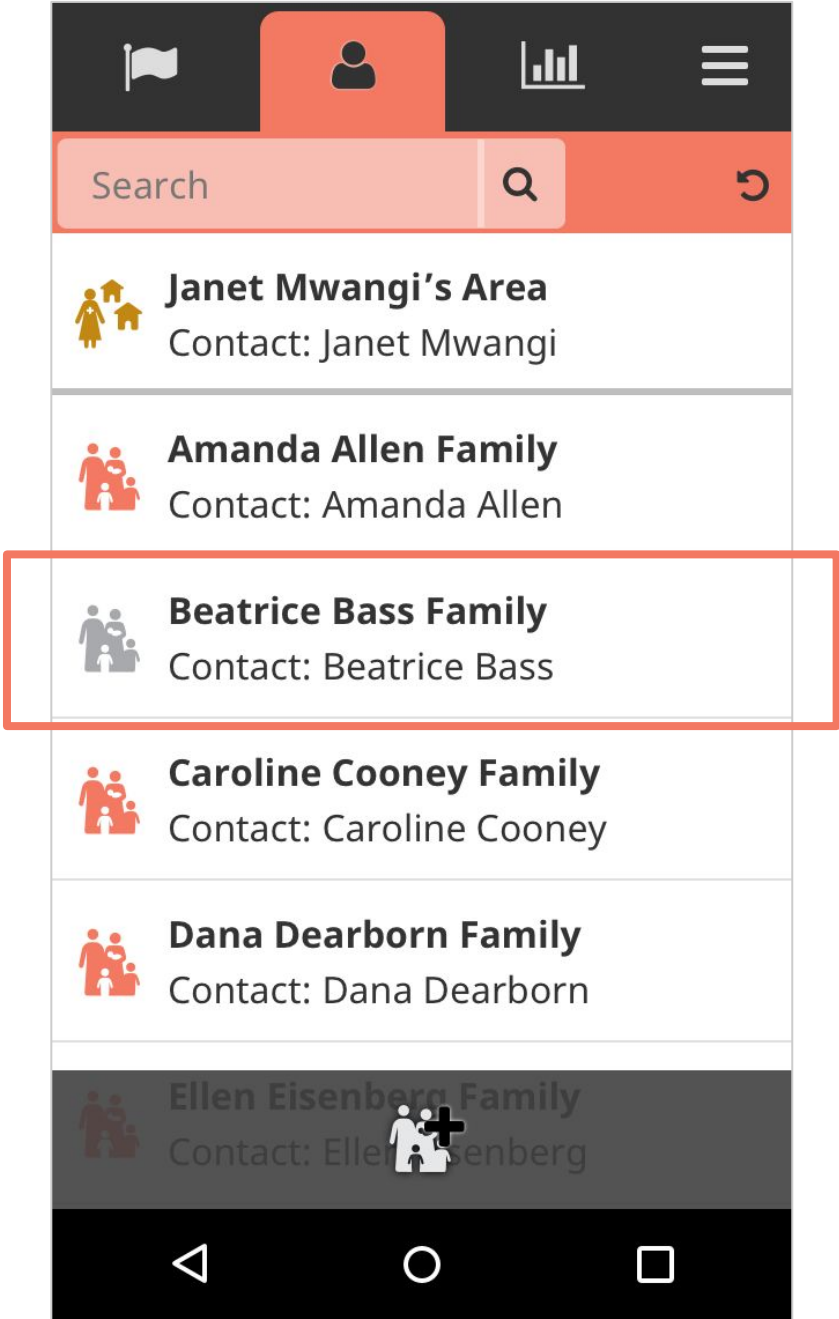
Muting

- Temporary state
- Place, family, or individual level
- Quiets notifications for schedules
- A muted individual is not removed from the family list
- New actions may be performed, but no tasks or notifications will be sent
- Manager confirmation configurable

Didn't This Feature Already Exist?

We previously supported partial individual muting with the **On / Off Form**, however this functionality muted pre-existing SMS schedules only and did not mark or style the person as muted.

We've done some additional development to update this functionality and convert it into a true individual mute function that works logically with the new family / place muting features.



Muting Families

How To Mute A Family

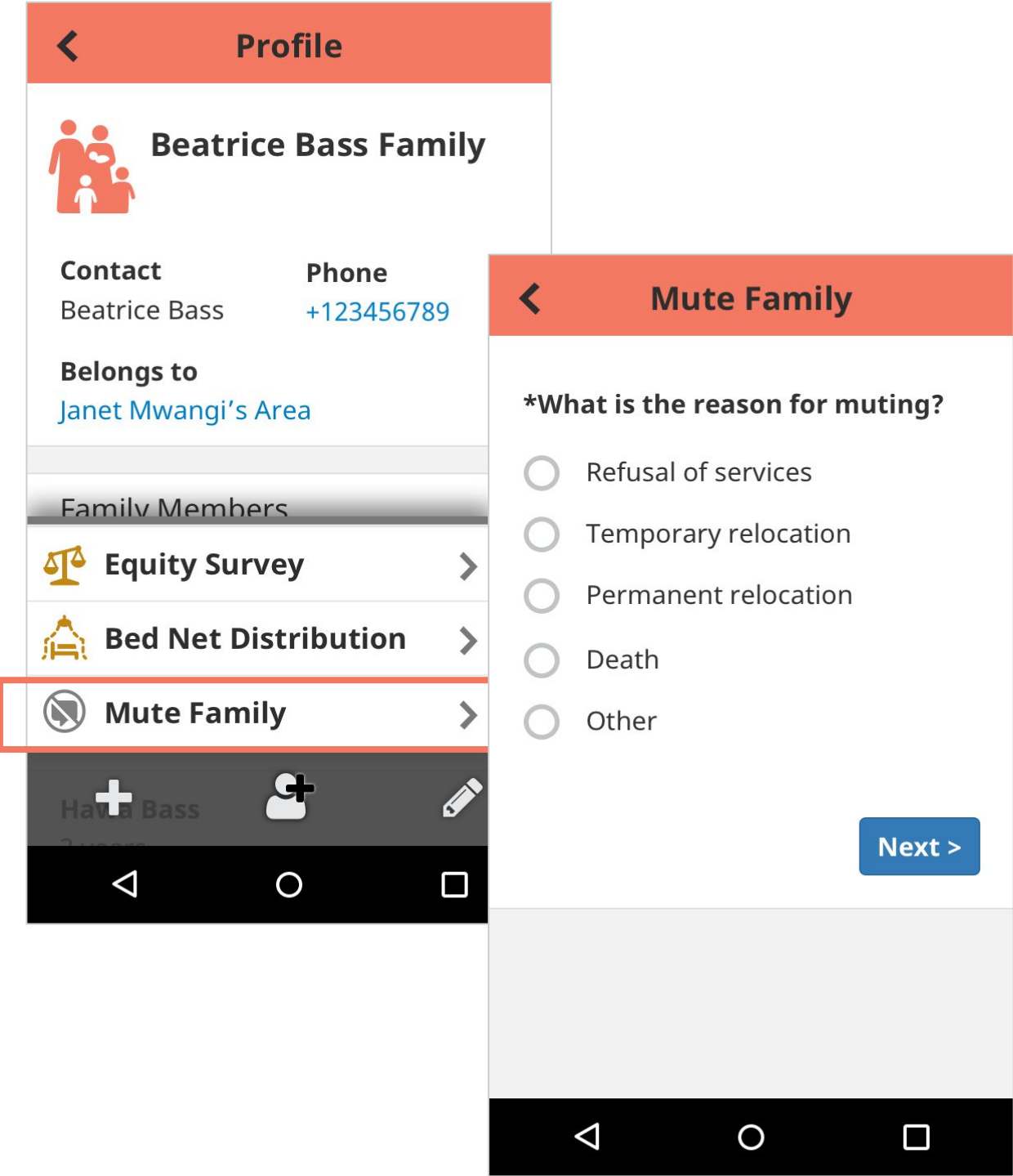
To mute a family, navigate to the **Family Profile**, open the **Action Window** & select the **Mute Form**.

If accessing the Mute Form from the **Reports** tab, you will first need to choose a contact to mute from a dropdown list.

A question on the Mute Form asks “**What is the reason for muting?**” and provides options (these questions and answers are configurable).

If the app has not been configured to require a Manager Verification, the family will be muted when the user clicks the **Submit** button, if the user is connected to the server.

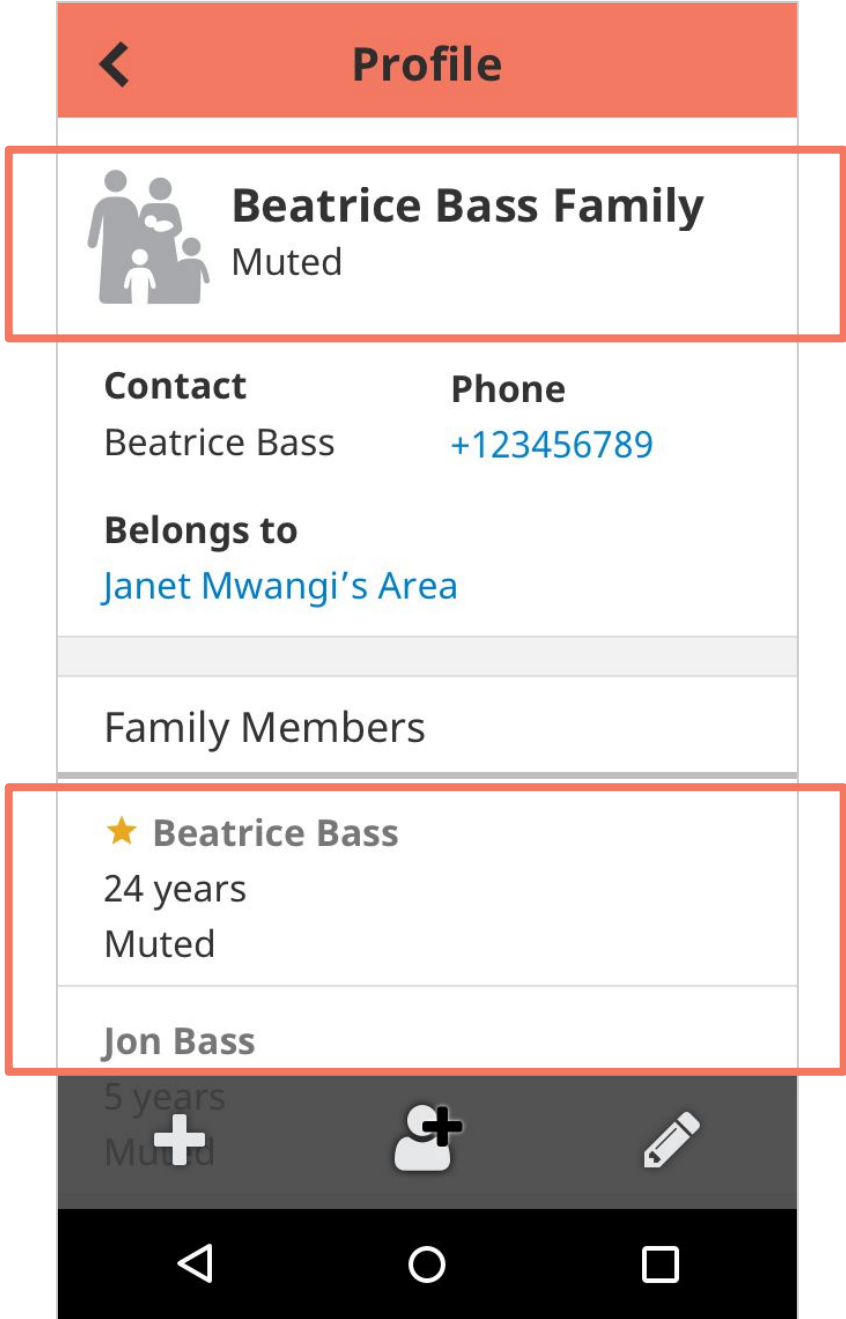
If the app does require Manager Verification, a task will be sent to the manager to confirm the muting status change. The family will remain active until the manager confirms the muting.



How Muting Changes Family Profiles

The styling of muted family profiles updates to make their muted status clear and easily recognizable:

- The family icon turns grey and a status of **muted** is displayed beneath the family name
- Each family member in the card is also **muted**
- Any actions that were previously available on the family remain available on the profile
- Instead of a **Mute Form**, there is an **Unmute Form**
- If an action is begun on a muted family, a warning message states **“This family is currently muted. Are you sure you want to proceed?”**
- A user may add a new person to a muted household. If they do, and choose to leave the family muted, the new person will be automatically muted once created



How Muting Changes Family Member Profiles

The styling of muted family member profiles also updates to make their muted status clear and easily recognizable:

- The family icon turns grey and a status of **muted** is displayed beneath their name
- Any condition cards that were previously on the profile, such as **Pregnancy** or **Immunization**, remain
- Any actions that were previously available on the person's profile remain
- Any actions that were previously available on the family remain available on the individual's profile
- Instead of a **Mute Form**, there is an **Unmute Form**
- If an action is begun on a muted person, a warning message states **“This person is currently muted. Are you sure you want to proceed?”**

Profile

Beatrice Bass

★ Head of Household

Muted

Patient ID

65421

Age

24 years

Gender

Female

Phone

+123456789

Belongs to

Beatrice Bass Family • Janet Mwangi's Area

Active Pregnancy

Date recorded

30 April

How A Muted Family Will Appear In The Stored Data

Muting is persistent. When a family is muted, a **muted** property is stored in its CouchDB document. The **muted** property contains a date in ISO format which represents the moment the muting action was processed by Sentinel (see image). When the action of muting a family is processed:

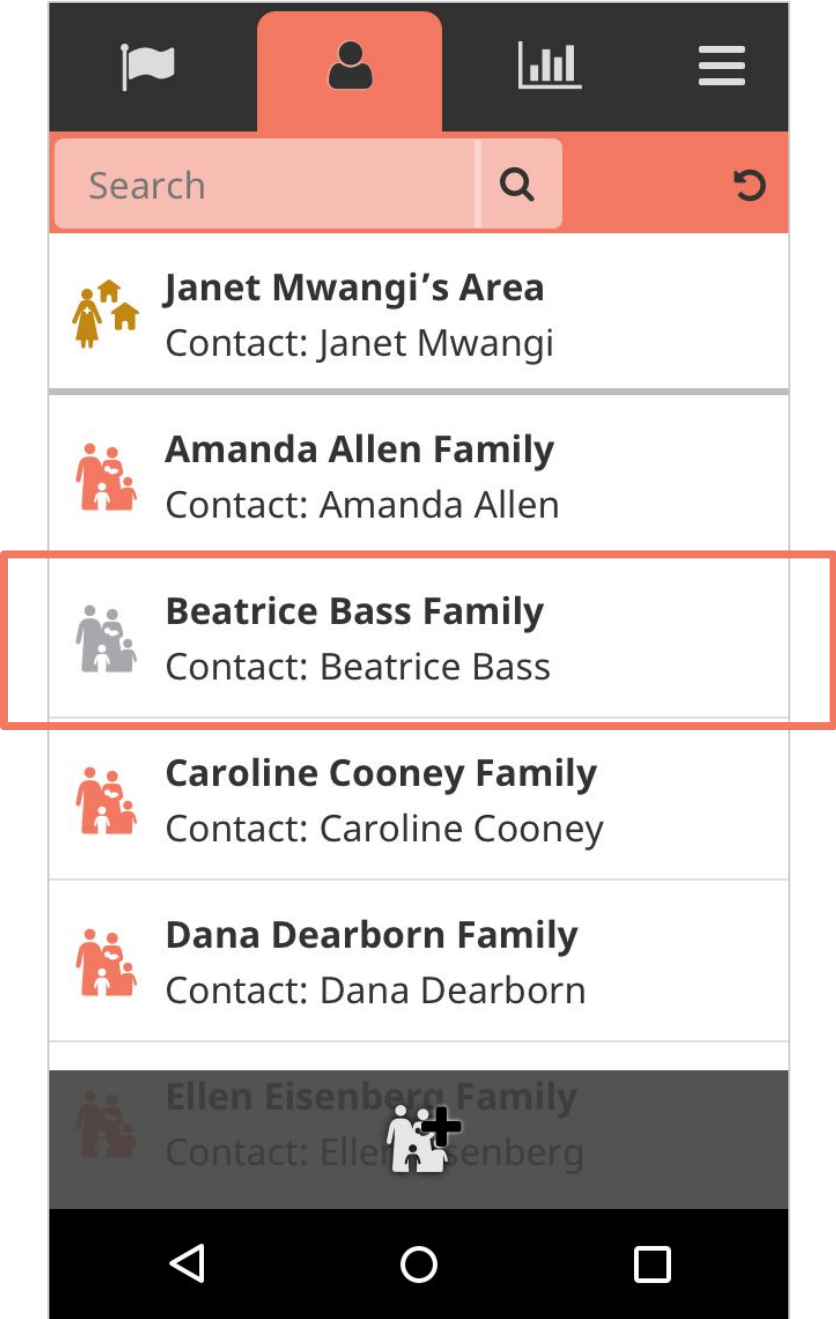
- All family members are also muted (including saving the **muted** property in their CouchDB docs and adding a **muting_history** entry in their Sentinel doc)
- All registrations about the family or any family members are updated, changing the state of all **pending** or **scheduled** SMS schedules to **muted**.

When muting an already muted family, the **muted** property is not updated, retaining its initial value. This also applies to already muted family members and related registrations.

```
{
  "_id": "c483797b-bb34-482b-bea7-e8d5784fd257",
  "_rev": "6-842865f899d2d1a31c75fdaa38ee220d",
  ▶ "parent": { ... }, // 2 items
  "type": "clinic",
  "is_name_generated": "false",
  "name": "Shooter McGavin's Family",
  "external_id": "",
  "notes": "",
  ▶ "contact": { ... }, // 2 items
  "geolocation": "",
  ▶ "meta": { ... }, // 3 items
  "reported_date": 1543502006634,
  "muted": "2018-12-03T15:36:08.639Z"
}
```


Muted Families In The Main List

Muted contacts are sorted to the bottom of the contact list so you can more easily see all your active contacts. The family's icon turns grey, to reflect their muted status.



How To Unmute A Family

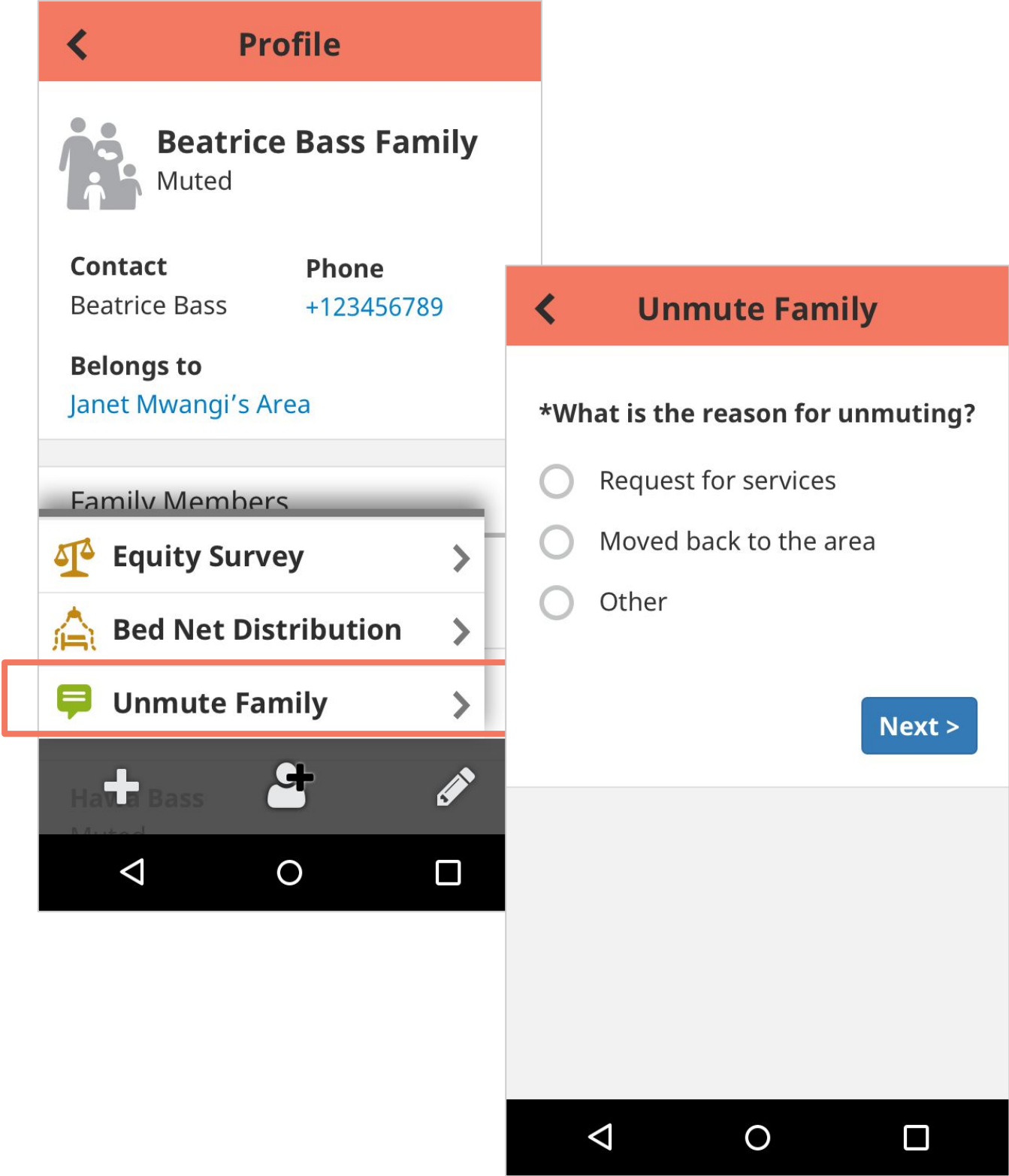
Families can be unmuted by submitting an **Unmute Form** from the main Family Profile or from any Family Member Profile. The Unmute Form can also be accessed on the **Reports tab**.

The **Unmute Form** asks for the reason for unmuting (these questions and answers are configurable).

When a family is unmuted, all individuals in the family are unmuted as well.

Unmuting an individual person in a muted family will also unmute all other family members, because we don't currently permit an unmuted individual underneath a muted household.

Unmuted family schedules will resume .



How An Unmuted Family Is Stored In The Data

An unmuted family does not have a **muted** property present in its CouchDB document. When the action of unmuting a family is processed:

- All family members are also unmuted (including removing the **muted** property in the CouchDB docs and adding a **muting_history** entry in their Sentinel info doc)
- All registrations about the family or any family members are updated, changing the state of all present or future **muted** SMS schedules to **scheduled**
- Schedules that are past their due date retain the **muted** state

```
{
  "_id": "c483797b-bb34-482b-bea7-e8d5784fd257",
  "_rev": "6-842865f899d2d1a31c75fdaa38ee220d",
  ▶ "parent": {...}, // 2 items
  "type": "clinic",
  "is_name_generated": "false",
  "name": "Shooter McGavin's Family",
  "external_id": "",
  "notes": "",
  ▶ "contact": {...}, // 2 items
  "geolocation": "",
  ▶ "meta": {...}, // 3 items
  "reported_date": 1543502006634,
}
```

Muting People

How To Mute A Person


To mute a person, navigate to their **Profile**, open the **Action Window**, and select the **Mute Form**


If accessing the Mute Form from the **Reports** tab, you first need to choose a contact to mute from a dropdown list.


A question on the Mute Form asks “**What is the reason for muting?**” and provides options (these questions and answers are configurable).

If the app has not been configured to require a Manager Verification, the person will be muted as soon as the user clicks the **Submit** button, if the user is connected to the server.

If the app does require manager verification, a task will be sent to the manager to confirm the muting status change. The person will remain active until the manager confirms the muting.


Profile



Beatrice Bass
 Head of Household



Patient ID
 65421



Age
 24 years



Gender
 Female

Phone
 +123456789





Belongs to
 Beatrice Bass Family • Janet Mwangi's



General Assessment



New Pregnancy



Mute


30 April
 Weeks pregnant


Mute

***What is the reason for muting?**

☐ Refusal of services

☐ Temporary relocation

☐ Permanent relocation

☐ Death

☐ Other

Next >

How Muting Changes Person Profiles

The styling of a muted person's profile updates to make their muted status clear and easily recognizable:

- The individual's icon turns grey and a status of **muted** is displayed beneath their name
- Any actions that were previously available on the **Family Profile** remain available on the **Person Profile**
- Instead of the **Mute Form**, there is an **Unmute Form**
- If an action is begun on a muted person, a warning message states **"This person is currently muted. Are you sure you want to proceed?"**

Profile

Beatrice Bass

★ Head of Household

Muted

Patient ID

65421

Age

24 years

Gender

Female

Phone

+123456789

Belongs to

Beatrice Bass Family • Janet Mwangi's Area

Active Pregnancy

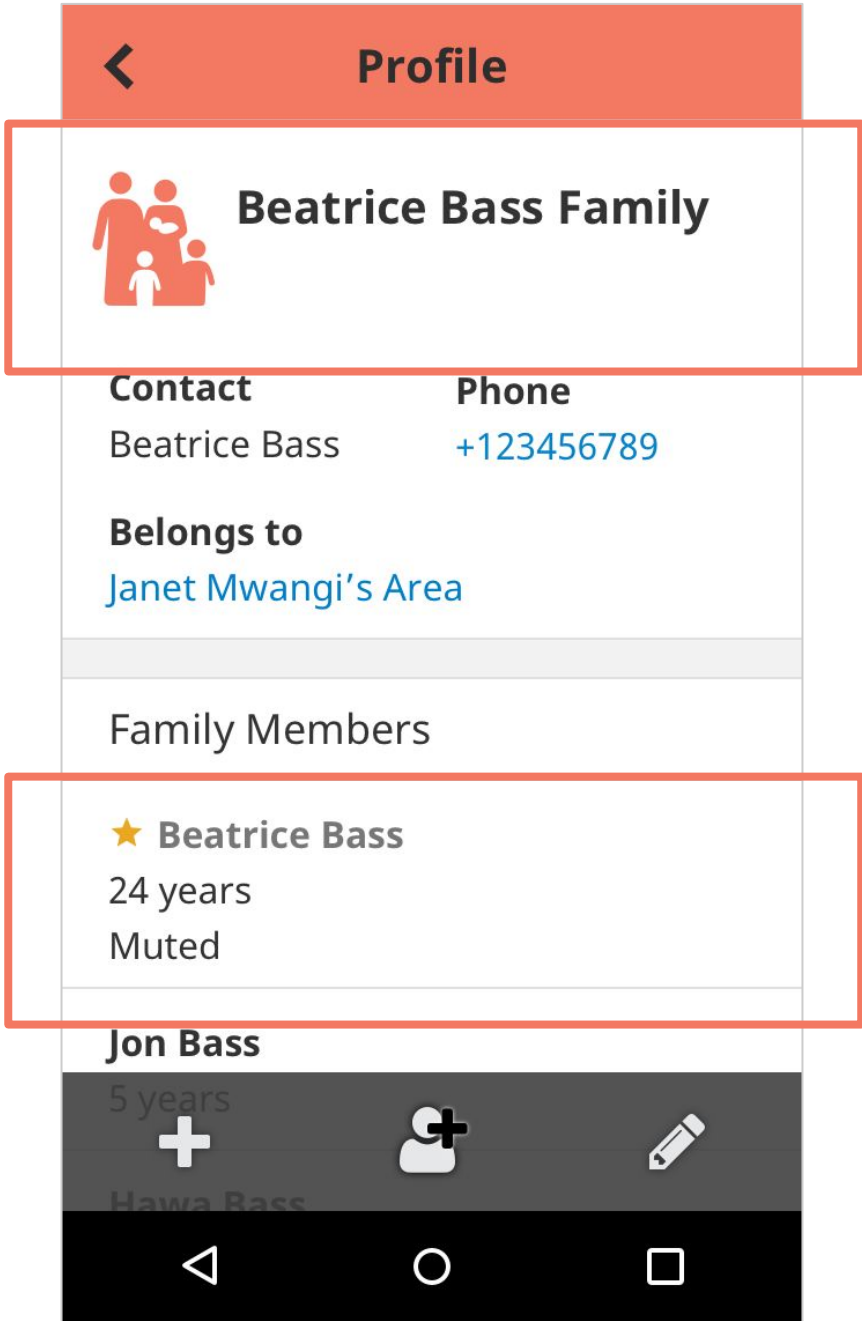
Date recorded

30 April

Muted Person In An Active Family

If an individual is muted, but the family they belong to is active, the family itself remains styled and marked active and only the individual's profile updates:

- The main family icon remains colored, and there is no **muted** label underneath the family name, since the entire family is not muted
- The muted individual(s) in the family members list have grey text for their names and display the label **muted**



How A Muted Or Unmuted Person Will Appear In The Stored Data

Muting is persistent. When a person is muted, a **muted** property is stored in its CouchDB document. The **muted** property contains a date in ISO format which represents the moment the muting action was processed by Sentinel.

When the muting action is processed, all registrations about that person are updated, changing the state of all **pending** or **scheduled** SMS schedules to **muted**. When muting an already muted person, the **muted** property is not updated, retaining its initial value, and no registrations are updated

When unmuting, the **muted** property is removed, and all registrations about the person are updated, setting present / future **muted** SMS schedules to a **scheduled** state

```
{
  "_id": "ef0d26b8-bf27-41f3-a9ac-f7613238b0c3",
  "_rev": "11-e97f2aa1987dac707fdb6b9c1364bfb8",
  "type": "person",
  "name": "Red Foreman",
  "notes": "",
  "sex": "male",
  "date_of_birth_method": "approx",
  "date_of_birth": "1986-11-14",
  "phone": "",
  "alternate_phone": "",
  "external_id": "",
  "reported_date": 1542228245476,
  ▶ "parent": { ... }, // 2 items
  "patient_id": "56080",
  "muted": "2018-12-03T15:36:08.639Z"
}
```

How Muting / Unmuting Changes Appear In Scheduled SMS Messages

When muting / unmuting, related registrations that have **scheduled_tasks** (SMS messages which are scheduled to be sent) are updated

Muting will update all **scheduled_tasks** which are in **scheduled** or **pending** state, to **muted**

The action of unmuting will update all present or future muted **scheduled_tasks**, setting their state to **scheduled** (messages with a due date in the past will remain **muted**).

```
{
  "due": "2019-02-25T09:00:00.000Z",
  "group": 2,
  "type": "ANC Reminders LMP from App",
  "translation_key": "schedule.anc_lmp_from_app",
  "message_key": "messages.schedule.anc.reminder",
  "recipient": "clinic",
  "state_history": [
    {
      "state": "scheduled",
      "timestamp": "2018-12-10T06:36:09.076Z"
    },
    {
      "state": "muted",
      "timestamp": "2018-12-11T06:36:09.076Z"
    },
    {
      "state": "scheduled",
      "timestamp": "2018-12-12T06:36:09.076Z"
    }
  ],
  "state": "scheduled"
},
```

← muting

← un-muting

← state may say scheduled,
muted, or unmuted

How To View Muting History In Medic-Sentinel Database

Every time the muted state of a contact (person, family, etc) is updated, an entry is added to their **muting_history**

muting_history can be found in the **info-docs** saved in **medic-sentinel database**. Each entry includes the following information:

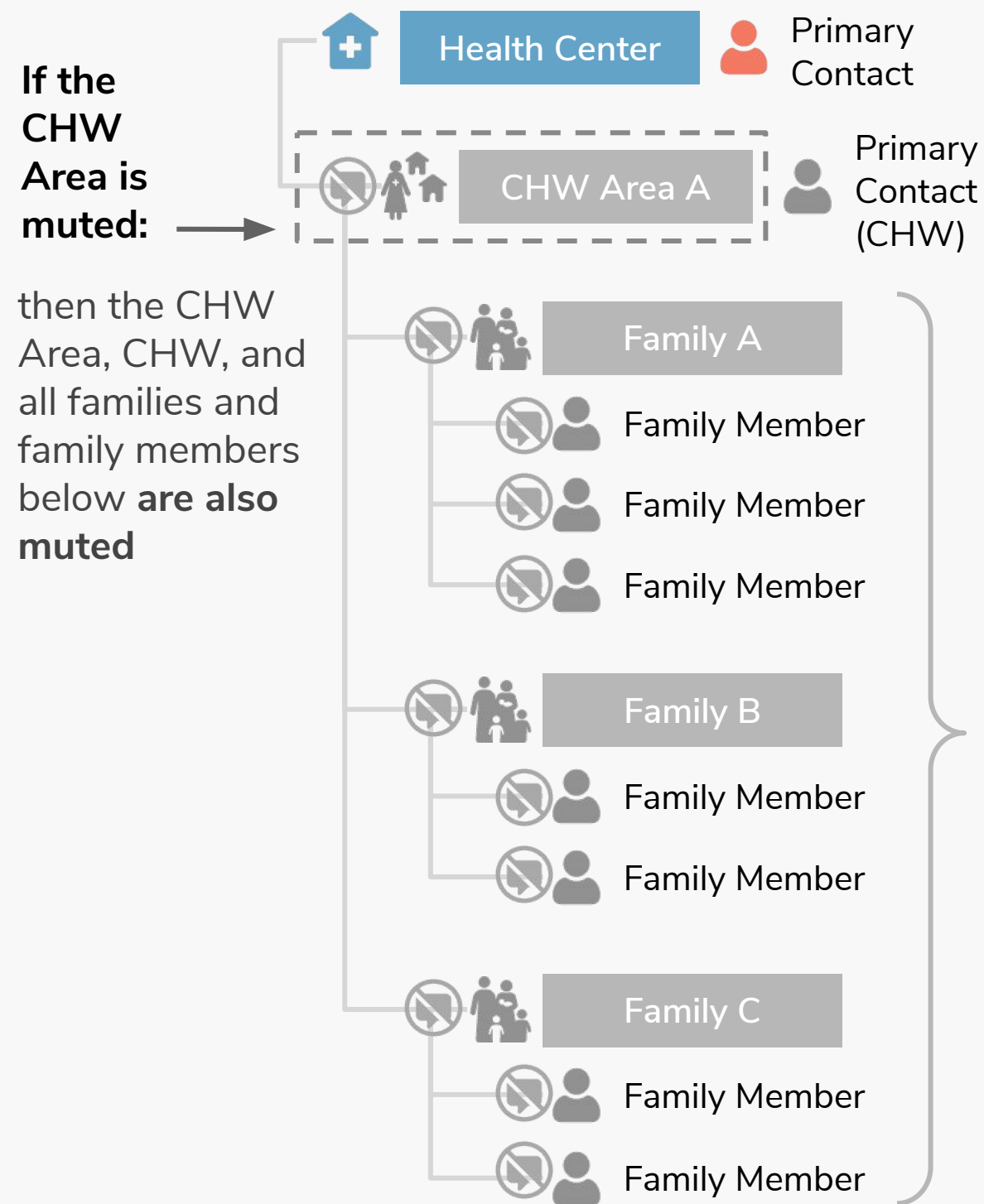
- A boolean **muted** property, describing the new state
- An ISO formatted date describing when the action was processed
- A **report_id** property which contains the **_id** of the report that triggered the action

```
{
  "_id": "8d2e5384-0421-45ea-9cba-6adf09d5296f-info",
  "_rev": "20-14c194aa7f039a72aee3367d4d778cbd",
  "type": "info",
  "doc_id": "8d2e5384-0421-45ea-9cba-6adf09d5296f",
  "initial_replication_date": "2018-11-14T20:44:05.657Z",
  "latest_replication_date": "2018-12-03T15:36:10.617Z",
  "transitions": {},
  "muting_history": [
    {
      "muted": true,
      "date": "2018-11-29T14:31:57.250Z",
      "report_id": "7e09d2fb-0561-4806-84f7-0d362b959827"
    },
    {
      "muted": false,
      "date": "2018-11-29T21:47:07.020Z",
      "report_id": "749aaf7c-bee7-4fc1-bc49-7d0c7f445458"
    },
    {
      "muted": true,
      "date": "2018-12-03T15:27:08.287Z",
      "report_id": "b30945da-19cd-44e6-bd74-7b56e55a917a"
    },
    {
      "muted": false,
      "date": "2018-12-03T15:27:26.628Z",
      "report_id": "94634b6b-2054-4422-85cb-34f7a75883e5"
    },
    {
      "muted": true,
      "date": "2018-12-03T15:36:08.639Z",
      "report_id": "526ee71b-4c90-499a-b8f7-2f4a9864aefb"
    }
  ]
}
```

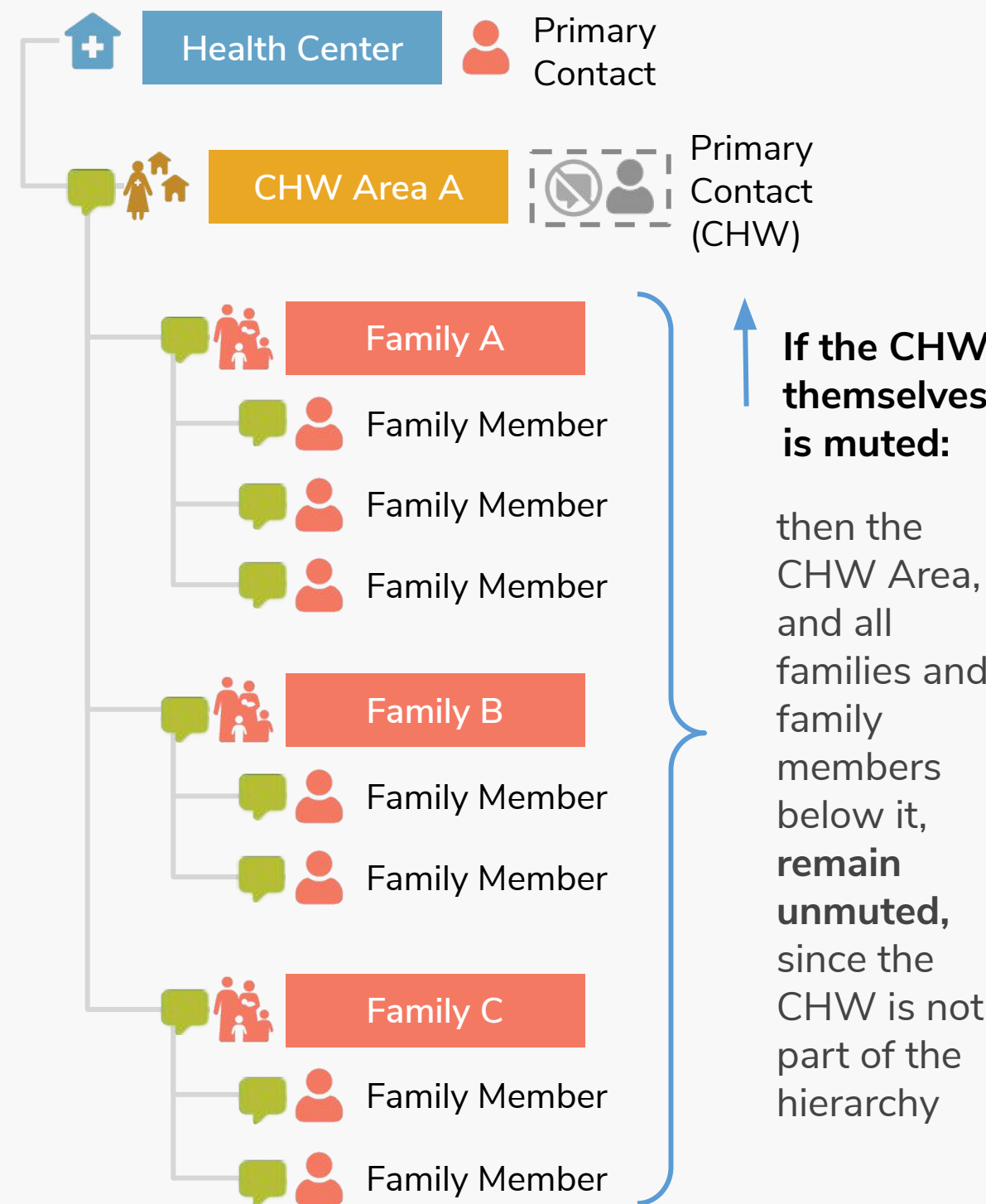
Hierarchy

Examples

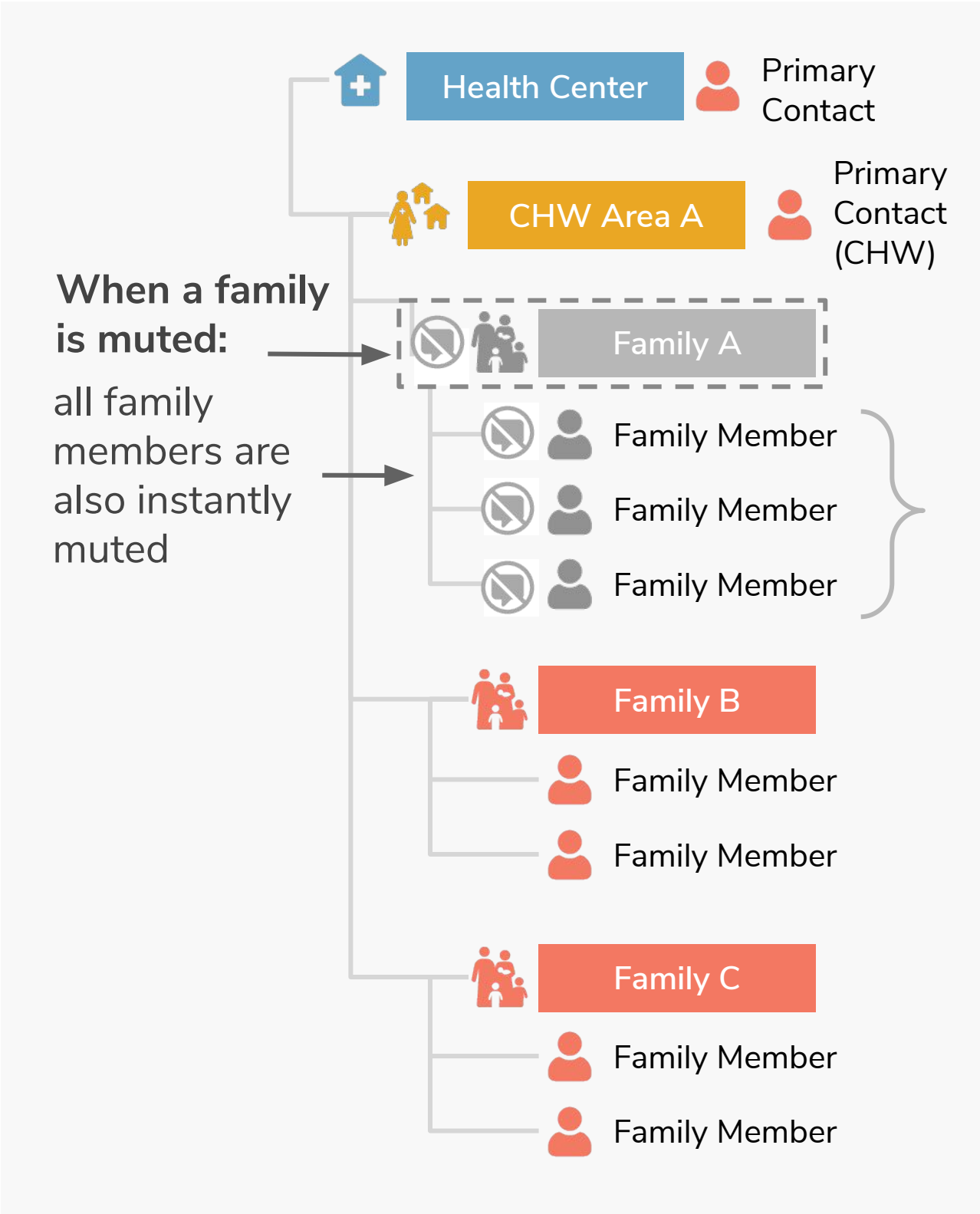
Muting CHW Area



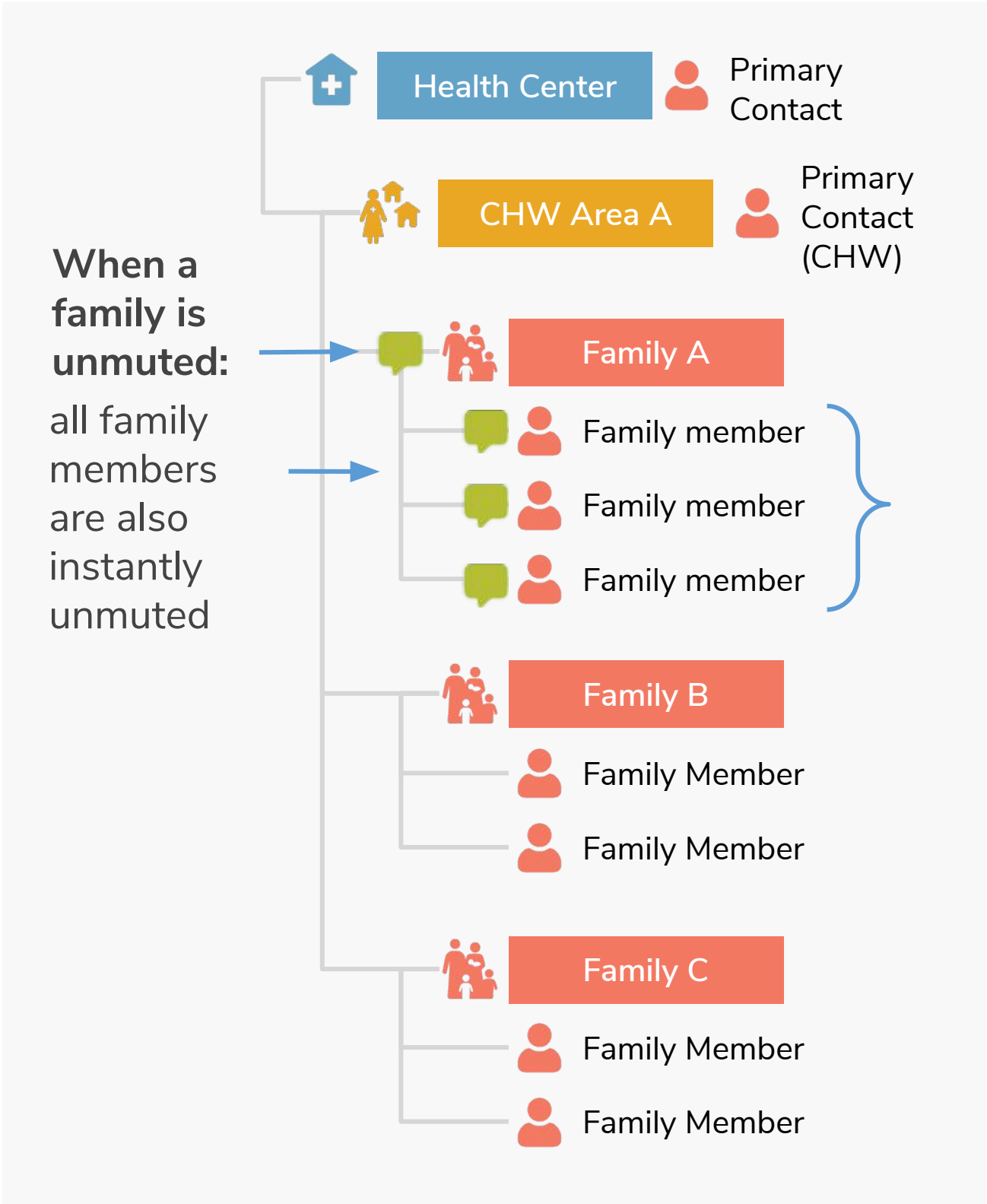
Muting CHW



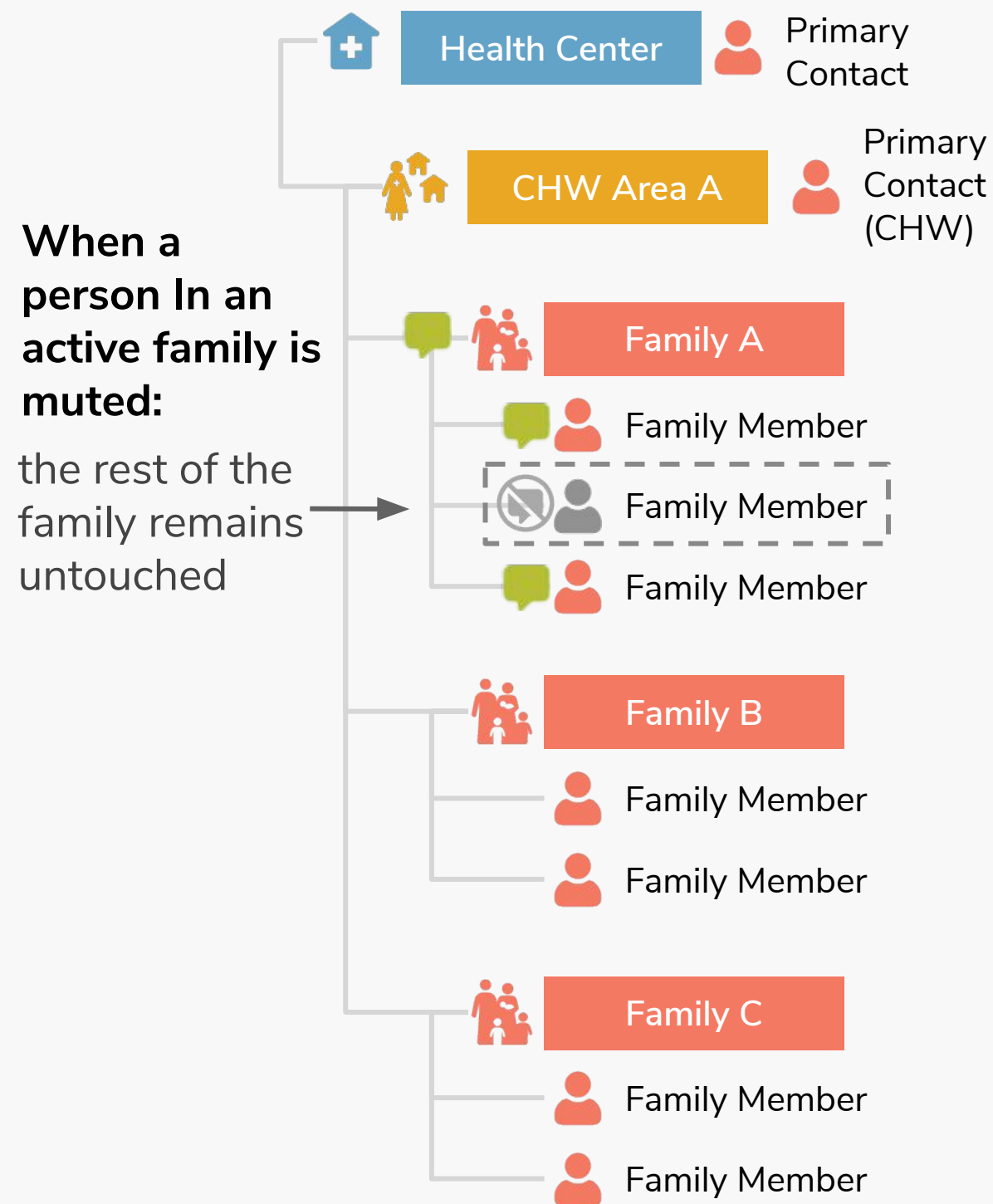
Muting Families



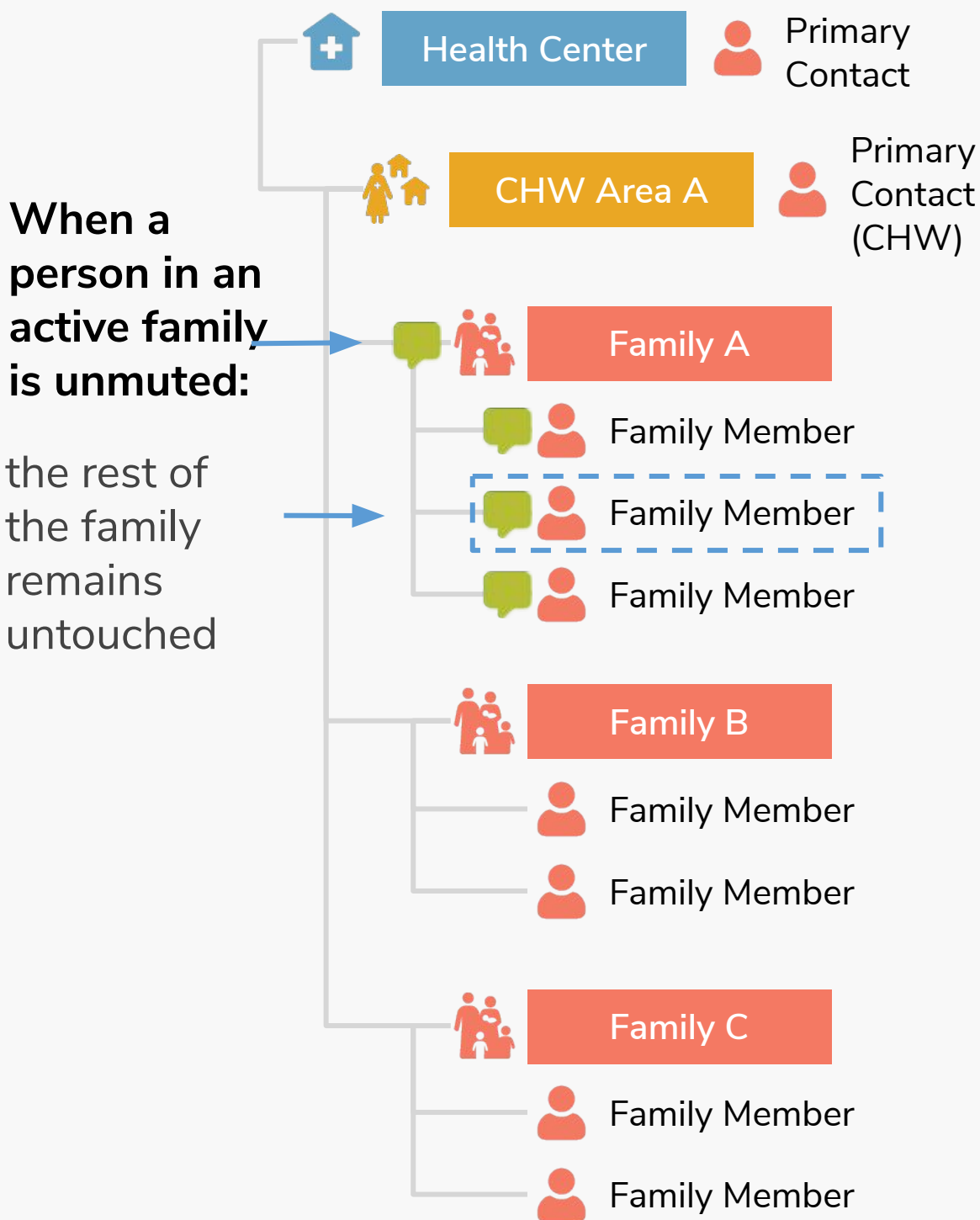
Unmuting Families



Muting People

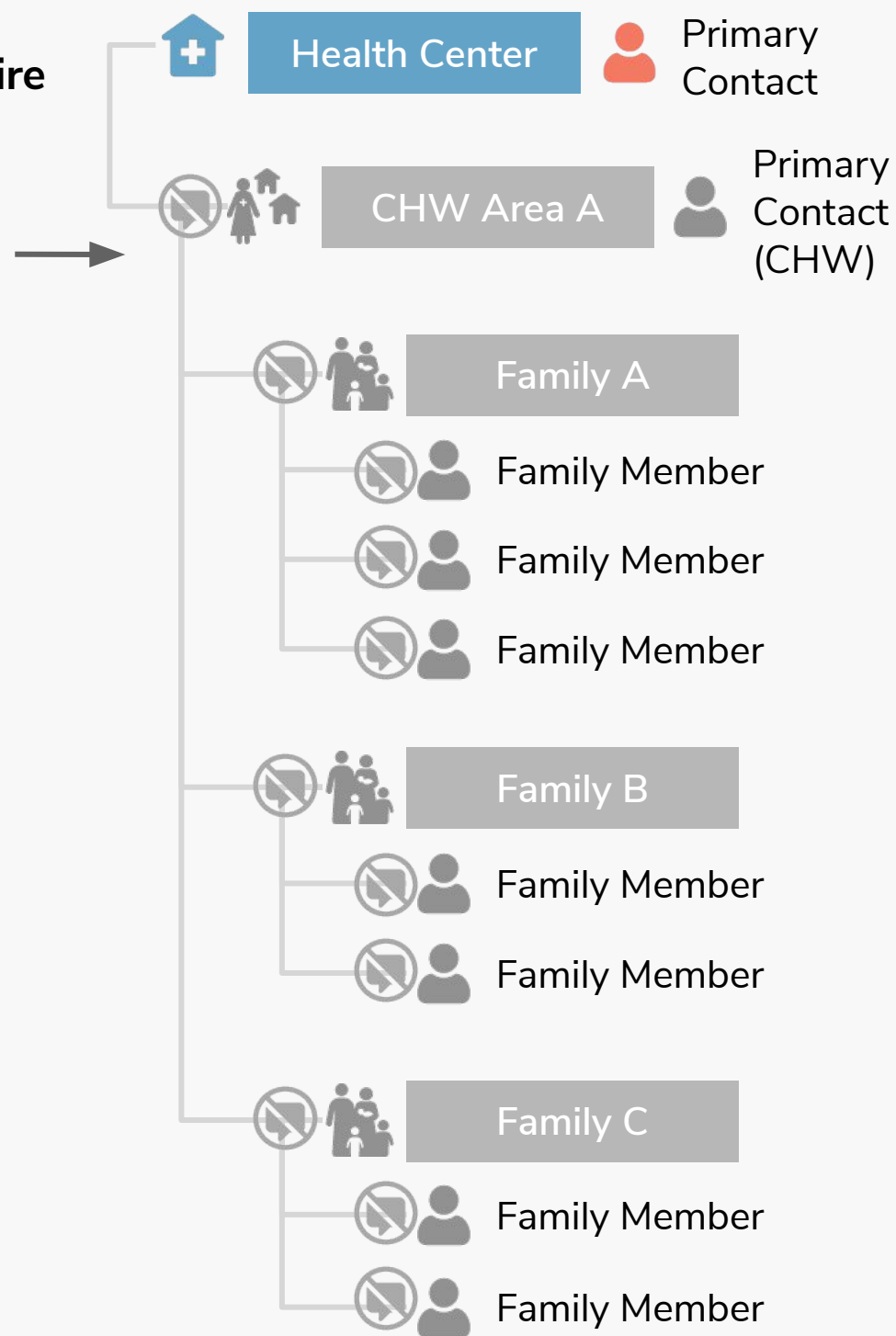


Unmuting People

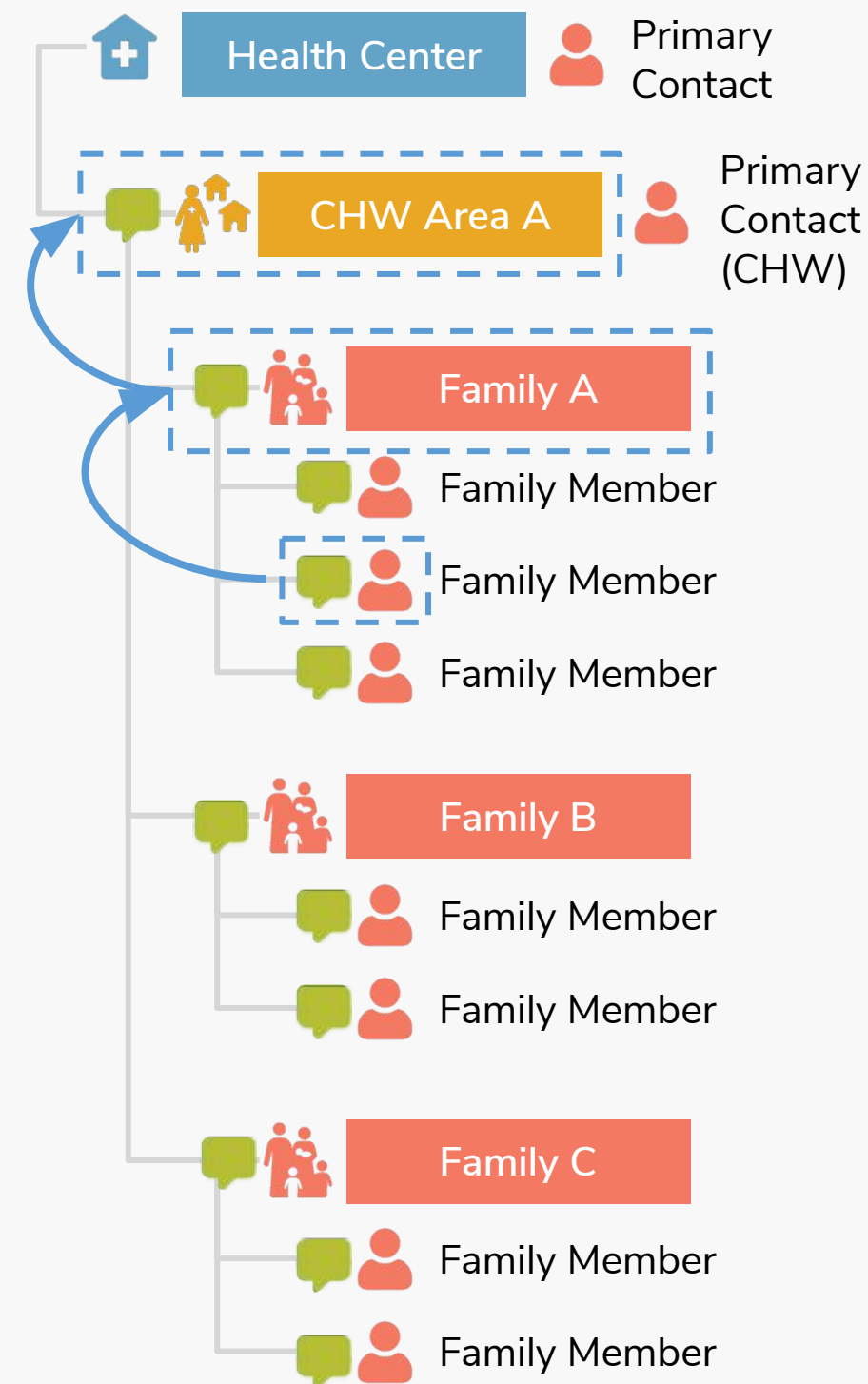


Unmuting People (When The CHW Area Is Muted)

If an entire area or place is already muted:

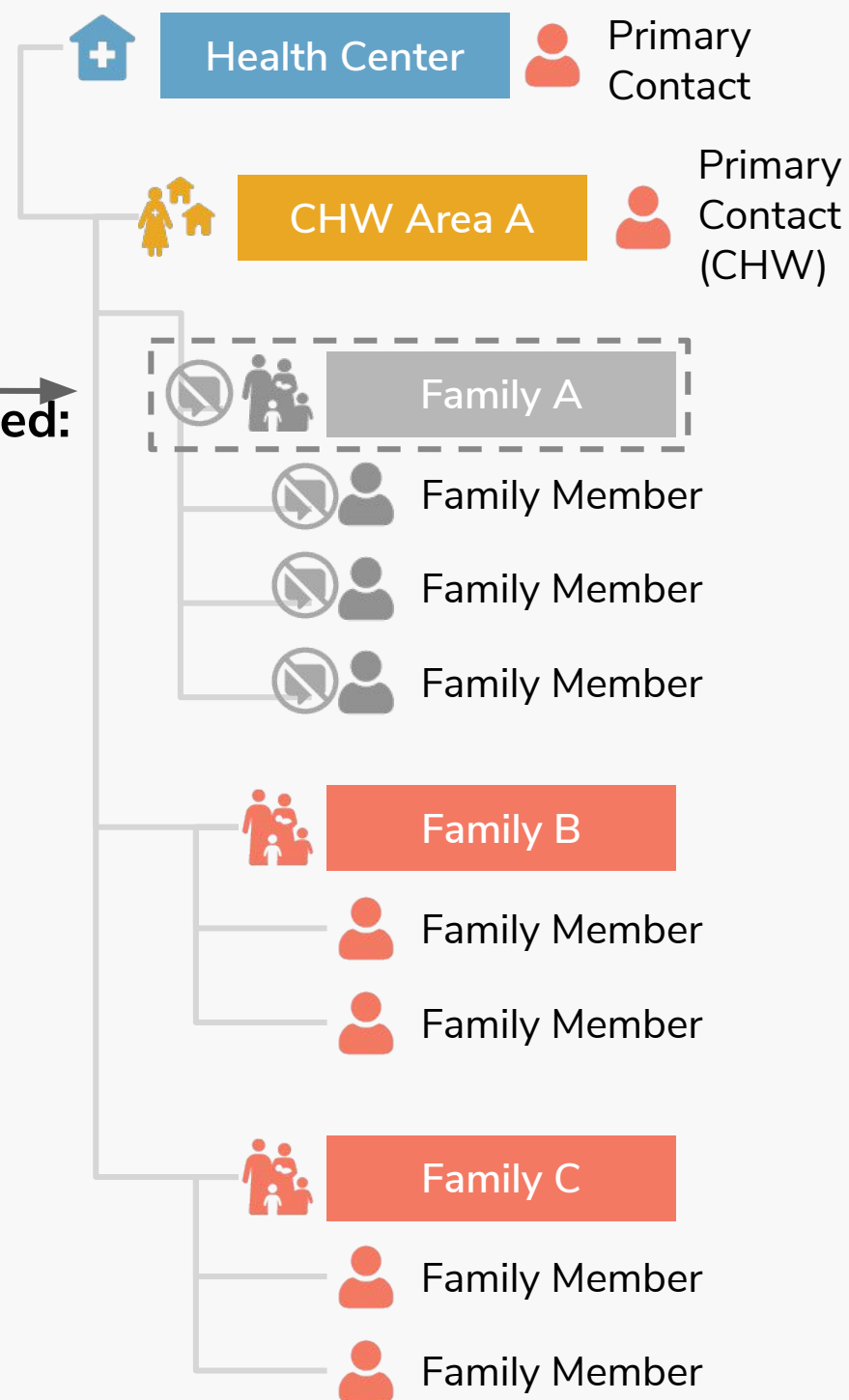


then unmuting any one person in that area or place **will** unmute every single place above them in the hierarchy



Unmuting People (When The Family Is Muted)

If a whole family is already muted:



then unmuting any person in the family will unmute the entire family

