



Muting Features Overview

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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 will see a warning that no tasks will be generated for this person / place until they are unmuted.

- **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 they 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**

This feature can support muting 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**

Whenever muting is set at the place level, it always applies to all people / places beneath that place. Unmuting a person / place will automatically unmute any muted parent places. 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

Muting Families

How To Mute A Family

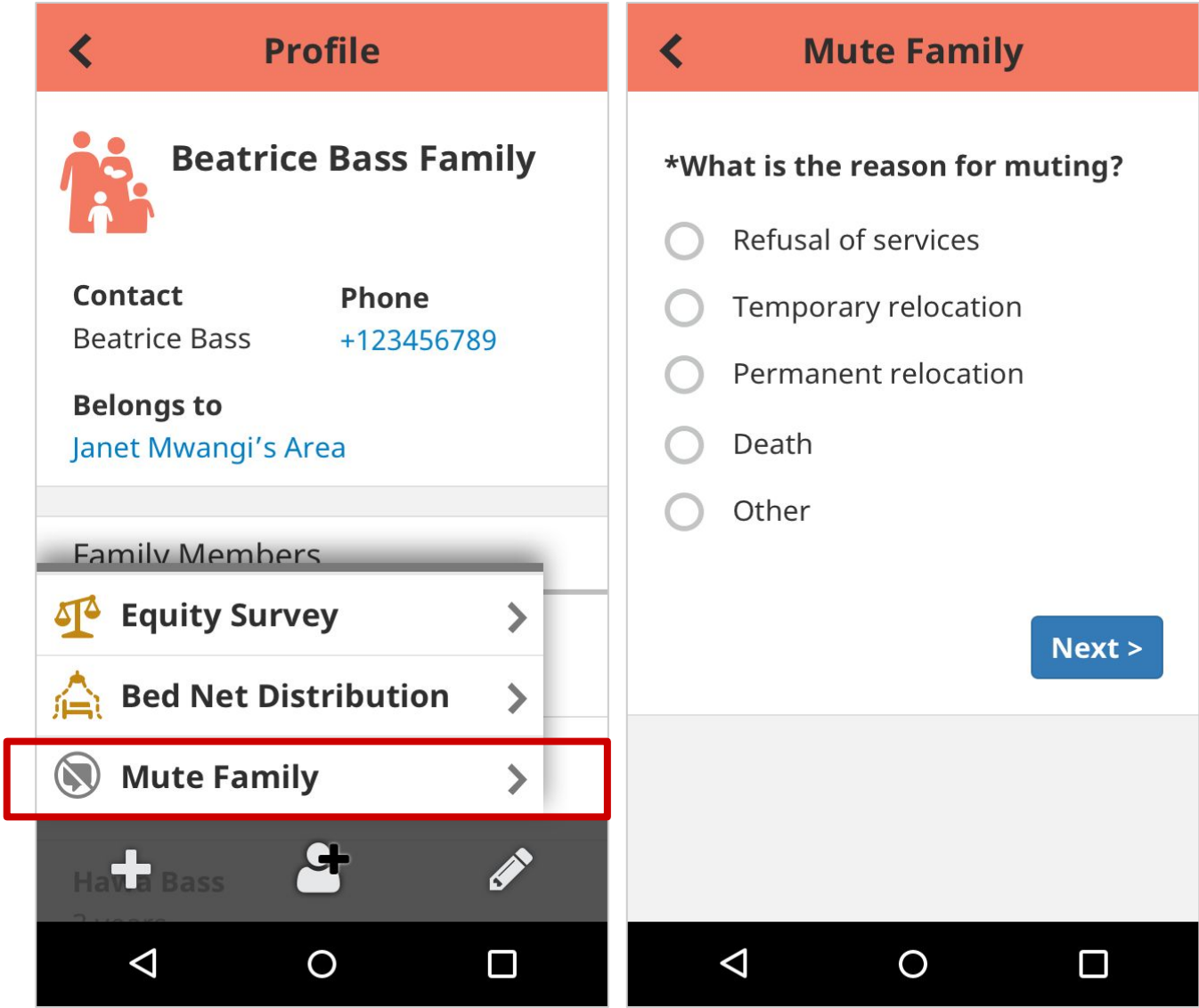
To mute a family, navigate to the family profile, open the action window & select the “Mute” form.

If accessing the “Mute” form from the Reports tab, you first need to choose a contact to mute from a dropdown list

A question on the form asks “What is the reason for muting?” and provides options (exact form questions and options are configurable)

If the app has not been configured to require a manager verification step, the family will be muted as soon as the user clicks the “Submit” button (assuming 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 A Muted Family Will Appear In The Stored Data

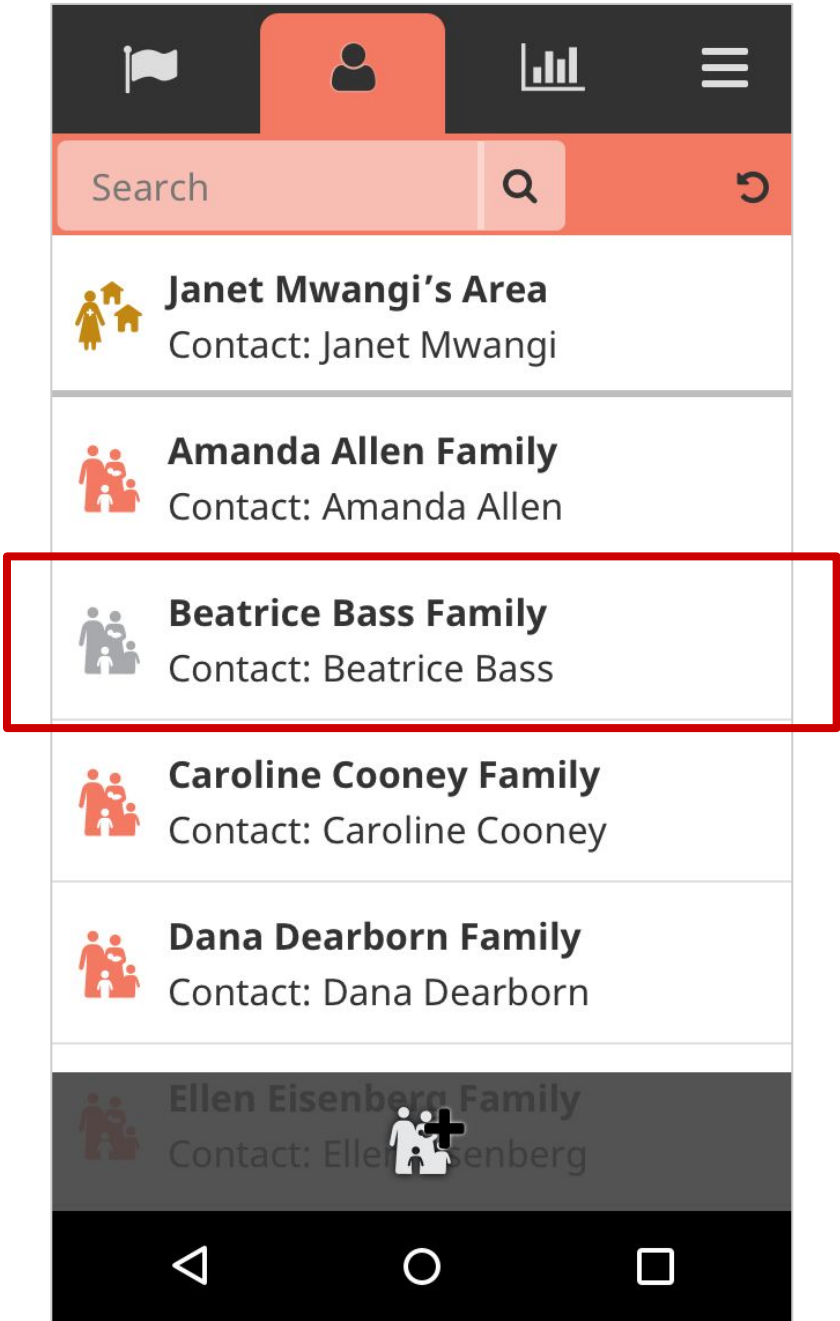
- Muting is persistent. When a family is muted, a “muted” property is stored in its CouchDB document
- The “muted” property contains a date in ISO format which represents the moment the muting action was processed by Sentinel
- When the action of muting a family is processed:
 - All family members are 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 registrations about already muted family members)

```
{
  "_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 now sorted to the bottom of the contact list so you can more easily see all your active contacts.

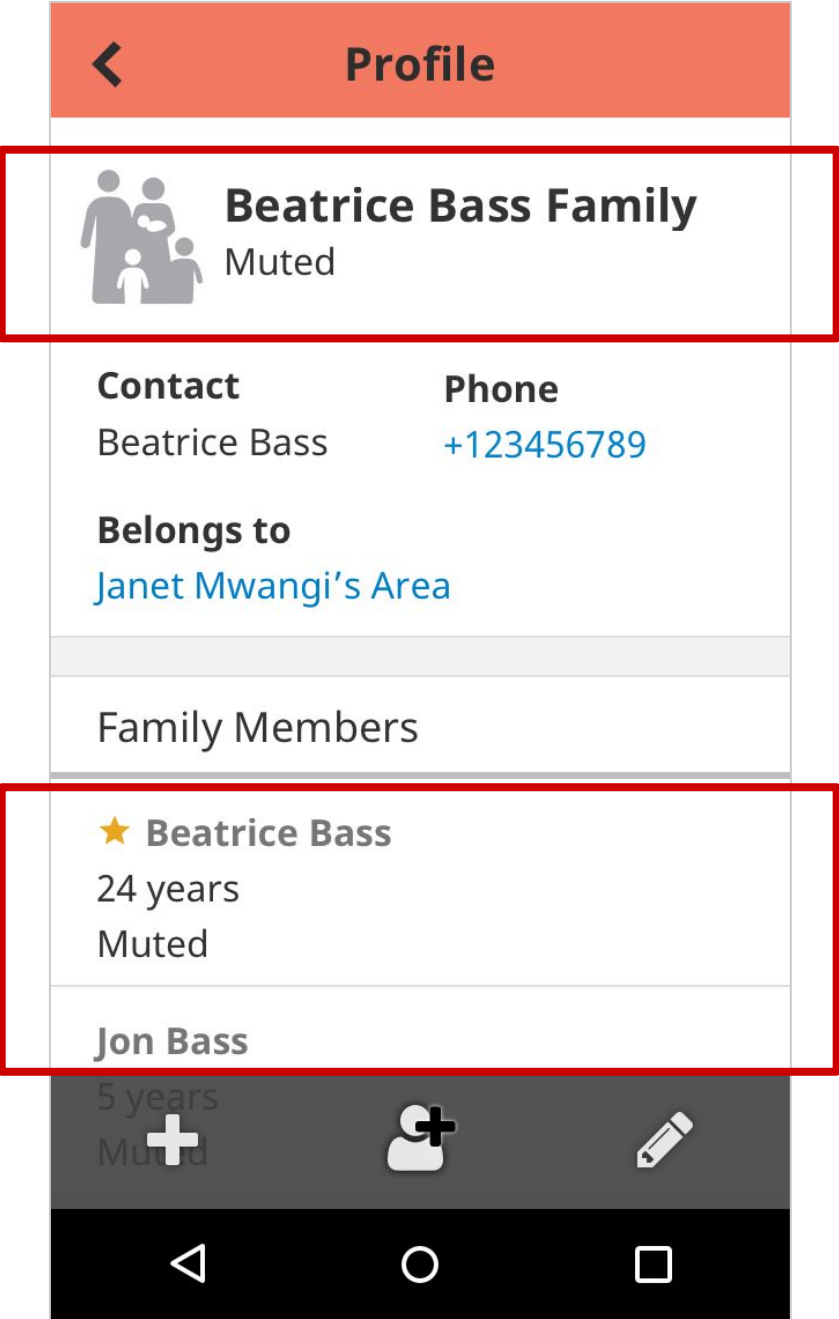
The styling of the muted family row updates to a grey icon to reflect the muted status



Changes To Muted Family Profiles

The UI of muted family profiles updates to make the muted status clear and easily recognizable.

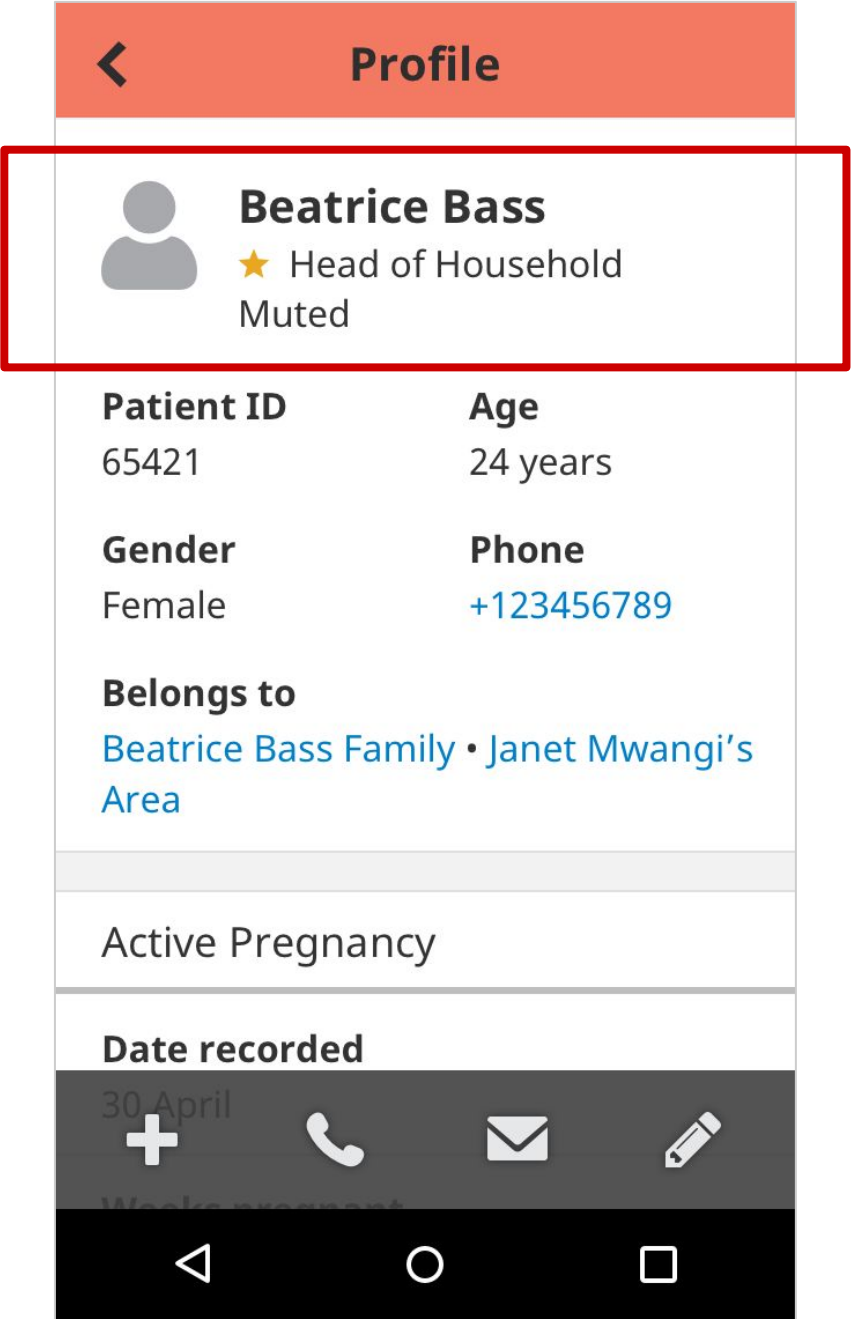
- The family icon turns grey and a status of “Muted” is displayed on the second line
- Each family member in the card is also styled as muted
- Any actions that were previously available on the family remain available on the profile.
- Instead of the “Mute” form, there is an “Unmute” form
- If an action is begun on a muted family, there will be a warning message saying “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.



Changes To Family Member Profiles

The UI 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 on the second line
- 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 available
- Any actions that were previously available on the family remain available on the profile.
- Instead of the “Mute” form, there is an “Unmute” form
- If an action is begun on a muted person, there will be a warning message saying “This person is currently muted. Are you sure you want to proceed?”



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 about the reason for unmuting (exact questions and options configurable).
- When a family is unmuted, all individuals in the family will be unmuted at the same time.
- Unmuting an individual person in a muted family works essentially the same way, unmuting the entire family and all other family members in it (because we don’t allow unmuted individuals underneath a muted household).
- Any unmuted family schedules should pick up right on track

The image displays two mobile application screens side-by-side, illustrating the process to unmute a family.

Left Screen: Profile

- Header: Profile
- Family Name: Beatrice Bass Family (Muted)
- Contact: Beatrice Bass
- Phone: +123456789
- Belongs to: Janet Mwangi's Area
- Family Members list:
 - Equity Survey
 - Bed Net Distribution
 - Unmute Family** (highlighted with a red box)

Right Screen: Unmute Family

- Header: Unmute Family
- Question: *What is the reason for unmuting?
- Options (radio buttons):
 - Request for services
 - Moved back to the area
 - Other
- Next > button

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

Didn't This Feature Already Exist?

- We already partially supported 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.
- Moving forward, muting an individual will mark them as “muted”, make the UI changes to their profile to reflect the “Muted” status, and mute all pre-existing and future schedules.

How To Mute A Person

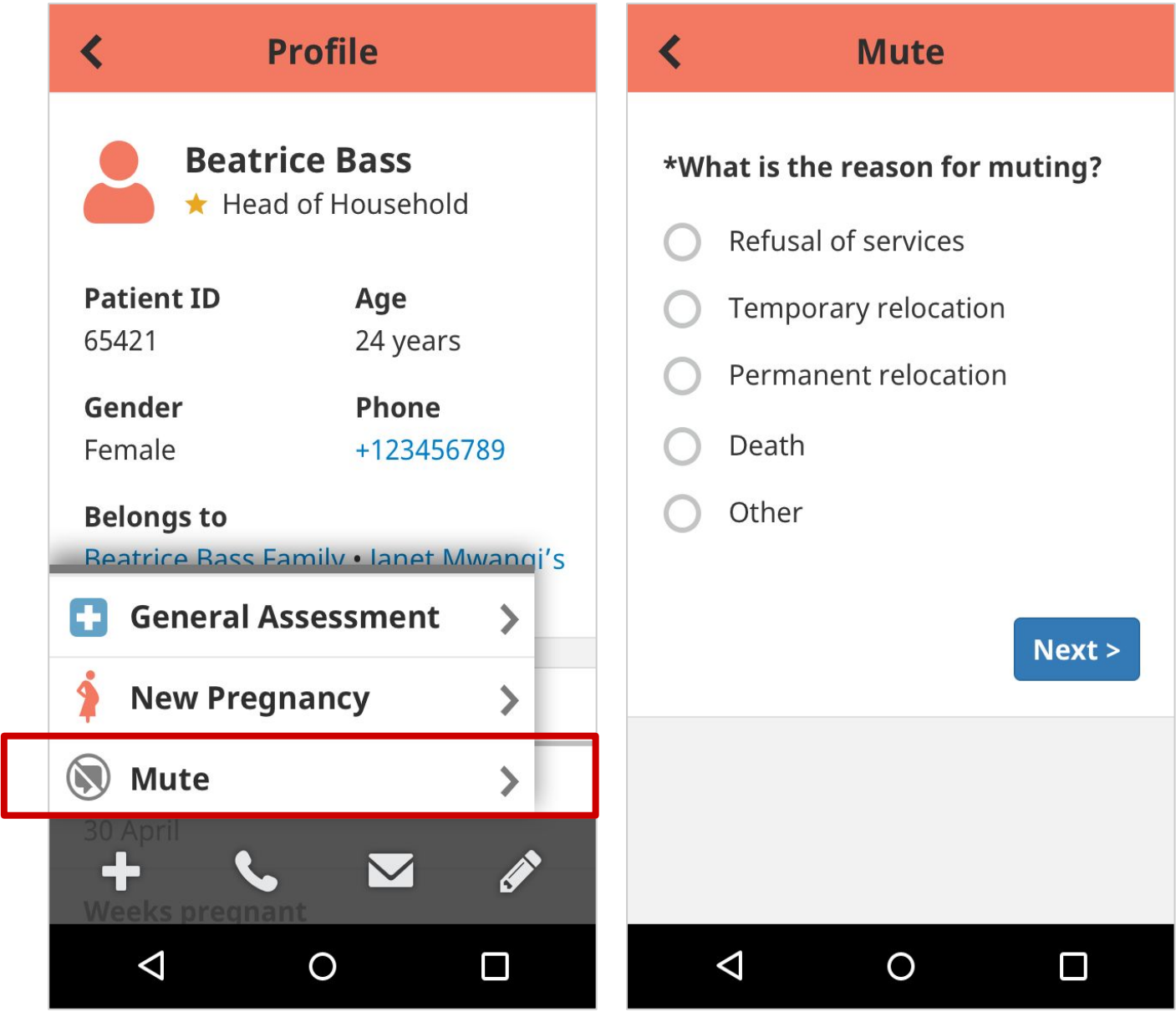
To mute a person, navigate to their profile, open the action window, and select the “Mute” form

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 form asks “What is the reason for muting?” and provides options (exact form questions and options 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 (assuming the user is connected to the server)

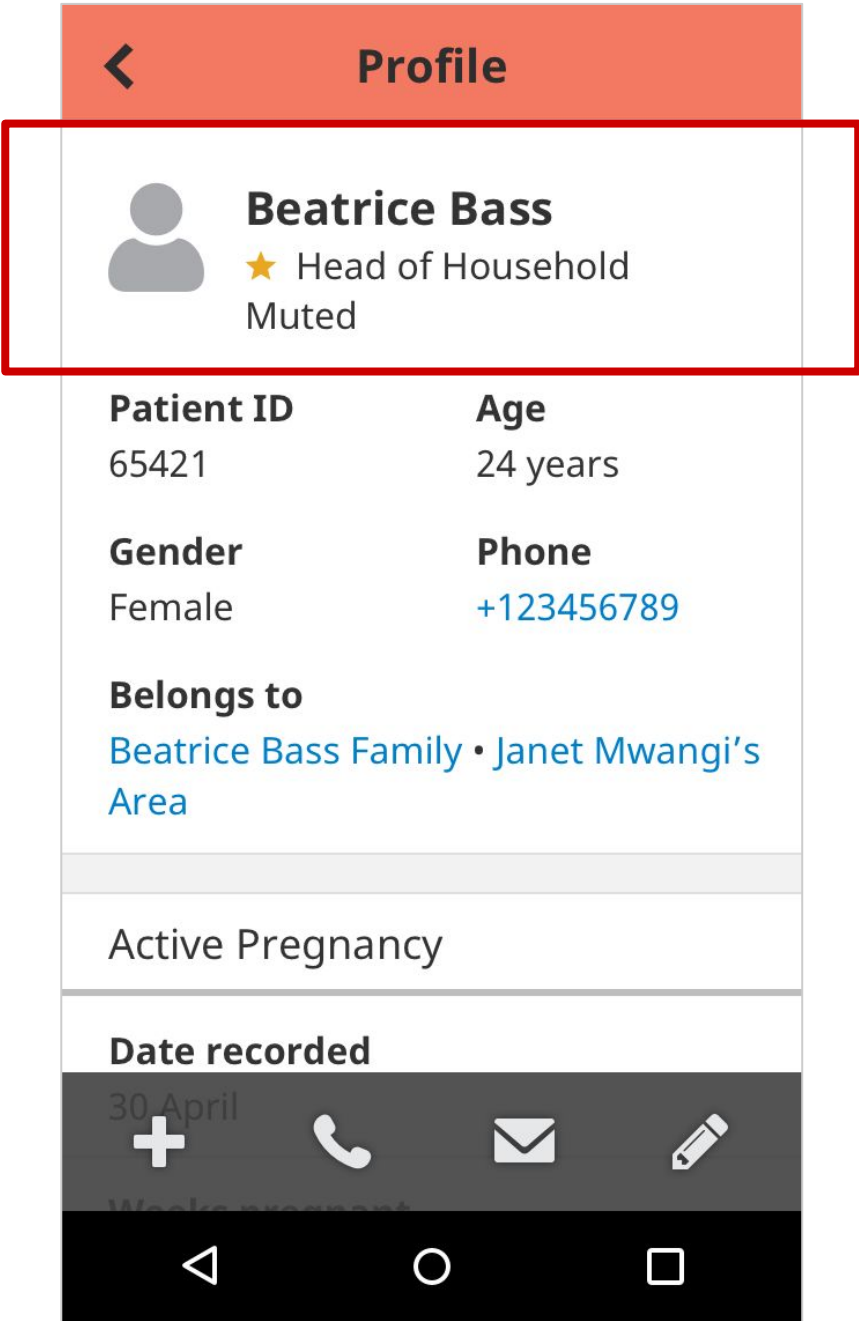
If the app does require manager verification, a task will be sent to the manager to confirm the muting status change. The person will remain active until the manager confirms the muting.



Changes To Muted Person Profiles

The UI of muted person profiles updates to make the muted status clear and easily recognizable.

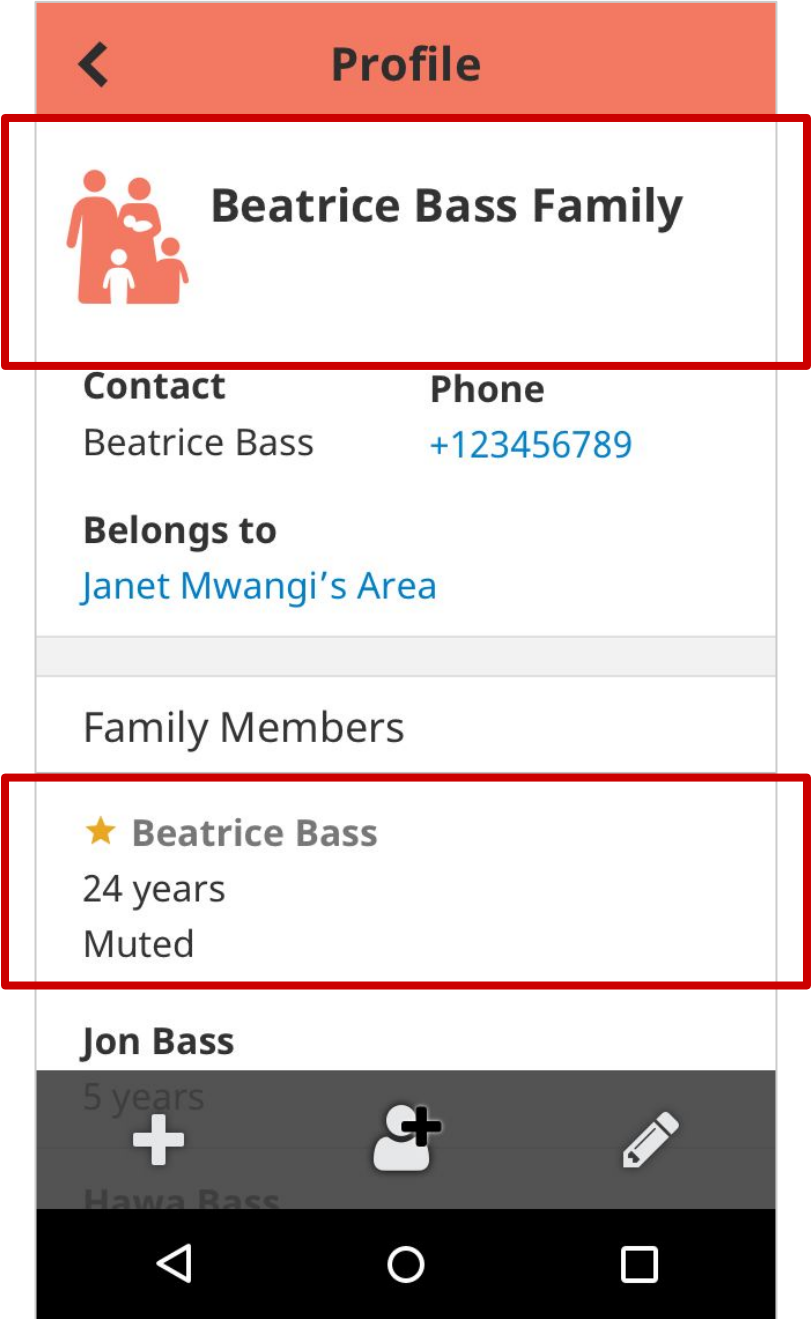
- The icon turns grey and a status of “Muted” is displayed on the second line
- Any actions that were previously available on the family remain available on the profile.
- Instead of the “Mute” form, there is an “Unmute” form
- If an action is begun on a muted person, there will be a warning message saying “This person is currently muted. Are you sure you want to proceed?”



Muted Person In An Active Family

If a single person is muted, but the family they belong to was/is active, the family as a whole remains styled “active” and only the individual person in the muted family members list updates.

- The main family icon remains pink, and there is no label “Muted” 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 To Unmute A Person

- People can be unmuted by submitting an “Unmute” form from the person’s profile. The unmute form can also be accessed via the Reports page.
- The Unmute form asks about the reason for unmuting (exact questions and options configurable).
- If a person belongs to a muted family or place, unmuting them unmutes the family or place levels above them at the same time.
- Any unmuted schedules for the person (such as pregnancy ANC schedule) should pick up on track

The image displays two screenshots of a mobile application interface, likely for healthcare management.

Left Screenshot: Profile Page

- Header:** Profile
- Profile Information:**
 - Name:** Beatrice Bass
 - Role:** ★ Head of Household
 - Status:** Muted
- Details:**
 - Patient ID:** 65421
 - Age:** 24 years
 - Gender:** Female
 - Phone:** +123456789
- Belongs to:** [List of entities]
- Bottom Menu (highlighted with a red box):**
 - General Assessment
 - New Pregnancy
 - Unmute** (highlighted)

Right Screenshot: Unmute Form

- Header:** Unmute
- Question:** *What is the reason for unmuting?
- Options:**
 - ☐ Request for services
 - ☐ Moved back to the area
 - ☐ Other
- Action:** Next >

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 action of muting a person 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, also none of the registrations are updated
- When unmuting, the “muted” property is removed, along with updating all registrations about the person, 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
- The action of muting will update all “scheduled_tasks” which are in “scheduled” or “pending” state, setting their 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

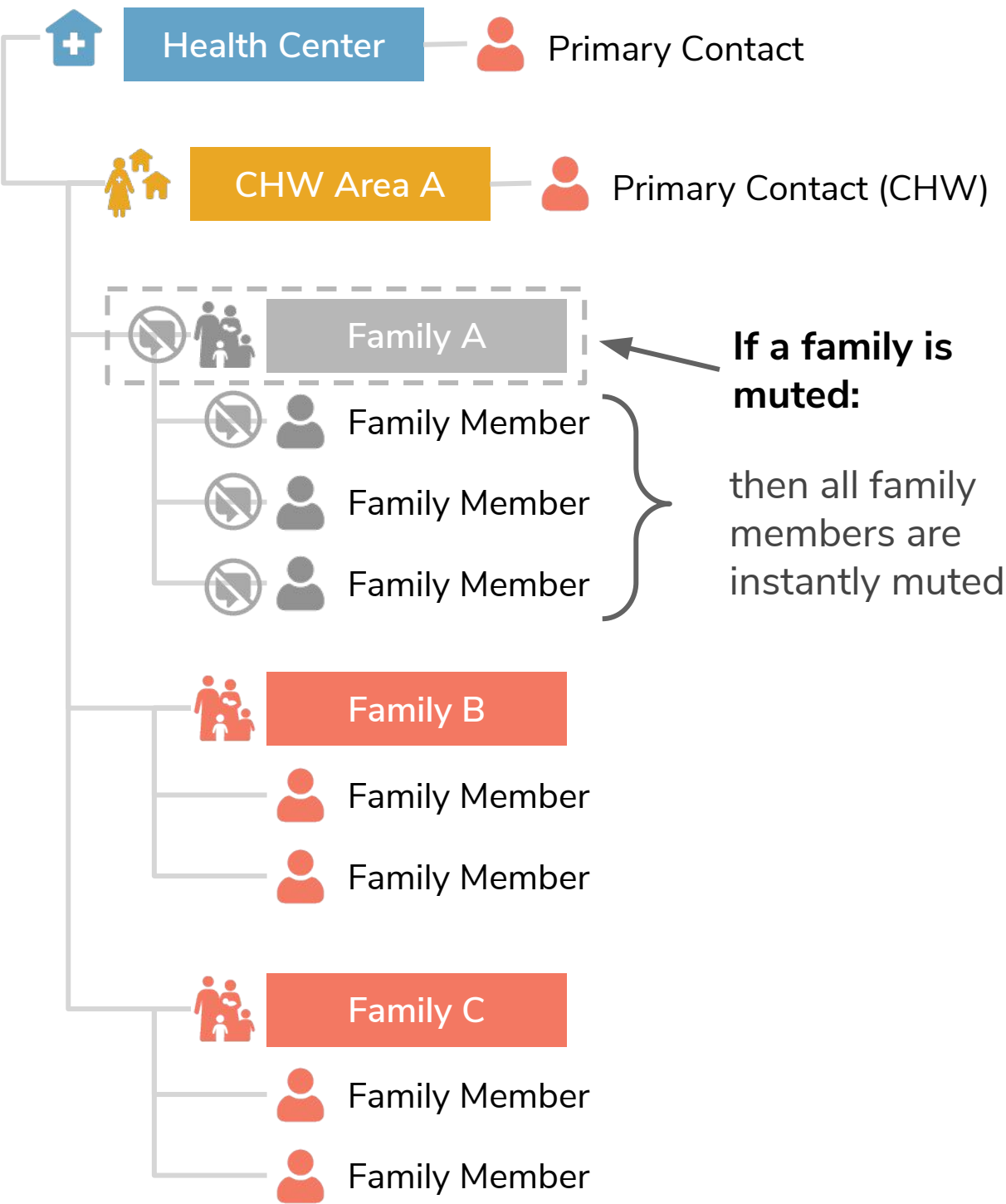
- Every time the muted state of a contact (person, family, etc) is updated, an entry is added to their “muting_history”
- “muting_history” can be found in the info-docs saved in medic-sentinel database. Each entry includes the following information:
 - A boolean “muted” property, describing the new state
 - 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"
    }
  ]
}
```

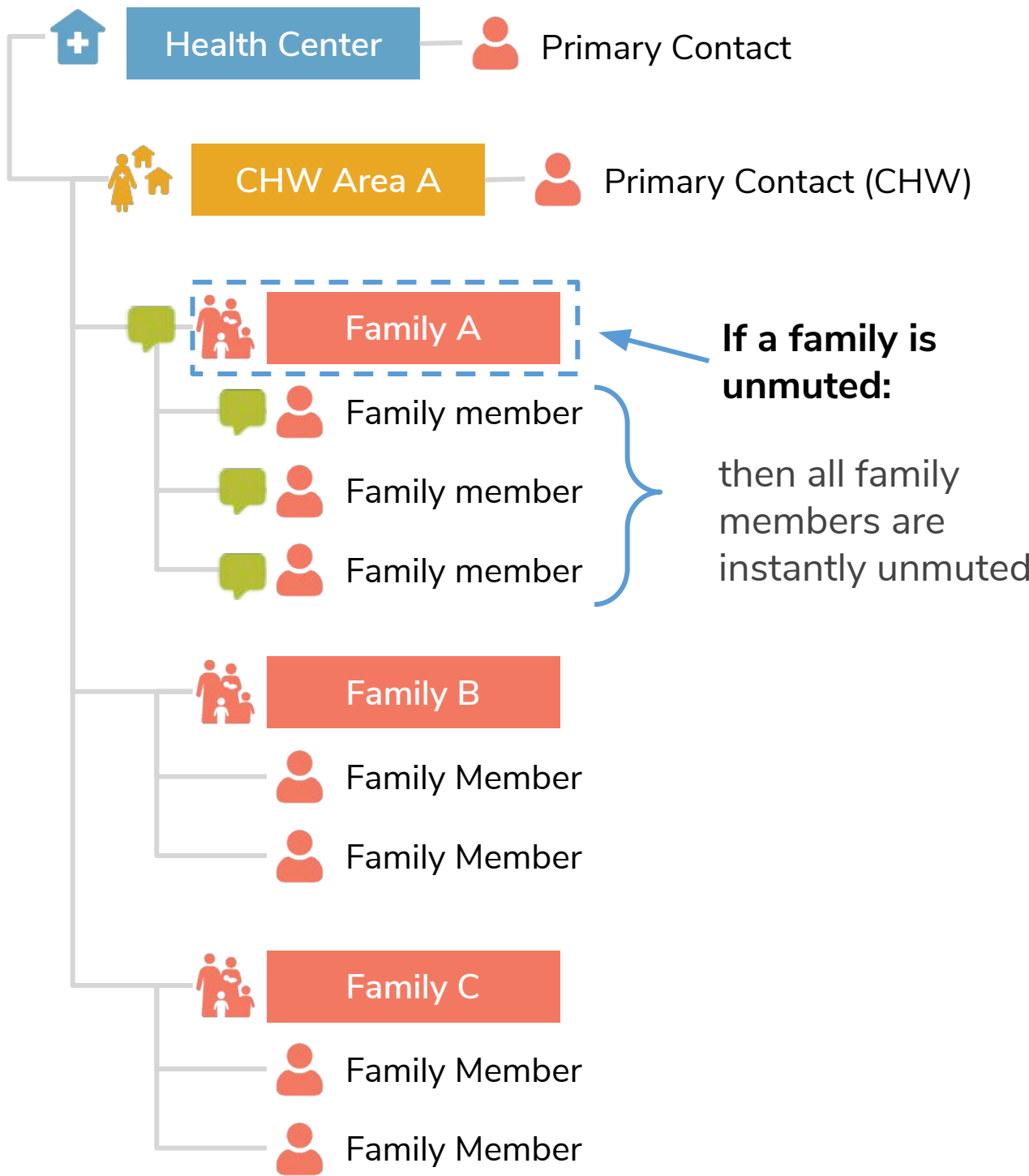
Hierarchy

Examples

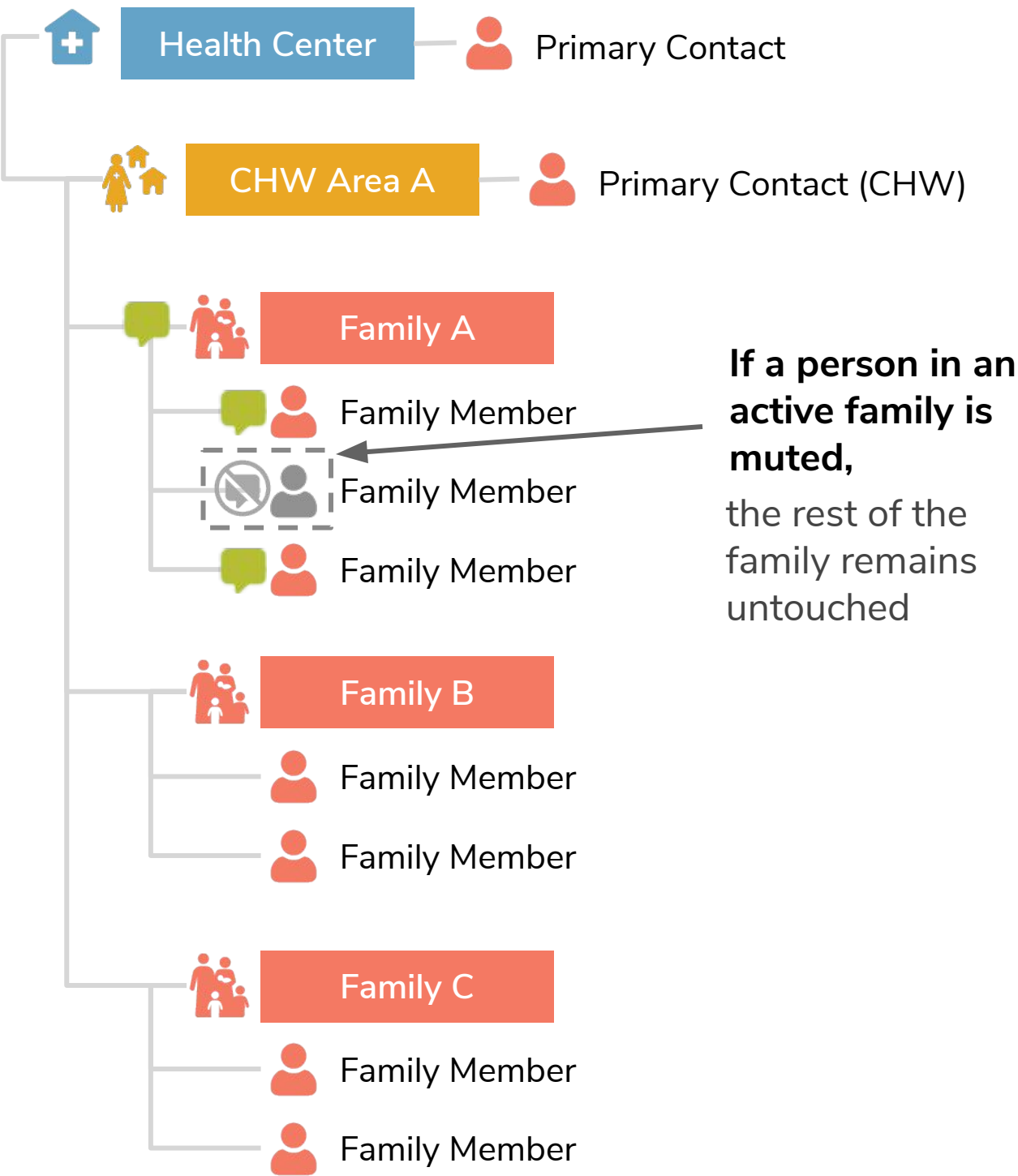
Muting Families



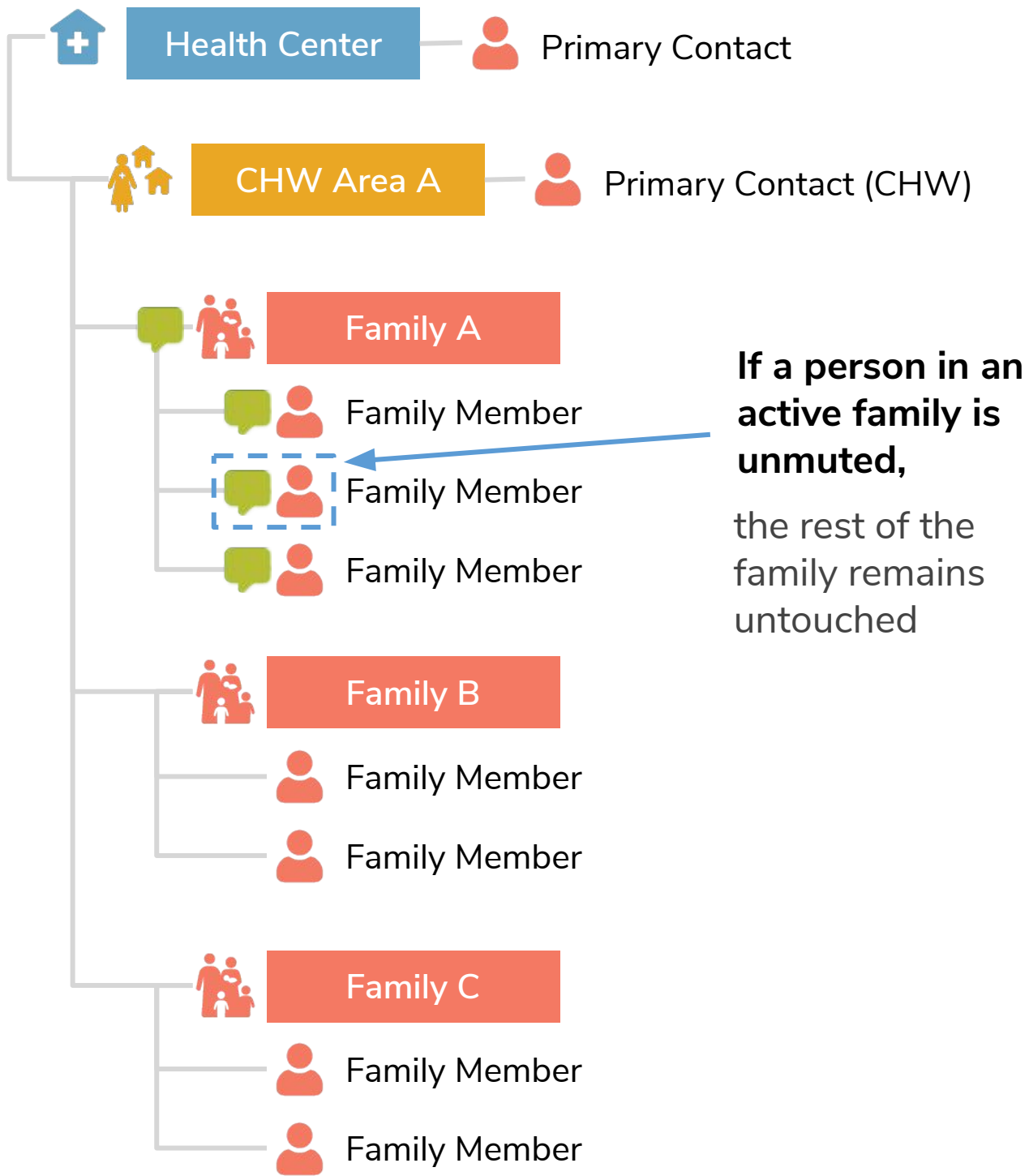
Unmuting Families



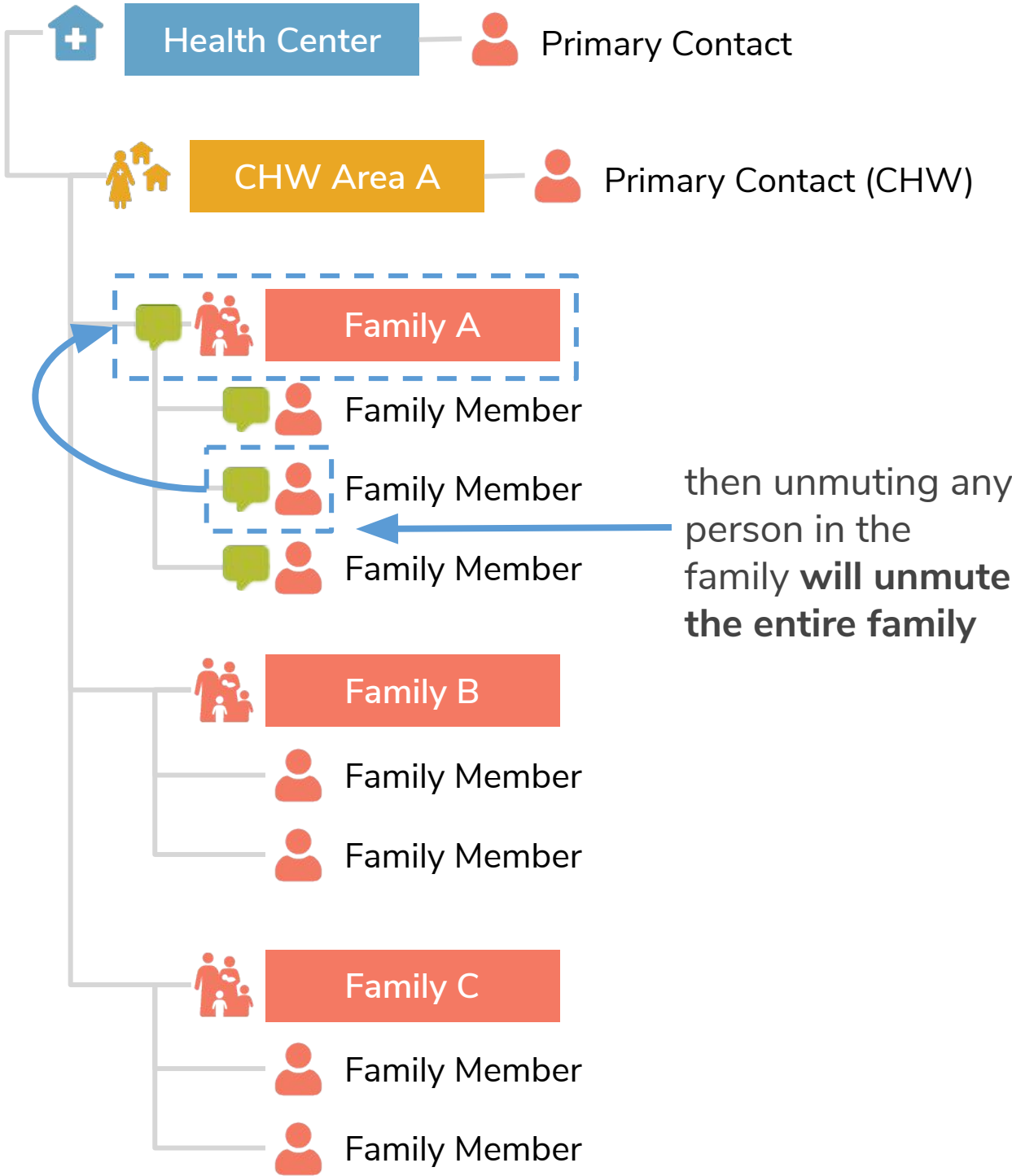
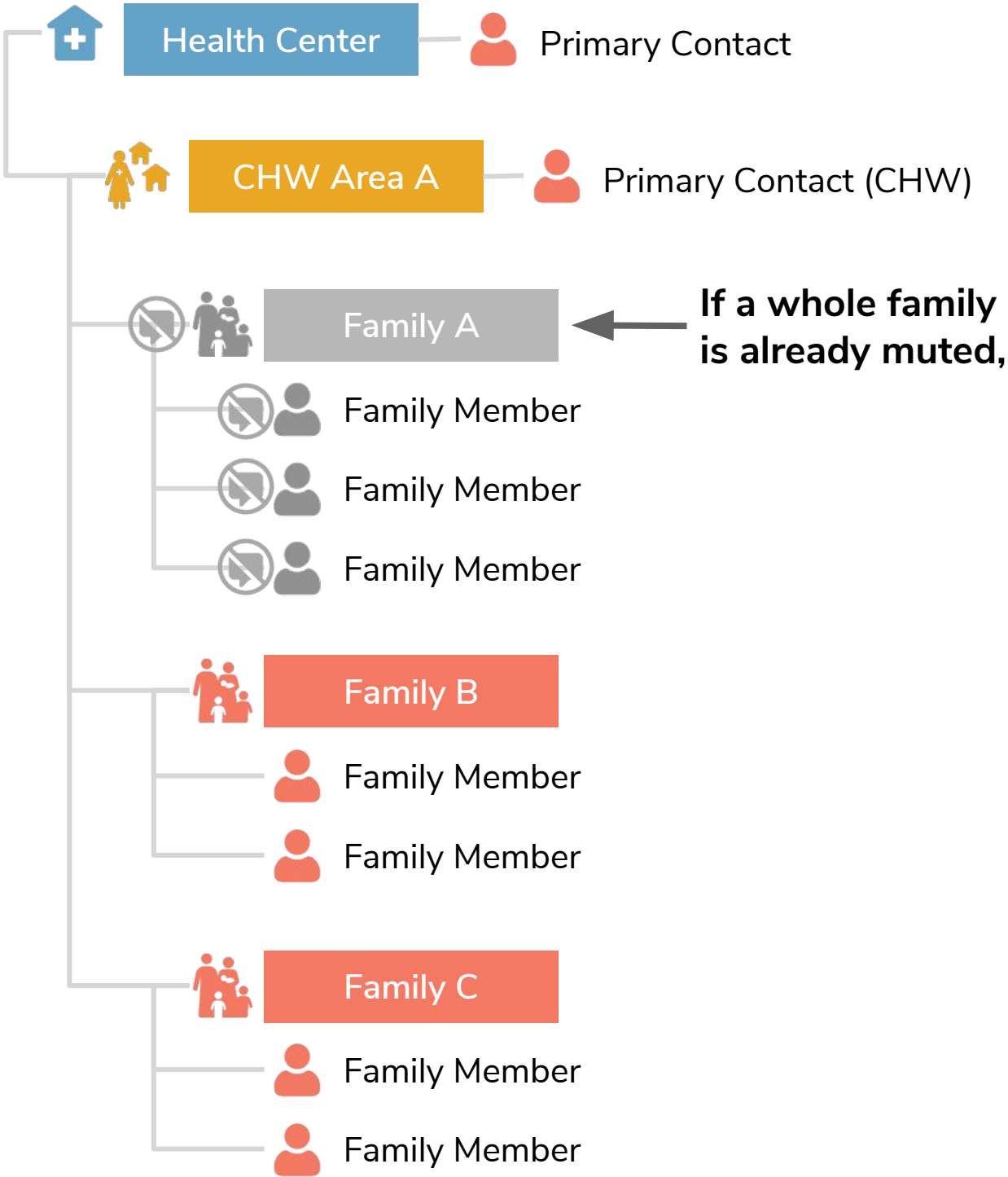
Muting People



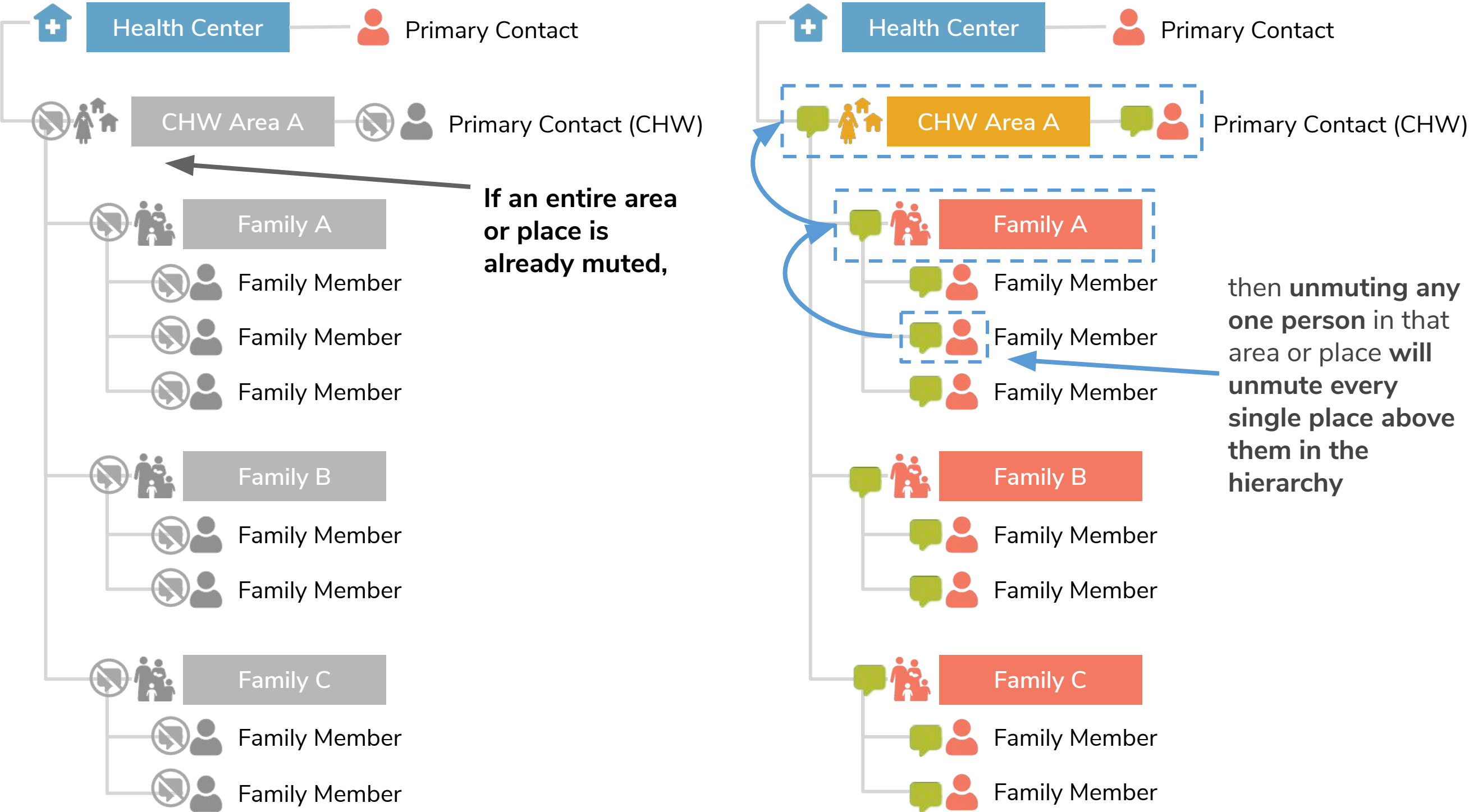
Unmuting People



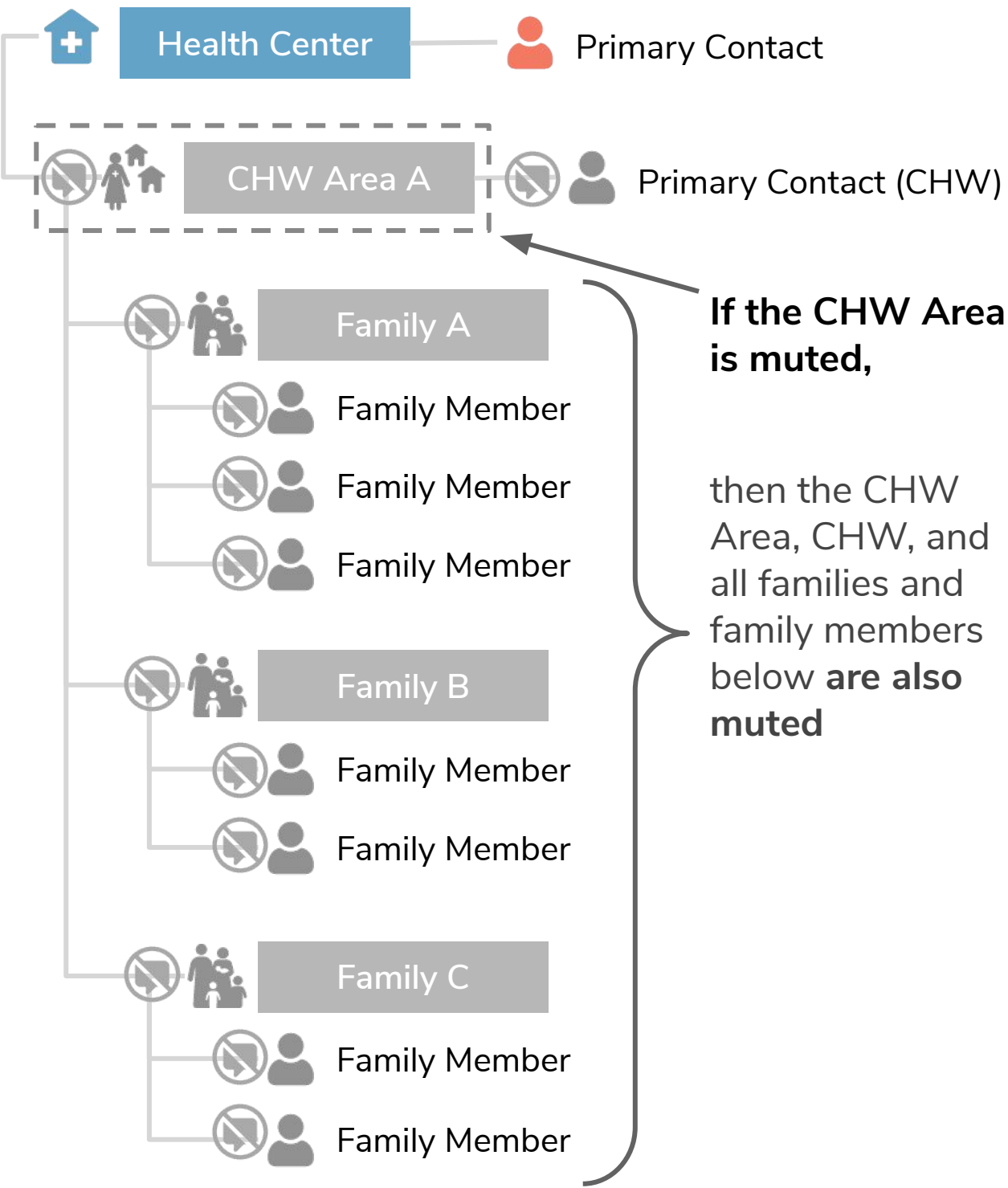
Unmuting People (Family Muted)



Unmuting People (Area Muted)



Muting CHW Area



Muting CHW

