

# Getting Started with CareKit

Session 237

Umer Khan Software Engineer

CareKit Overview

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Patient-Provider Experience

---

Creating a CareKit App

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Customizing with CareKit

---

What's Next?

# CareKit Overview



ResearchKit



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What's New in ResearchKit

Nob Hill

Friday 10:00AM

---

Building Apps with ResearchKit

WWDC 2015

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ResearchKit



ResearchKit



ResearchKit



CareKit

# CareKit

## Overview

Open source framework

Helps providers build apps that empower patients

Focused on engaging patient to take active role in their care







## Penick Medical Center General Surgery Post-Operative Discharge Instructions

### MEDICATIONS:

You have been prescribed pain medication. Directly after discharge be sure to take:

- hydrocodone 5mg/acetaminophen 300mg tablet - take 1-2 tablets every 4-6 hours as needed (not to exceed 8 tablets daily).

After 4 days of this pain medication, start decreasing the frequency of hydrocodone (e.g twice a day). If you have breakthrough pain, try adding ibuprofen in between your hydrocodone doses.

- hydrocodone 5mg/acetaminophen 300mg and ibuprofen 400mg. By the second week post discharge, shift completely to ibuprofen 400mg every 6-8 hours as needed.

It is important to your recovery that you do not wait until your pain becomes severe before taking this medication. It may not work as well if you wait too long to take it between doses. You may be prescribed antibiotics to help treat or prevent infection. If you need to be given antibiotics, be sure to complete the full course of antibiotics along with your prescribed pain medication. Antibiotics may be prescribed to you a few days into your recovery if risk of infection becomes clear.

### ACTIVITY:

Although it might be painful, movement is a key part of your recovery starting from day 1. However, too strenuous of an activity can be detrimental to your recovery.

- For the first two days after surgery, be sure to stand up and move around for at least 2 minutes twice a day. *light*
- After day 2, be sure to increase your activity level. At a minimum walk around for 5-10 minutes 3x per day. Activity is okay based on your comfort level, but avoid overly strenuous activity such as lifting heavy objects.

*until ok'd by dr.*

### DIET:

You will need to start your recovery process on a liquid diet and then slowly add solid foods back into your diet. Depending on how your recovery is going, you may need to add more fiber to your diet, but be sure to not add too much fiber too early. You may also be told to use a laxative or stool softener, these can often be bought over the counter.

- Consume at least 4 fluid meals during your first 3 days of recovery. This can include soups, juices and shakes.

### WOUND CARE:

A soft bandage has been placed over your incision. Keep your incision clean and dry. *Friday*

- Don't touch the bandage for the first 2 days. On day 3, start changing the bandage daily to a new, dry sterile gauze. Don't get the bandages wet for the first 2 days!
- You may shower 3 days after your operation. If you notice any discoloration of the wound area, call your doctor immediately.
- If steri-strips were applied to the incision, do not remove, let them fall off on their own.

Call your doctor right away if you have any of the following:

- Fever of 100.4 degrees F or higher
- Pain or tenderness near your incision area
- Increased redness, swelling or bleeding at the incision site
- Nausea or persistent pain that isn't relieved by pain medication
- Your range of motion isn't improving after 7 days

*408-555-0010*

## Penick Medical Center General Surgery Post-Operative Discharge Instructions

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*408-555-0010*

# Care Card

Today

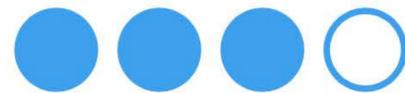


## Care Completion

June 17, 2016

64%

### Ibuprofen 200mg



### Stand and move a little For at least 2 minutes



### Diet Fluids only, every 6 hours



### Keep bandage dry Do not change gauze



### Physical Therapy Knee and back



Care Card



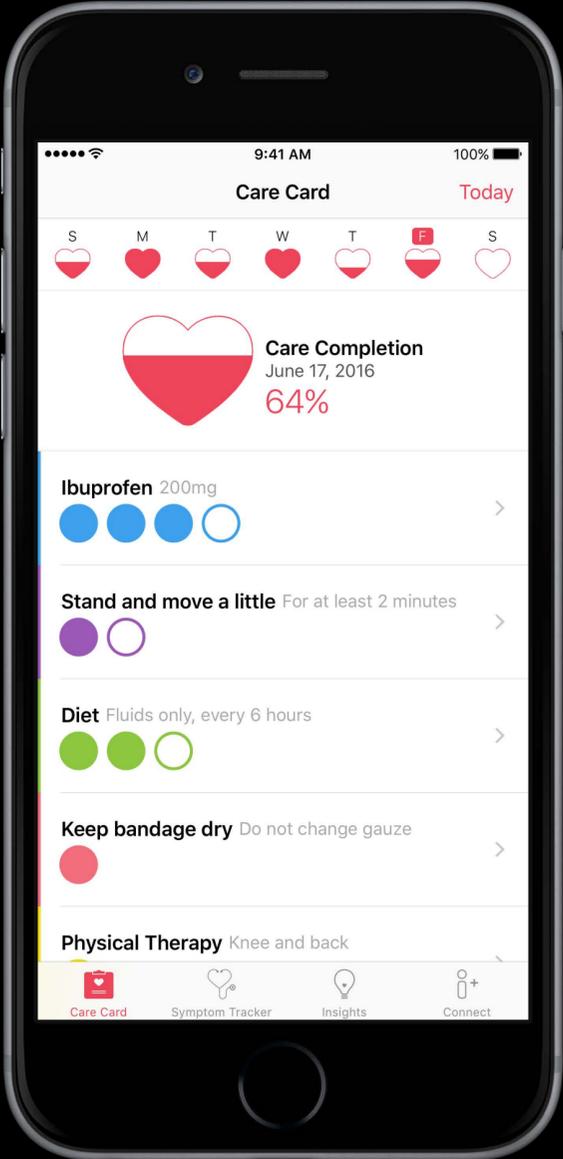
Symptom Tracker



Insights



Connect



9:41 AM 100%

### Care Card Today

S M T W T F S

**Care Completion**  
June 17, 2016  
64%

**Ibuprofen 200mg** >

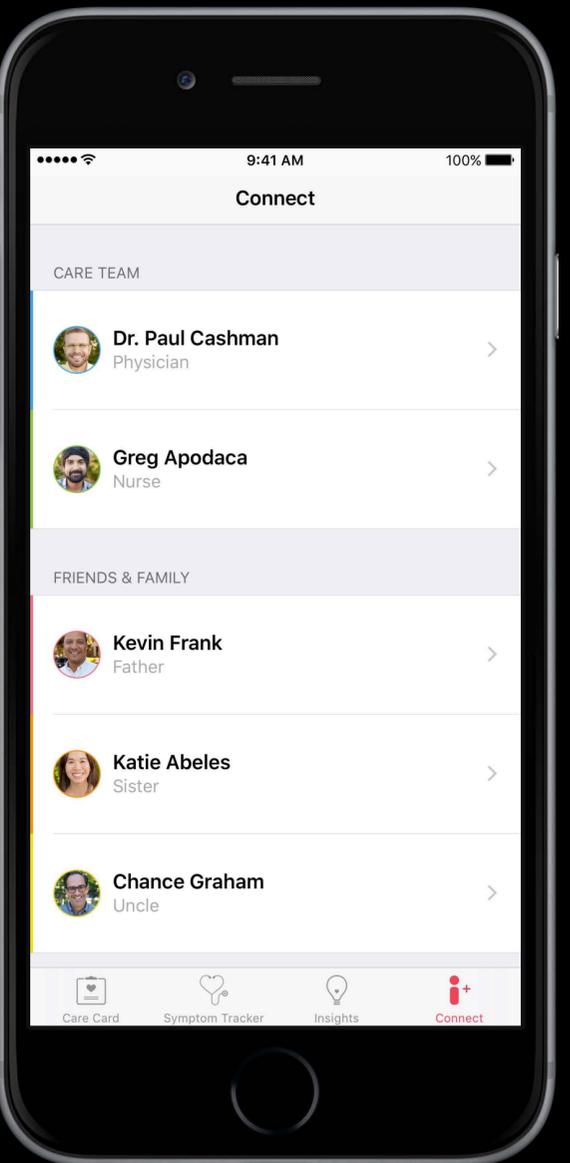
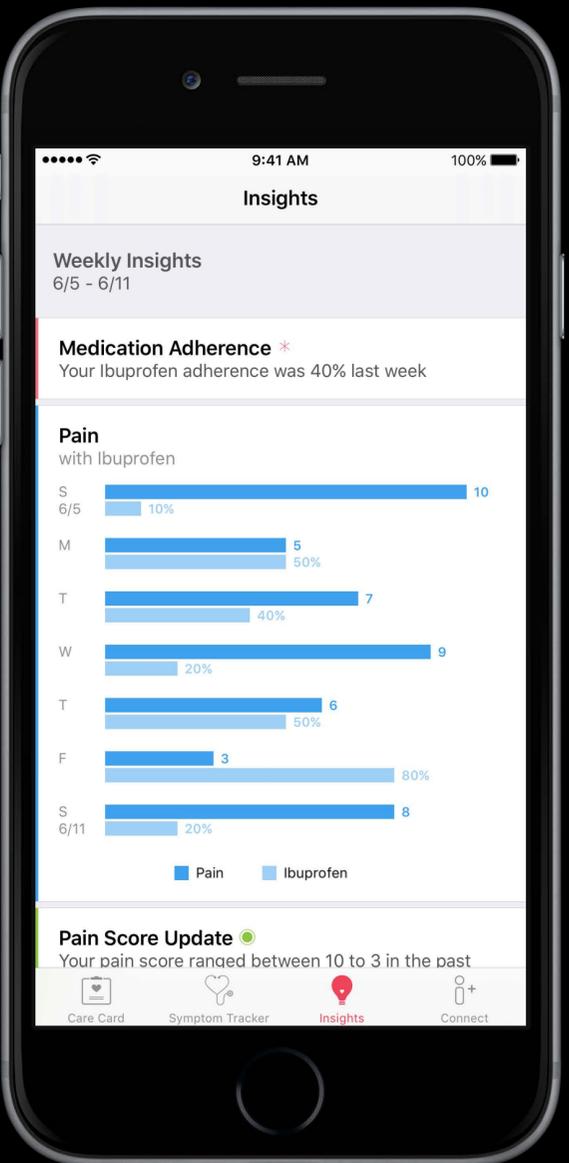
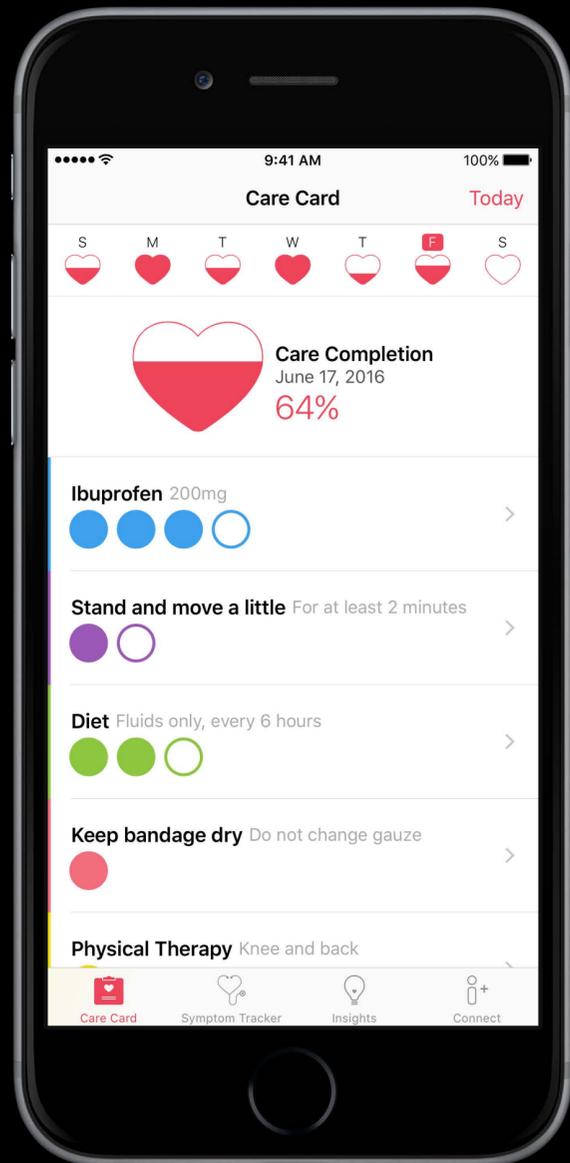
**Stand and move a little** For at least 2 minutes >

**Diet** Fluids only, every 6 hours >

**Keep bandage dry** Do not change gauze >

**Physical Therapy** Knee and back >

Care Card Symptom Tracker Insights Connect





9:41 AM

100%

# Symptom Tracker

Today



## Activity Completion

June 17, 2016

### Pain

Lower back

6  
of 10 >

### Range of Motion

Arm movement

50  
degrees >

### Discoloration

Around surgical area

None  
present >

### Weight

Bluetooth scale

145  
lbs >



Care Card



Symptom Tracker



Insights



Connect

# Insights

## Weekly Insights

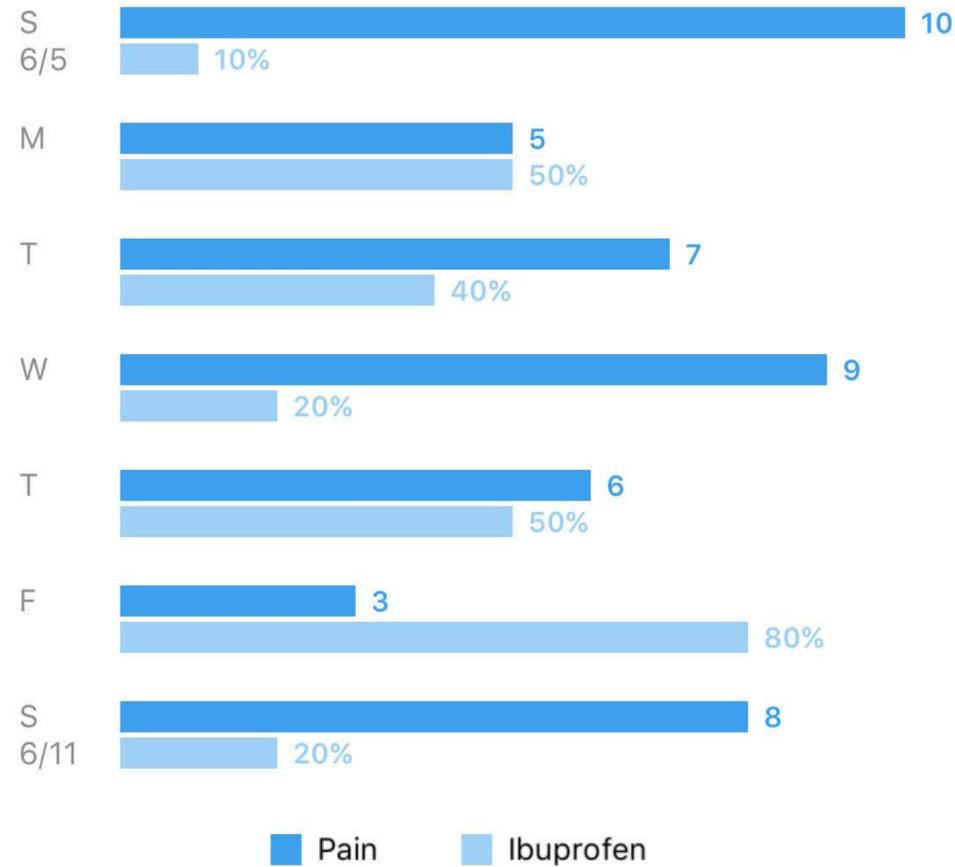
6/5 - 6/11

### Medication Adherence \*

Your Ibuprofen adherence was 40% last week

### Pain

with Ibuprofen



### Pain Score Update ●

Your pain score ranged between 10 to 3 in the past



Care Card



Symptom Tracker



Insights



Connect

# Connect

## CARE TEAM



**Dr. Paul Cashman**  
Physician



**Greg Apodaca**  
Nurse



## FRIENDS & FAMILY



**Kevin Frank**  
Father



**Katie Abeles**  
Sister



**Chance Graham**  
Uncle



Care Card



Symptom Tracker



Insights



Connect

# Patient-Provider Experience

T M C



TEXAS  
MEDICAL  
CENTER



9:41 AM

100%

TMC | TEXAS MEDICAL CENTER

# TMC



# CARE



JOIN NOW

SIGN IN



100% 

9:14

Friday, June 17



TMC Care 14m ago

Good morning, John! Please step on a scale and provide your weight for this morning.



9:41 AM



# Enter passcode

Touch ID or Enter Passcode



1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
	0	⌫



9:41 AM



[← Back](#)

[Confirm](#)

## Weight

Measurement

ENTER WEIGHT

184 lbs

INSTRUCTIONS

Weigh yourself on a scale at a similar time every day.



Care Card



Assessments



Insights



Connect



Profile

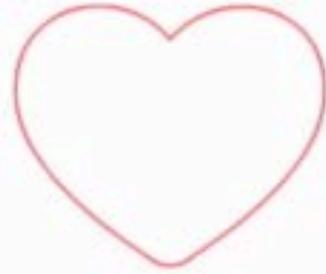


9:41 AM



# Care Card

Today



## Care Completion

June 17, 2016

0%

### Short Walk



### Feverall



### Ibuprofen



Care Card



Assessments



Insights



Connect



Profile



9:41 AM



[← Care Card](#)

## Short Walk

### INSTRUCTIONS

Take a 15-20 minute walk. Light walking only. If you start feeling discomfort or pain, stop.



Care Card



Assessments



Insights



Connect



Profile



9:41 AM



# Care Card

Today



## Care Completion

June 17, 2016

50%

### Short Walk



### Feverall



### Ibuprofen



Care Card



Assessments



Insights



Connect



Profile

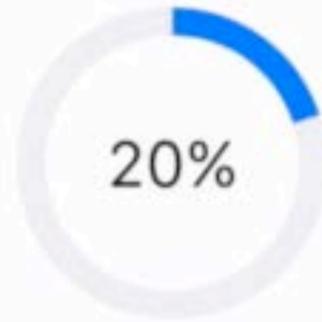


9:41 AM



# Assessments

Today



**Activity Completion**  
June 17, 2016

Frailty Test (get-up-and-go) >

Surgical Site Pain >

Infection >

Steps >

18/1



9:41 AM



# Assessments

Today



**Activity Completion**  
June 17, 2016

Frailty Test (get-up-and-go) >

Surgical Site Pain 4 >

Infection >

Steps >

18/1



Care Card



Assessments



Insights



Connect



Profile



9:41 AM



# Assessments

Today



**Activity Completion**  
June 17, 2016

Frailty Test (get-up-and-go) >

Surgical Site Pain 4 >

Infection Yes >

Steps >

18/1



9:41 AM



# Assessments

Today



**Activity Completion**  
June 17, 2016

Frailty Test (get-up-and-go) <1m >

Surgical Site Pain 4 >

Infection Yes >

Steps >

181

# Insights

**What you need to know for the first few weeks** >

< Previous week

**Weekly Insights**  
5/29-6/4

Next week >

## Frailty (Get Up & Go) Update \*

Your Frailty (Get Up & Go) rate this week is 15 steps per minute, which is an improvement from last week's 0 steps per minute.

### Frailty (Get Up & Go)



Care Card



Assessments



Insights



Connect



Profile



9:41 AM



## Connect

[Compose](#)



Inbox



Sent



### CARE TEAM



**Dr Paul Cashman**  
Physician



### FRIENDS & FAMILY

[Add](#)



**Change Graham**  
Uncle



**Katie Abeles**  
Sister



Care Card



Assessments



Insights



Connect



Profile



100% 

2:20

Friday, June 17



TMC Care 1m ago

You have received a new message from  
Dr. Cashman.

# Creating a CareKit App

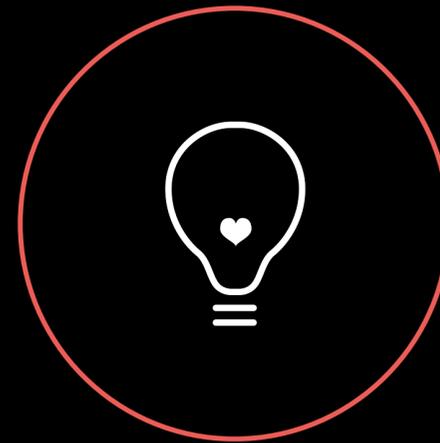
# CareKit Modules



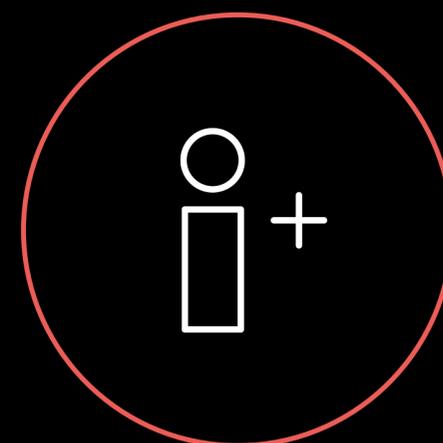
Care Card



Symptom Tracker



Insights Dashboard



Connect

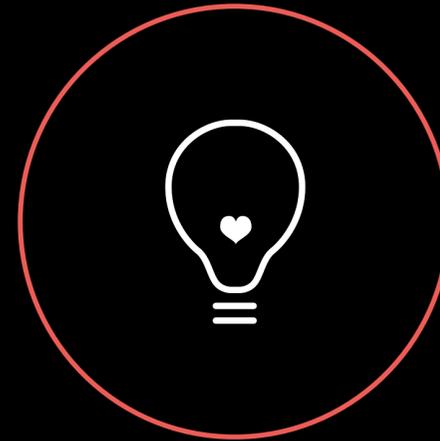
# CareKit Modules



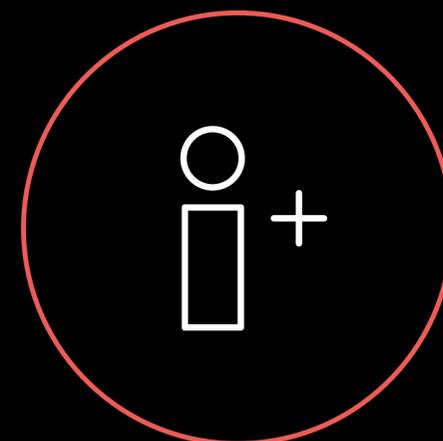
Care Card



Symptom Tracker



Insights Dashboard



Connect



Care Plan Store



Document Exporter

# Care Plan Store



Care Plan Store

# Care Plan Store

Encrypted data storage

Defining activities and events

Creating an activity and adding it to the store

The relationship between activities and events

Surfacing activities to the front-end modules



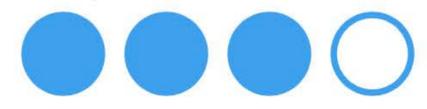
# Care Card

Today



**Care Completion**  
 June 17, 2016  
**64%**

**Ibuprofen 200mg**



**Stand and move a little** For at least 2 minutes



**Diet** Fluids only, every 6 hours



**Keep bandage dry** Do not change gauze



**Physical Therapy** Knee and back



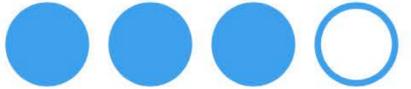
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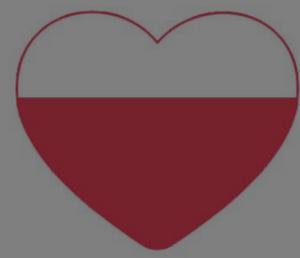


**Physical Therapy** Knee and back



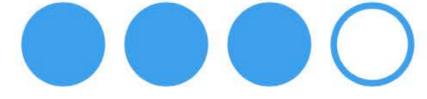
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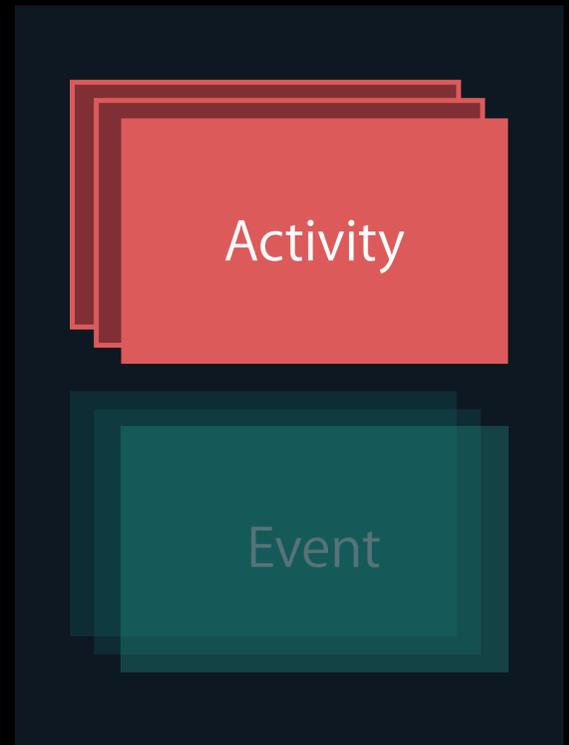
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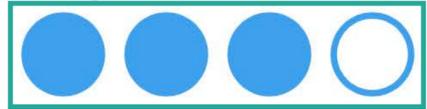
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Care Card



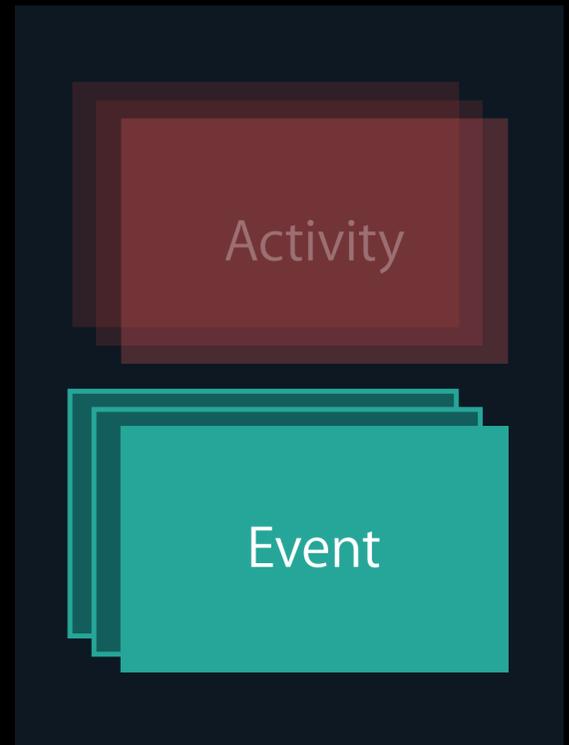
Symptom Tracker



Insights



Connect



# Care Plan Store

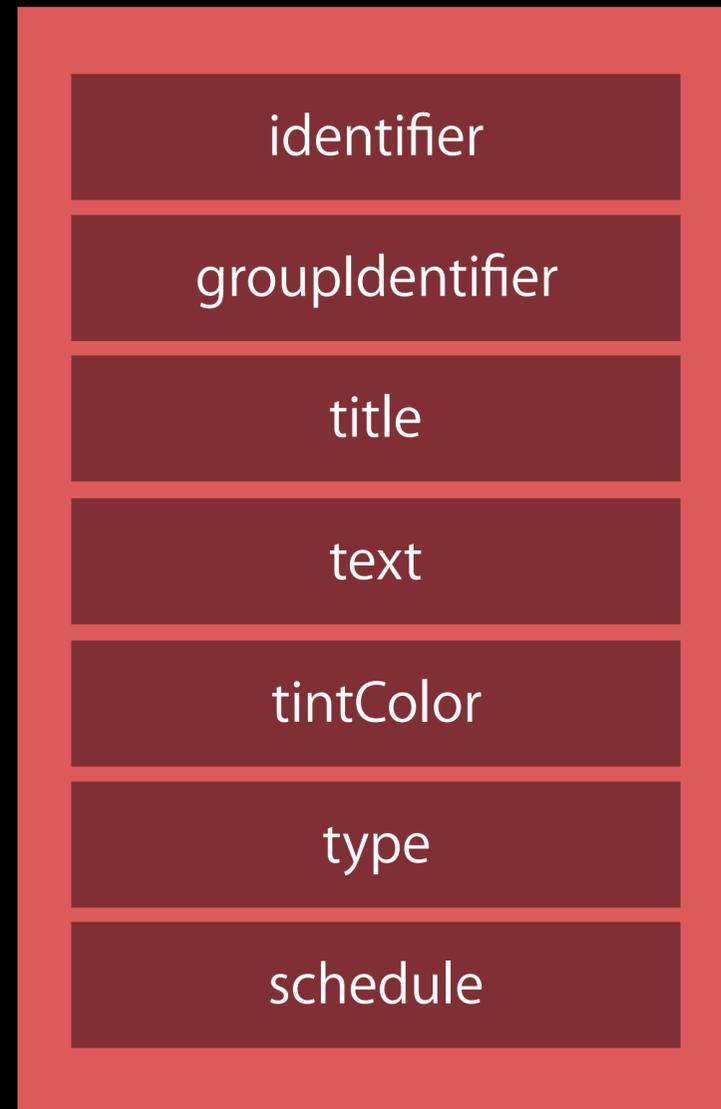


Care Plan Store

# Care Plan Store

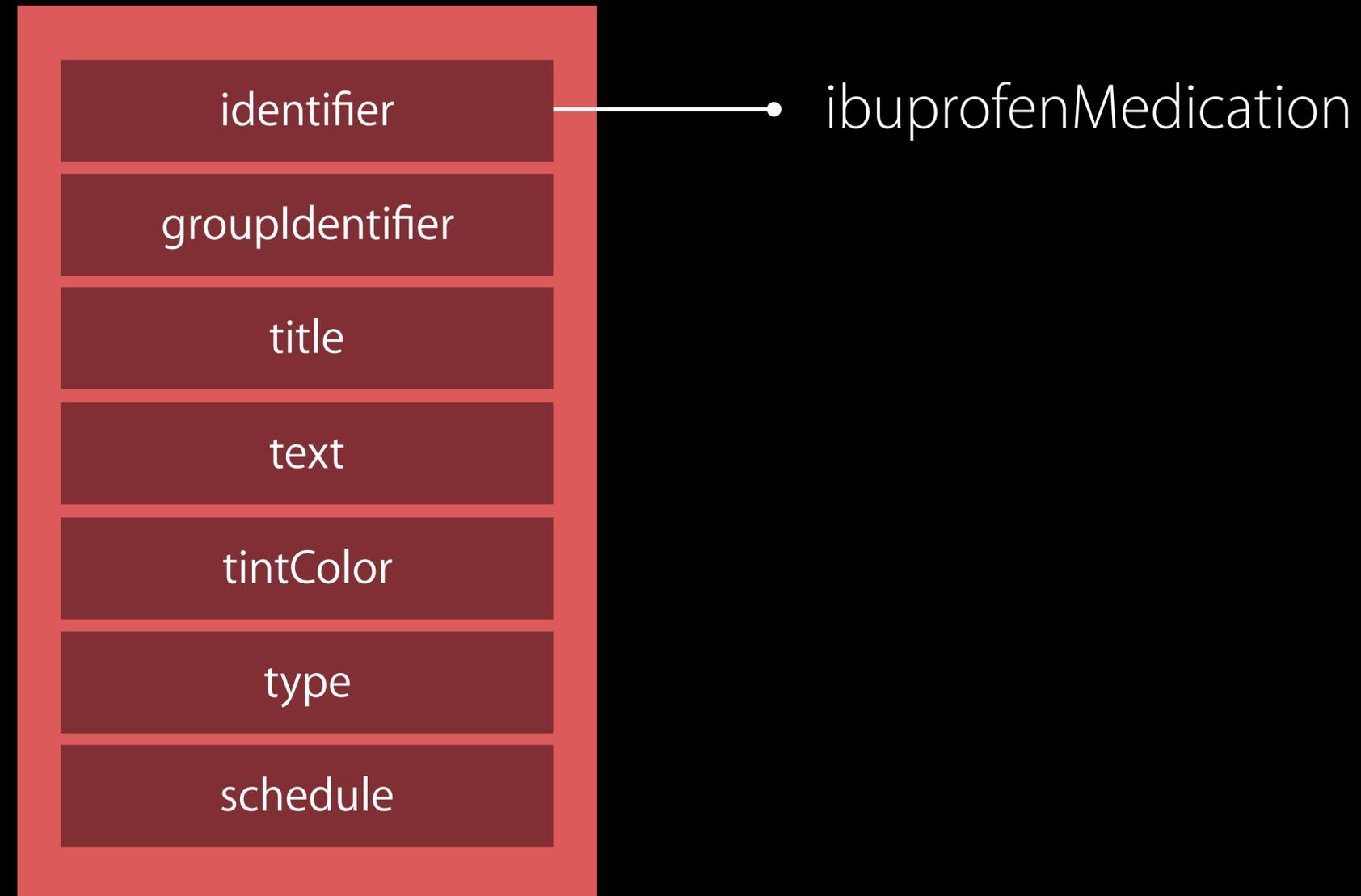


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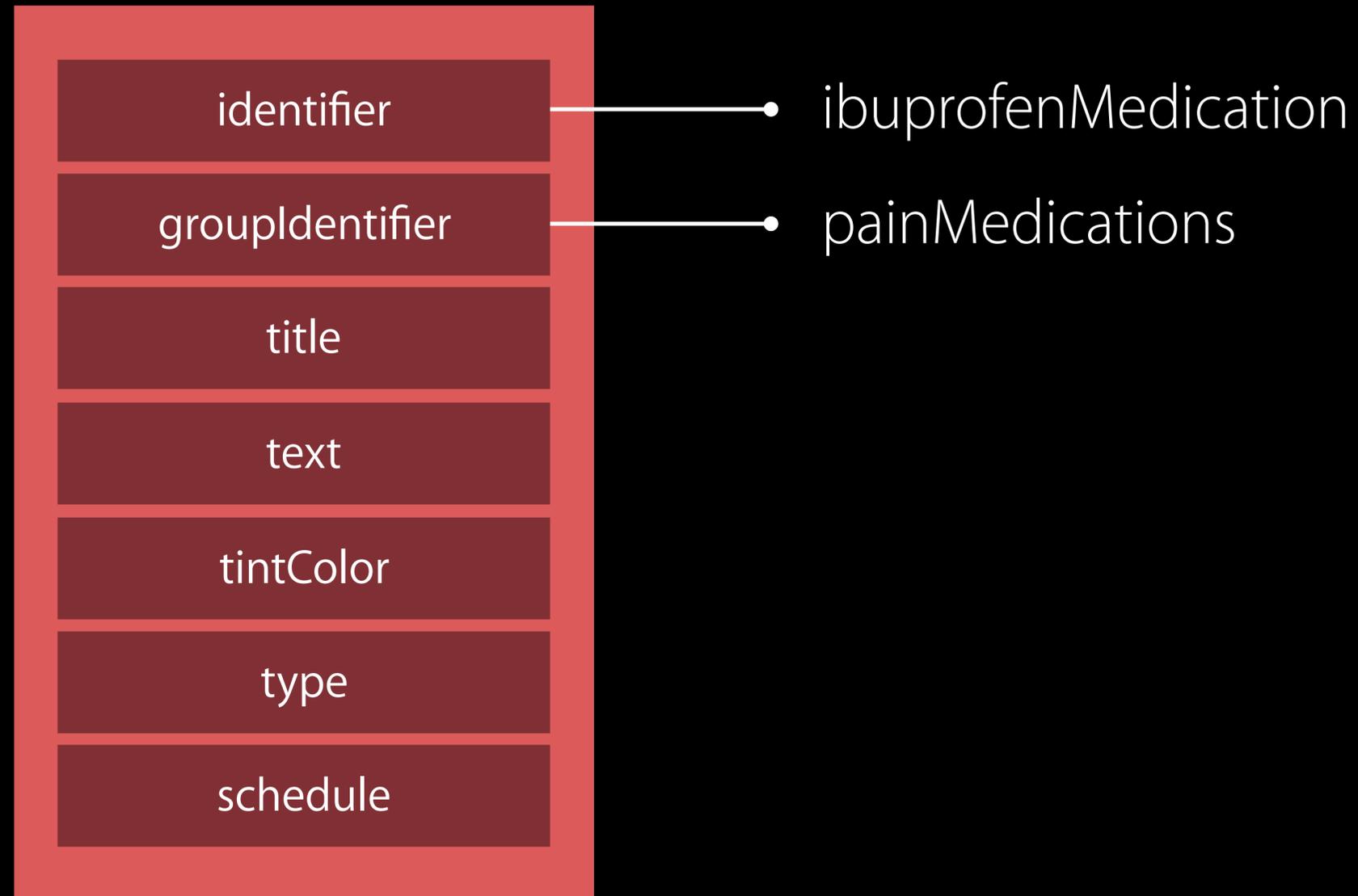
Activity

# Care Plan Store



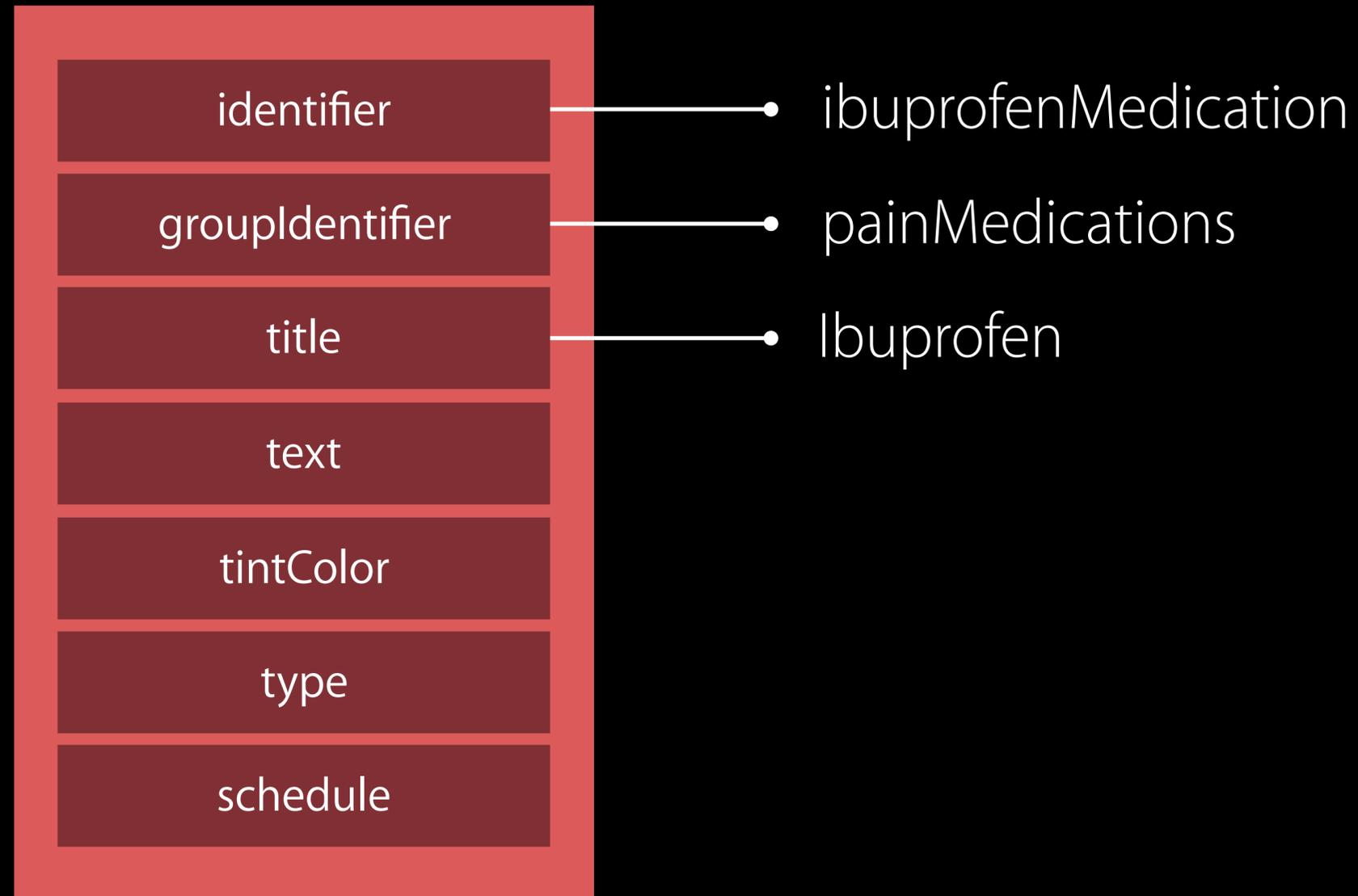
Activity

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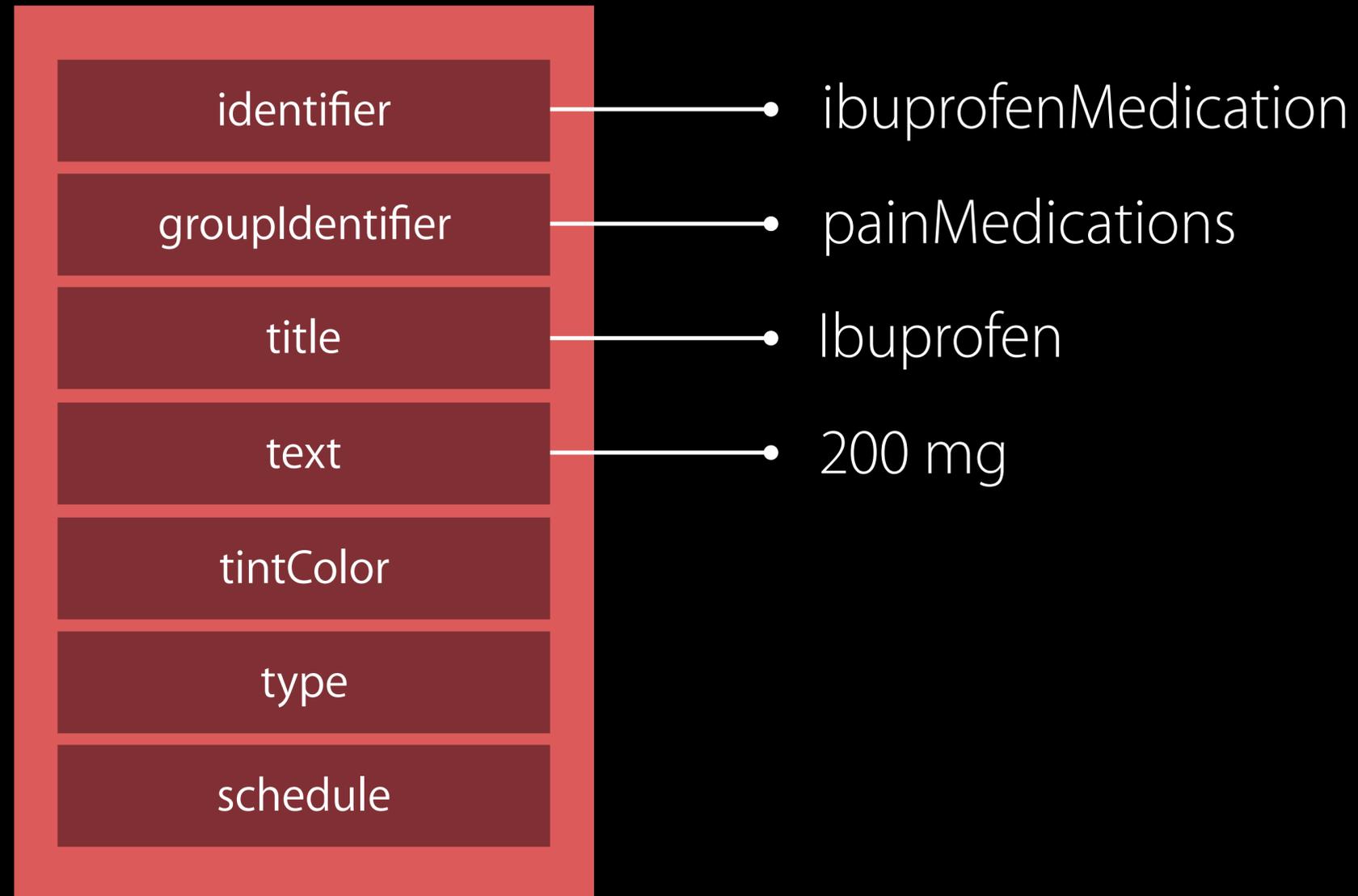
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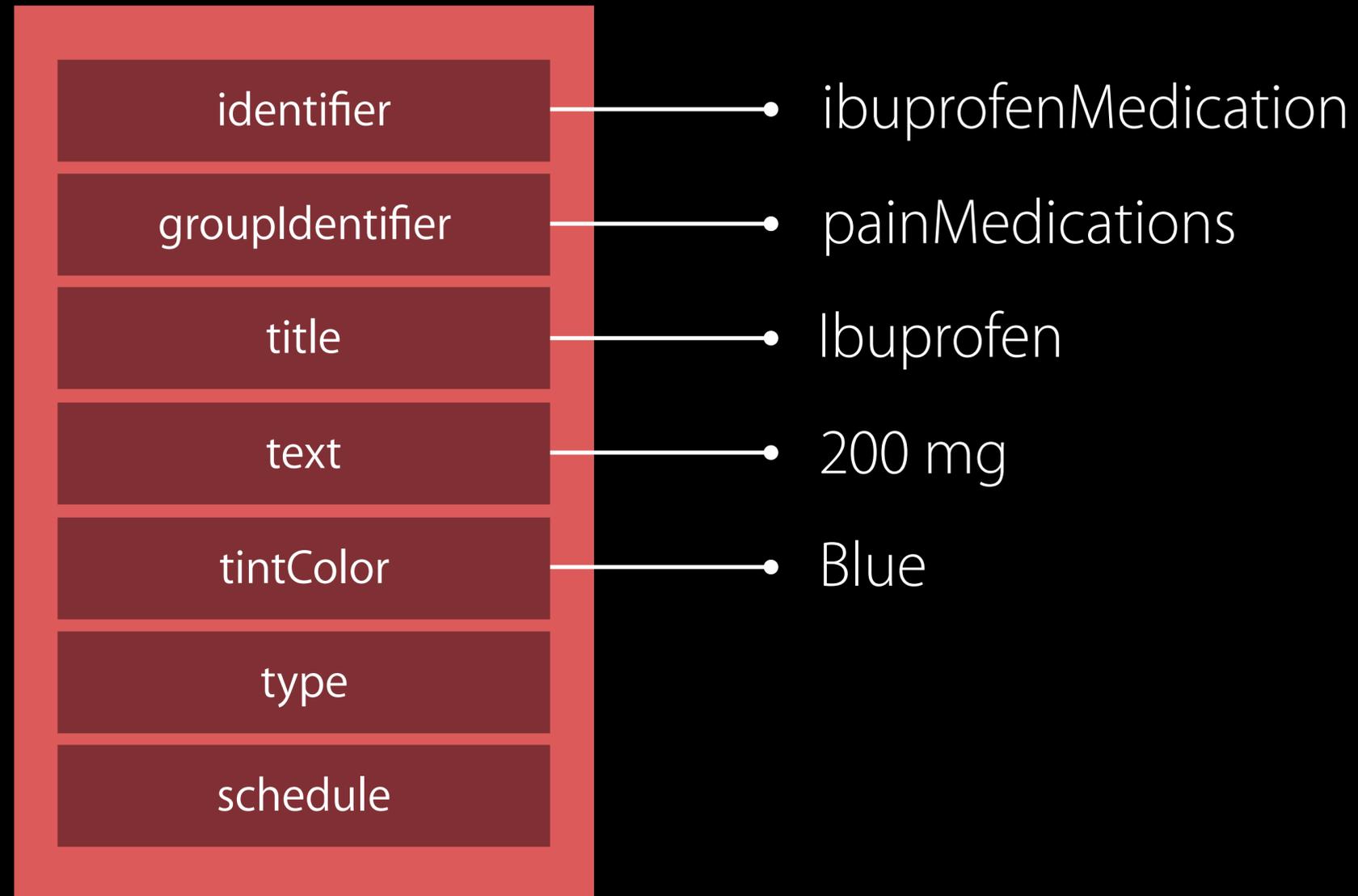
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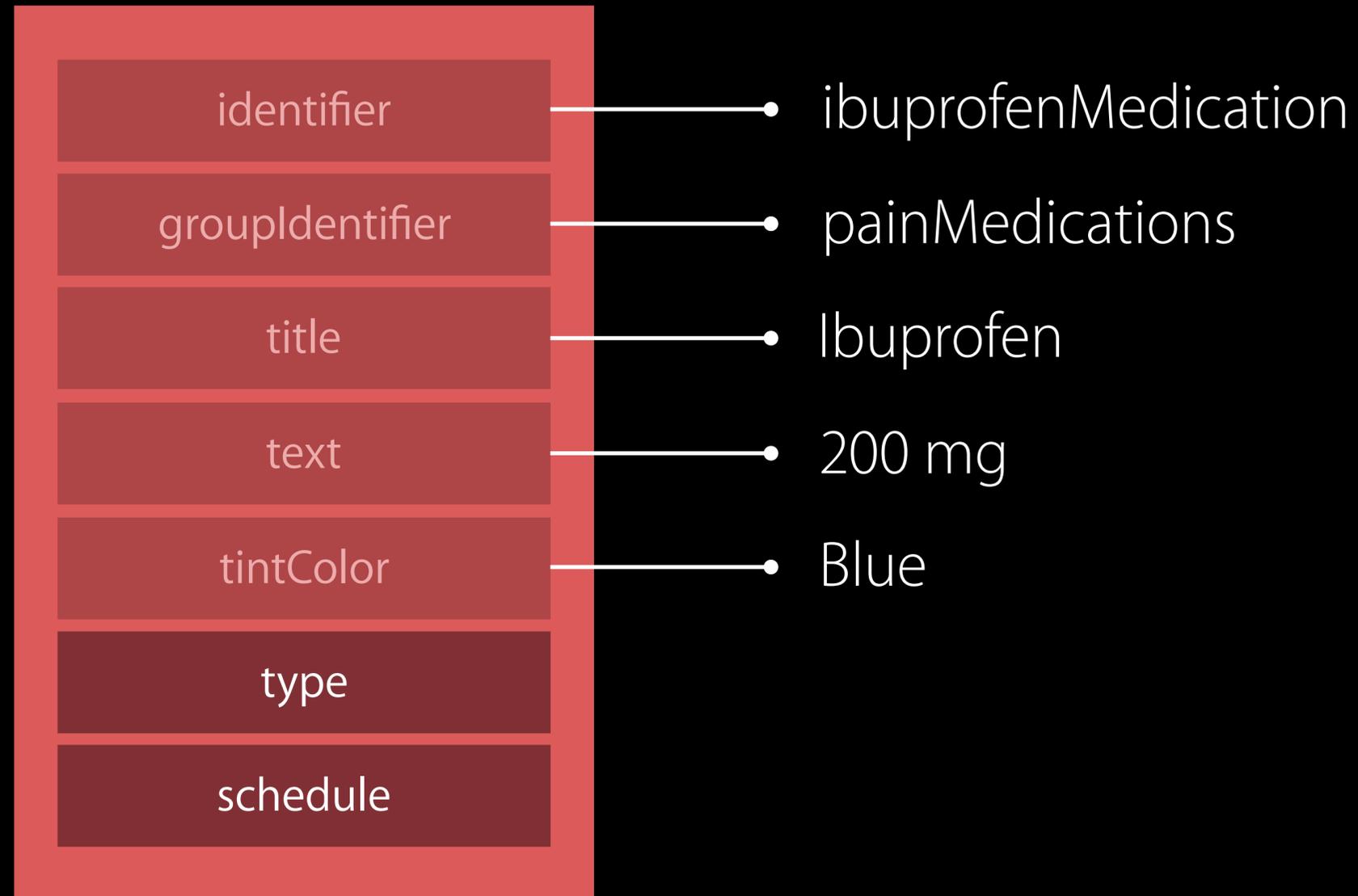
Activity

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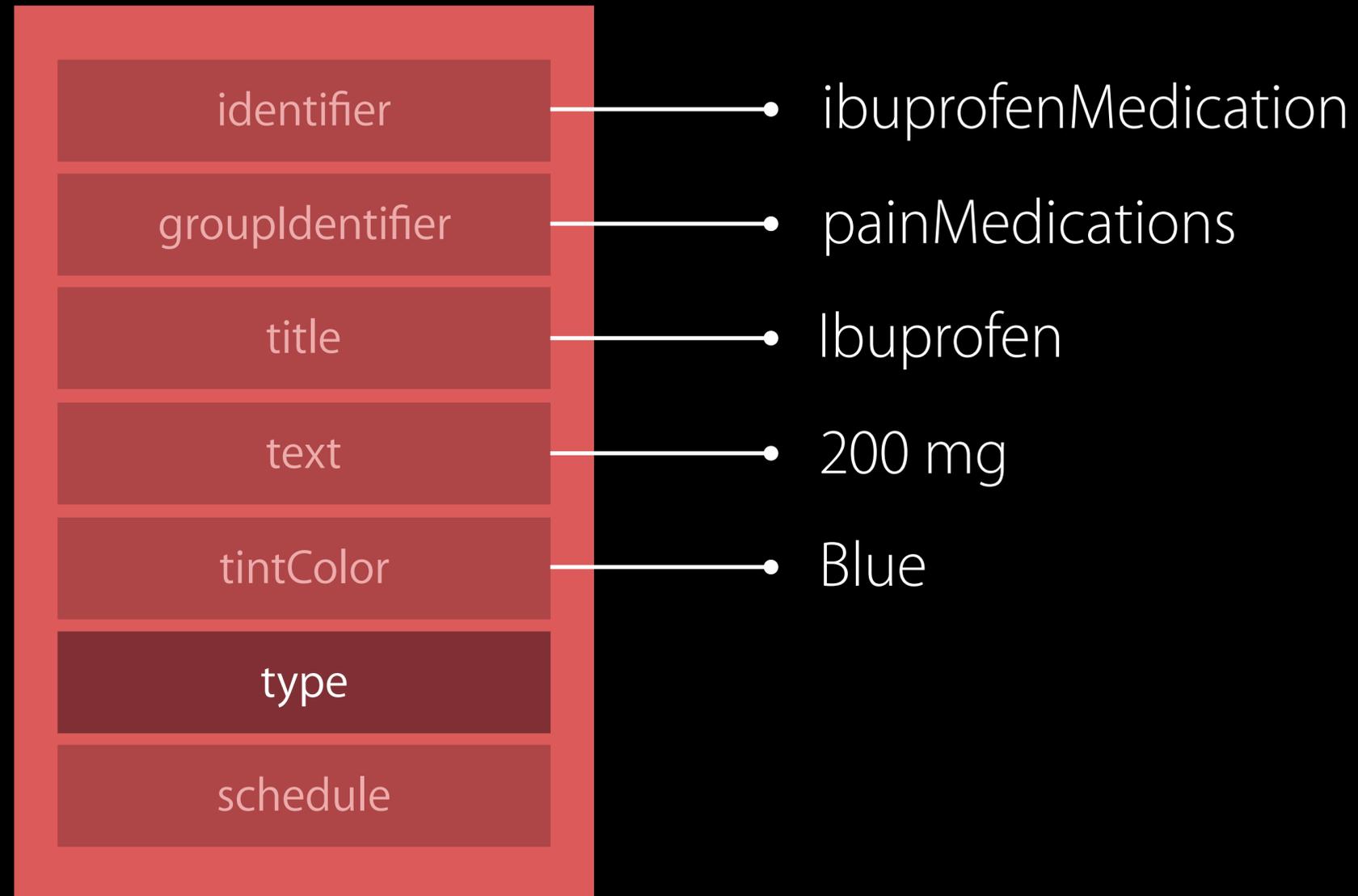
Activity

# Care Plan Store



Activity

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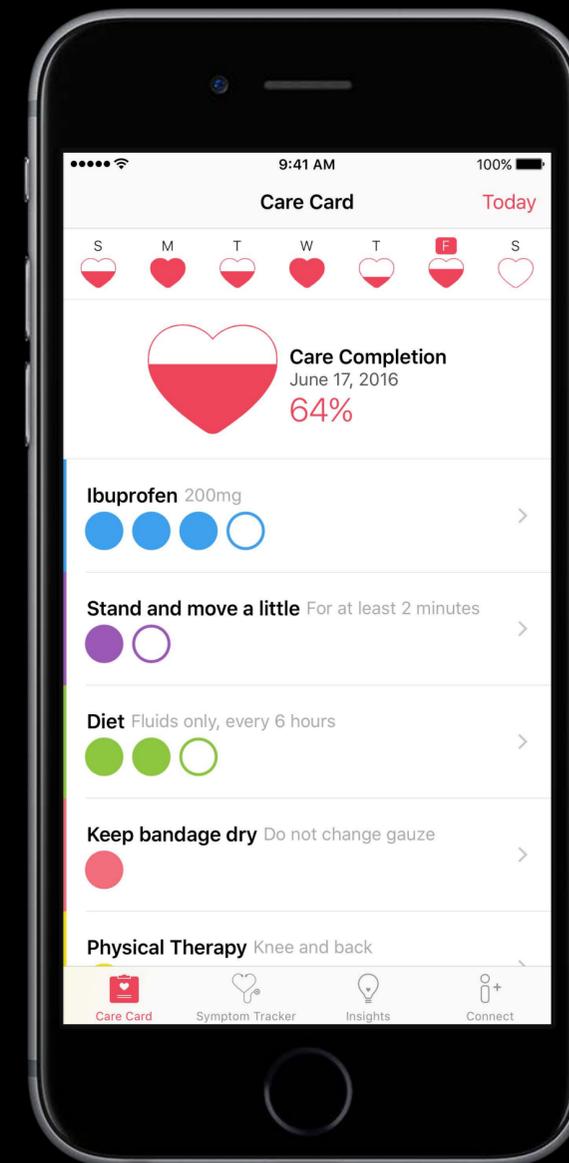


Activity

# Type

## Activity

Interventions



# Type

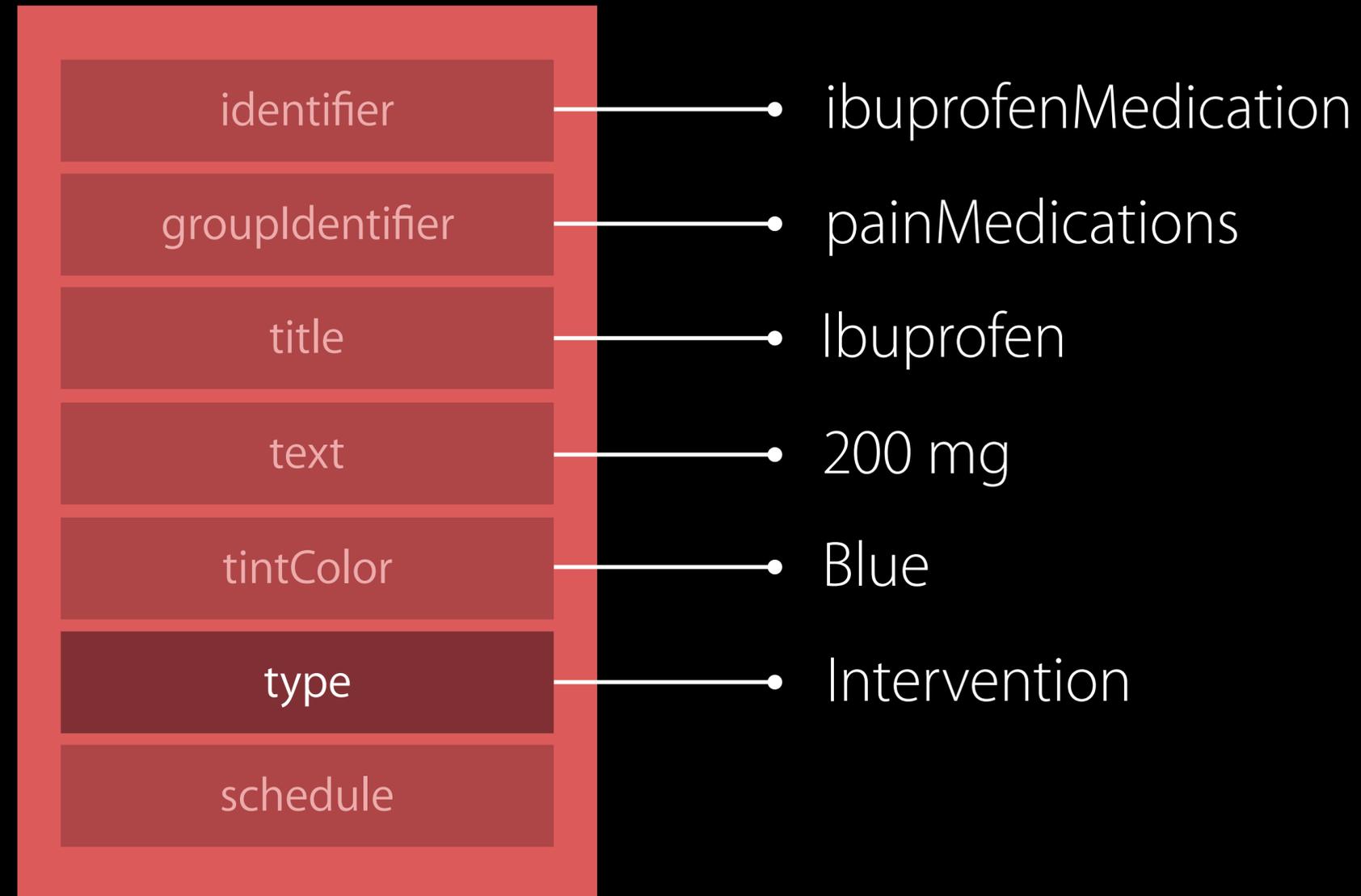
## Activity

Interventions

Assessments

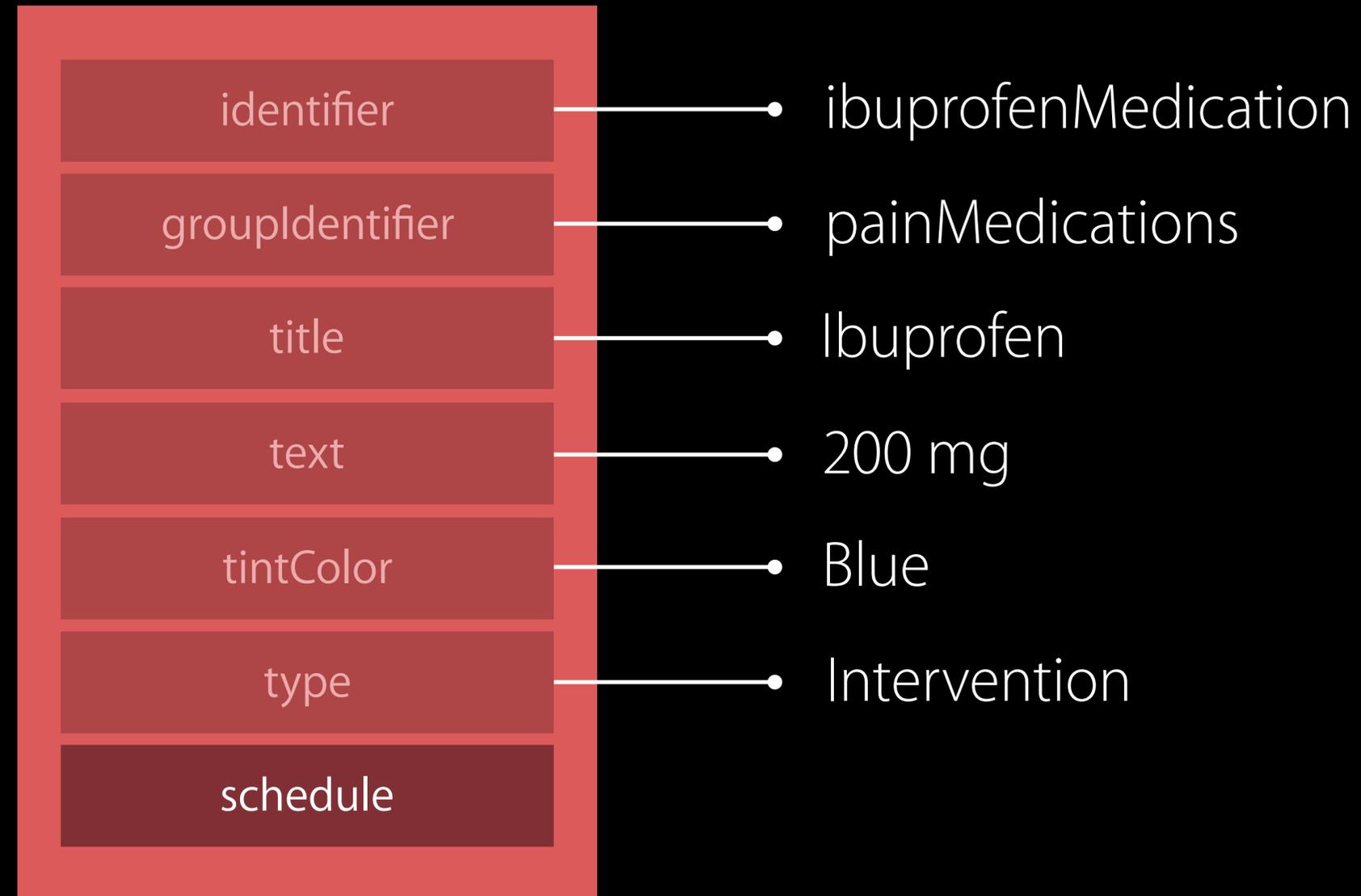


# Care Plan Store



Activity

# Care Plan Store



Activity

# Schedule

Activity

# Schedule

## Activity

Specify which days

- Daily
- Weekly
- Custom

# Schedule

## Activity

Specify which days

- Daily
- Weekly
- Custom

Times per day

- Frequency

Let's Define a Schedule!

# Let's Define a Schedule!

Weekly Schedule



# Let's Define a Schedule!

Weekly Schedule



# Let's Define a Schedule!

Weekly Schedule



Frequency

# Let's Define a Schedule!

Weekly Schedule



Frequency

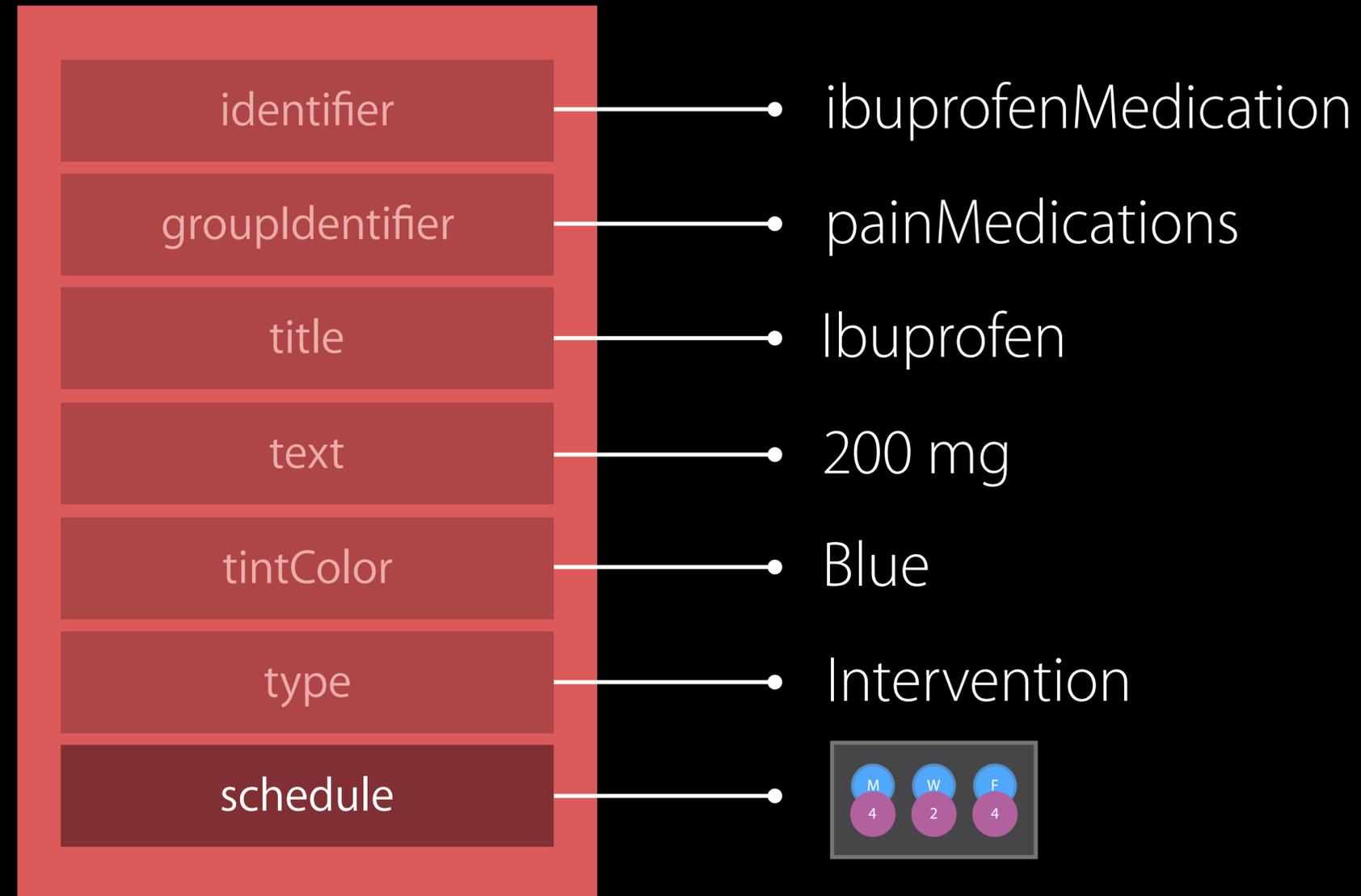


# Let's Define a Schedule!



Schedule

# Care Plan Store



Activity

# Care Plan Store



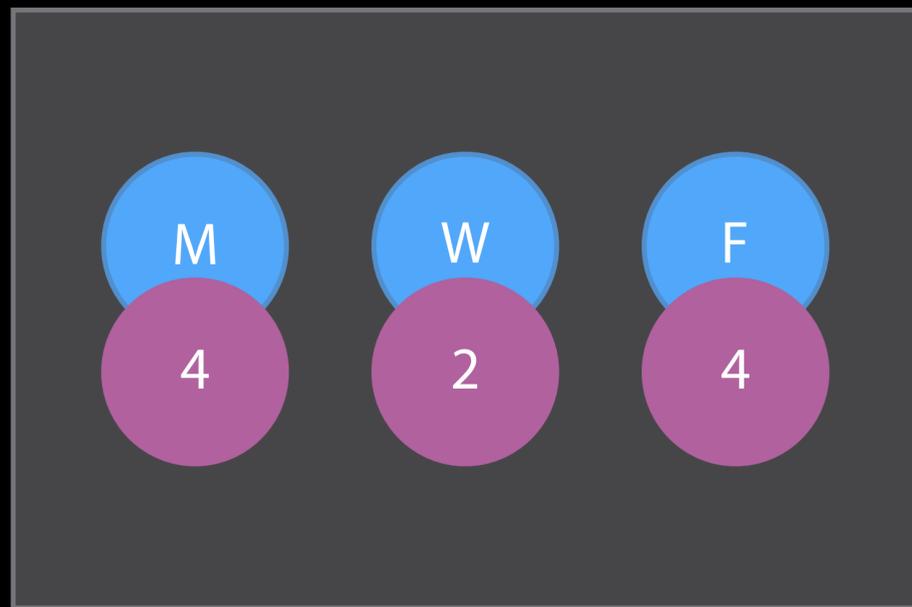
Care Plan Store

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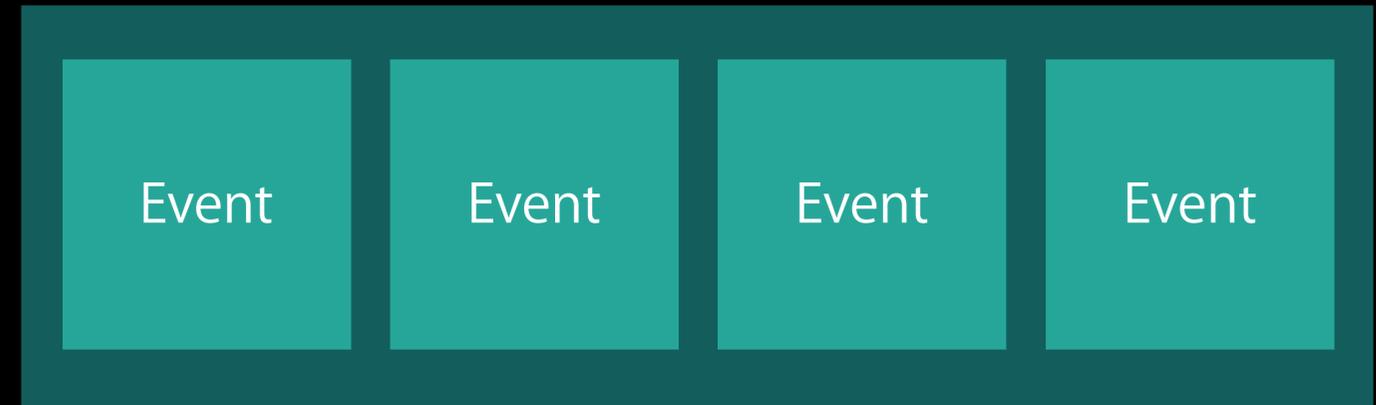


Schedule

# Care Plan Store



Schedule

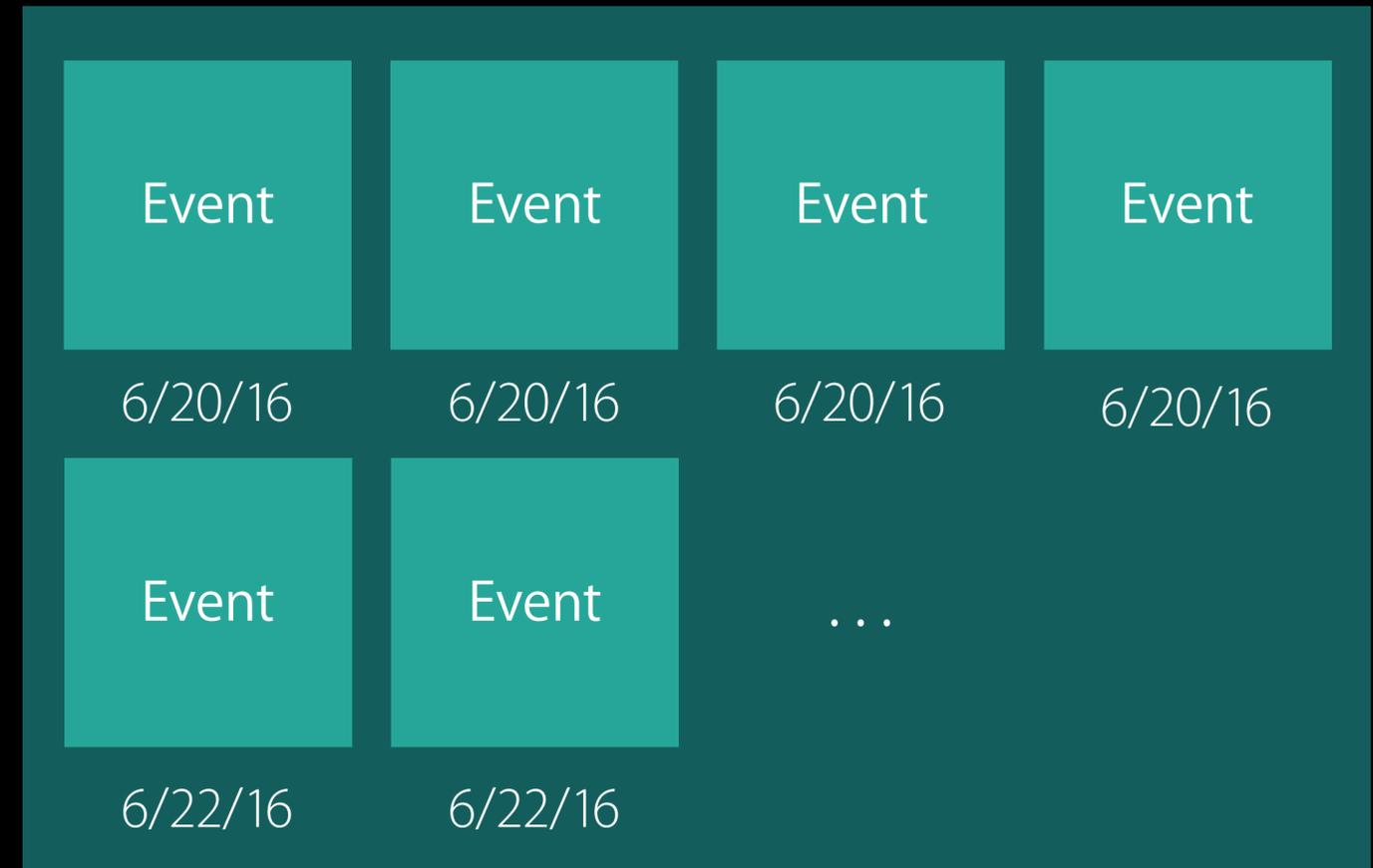


Events

# Care Plan Store

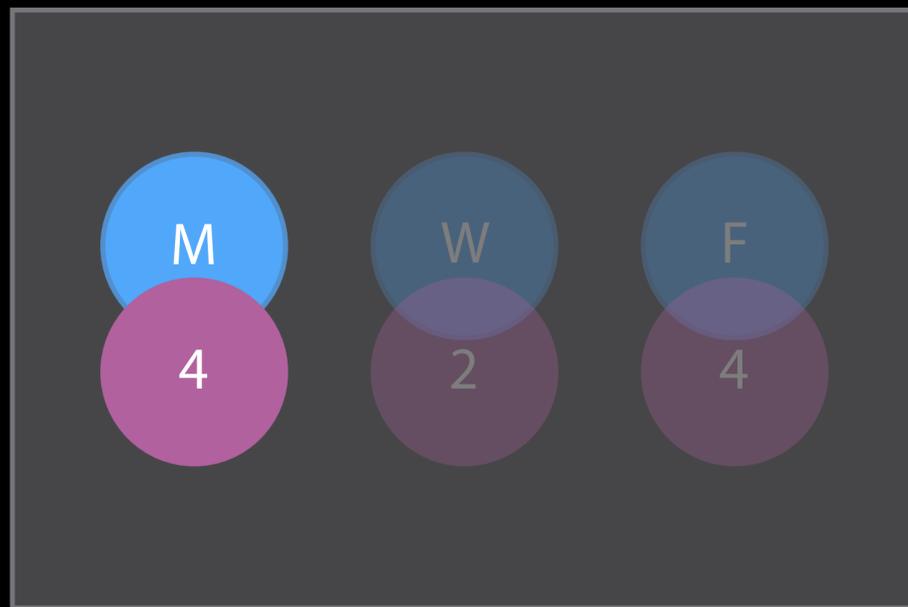


Schedule

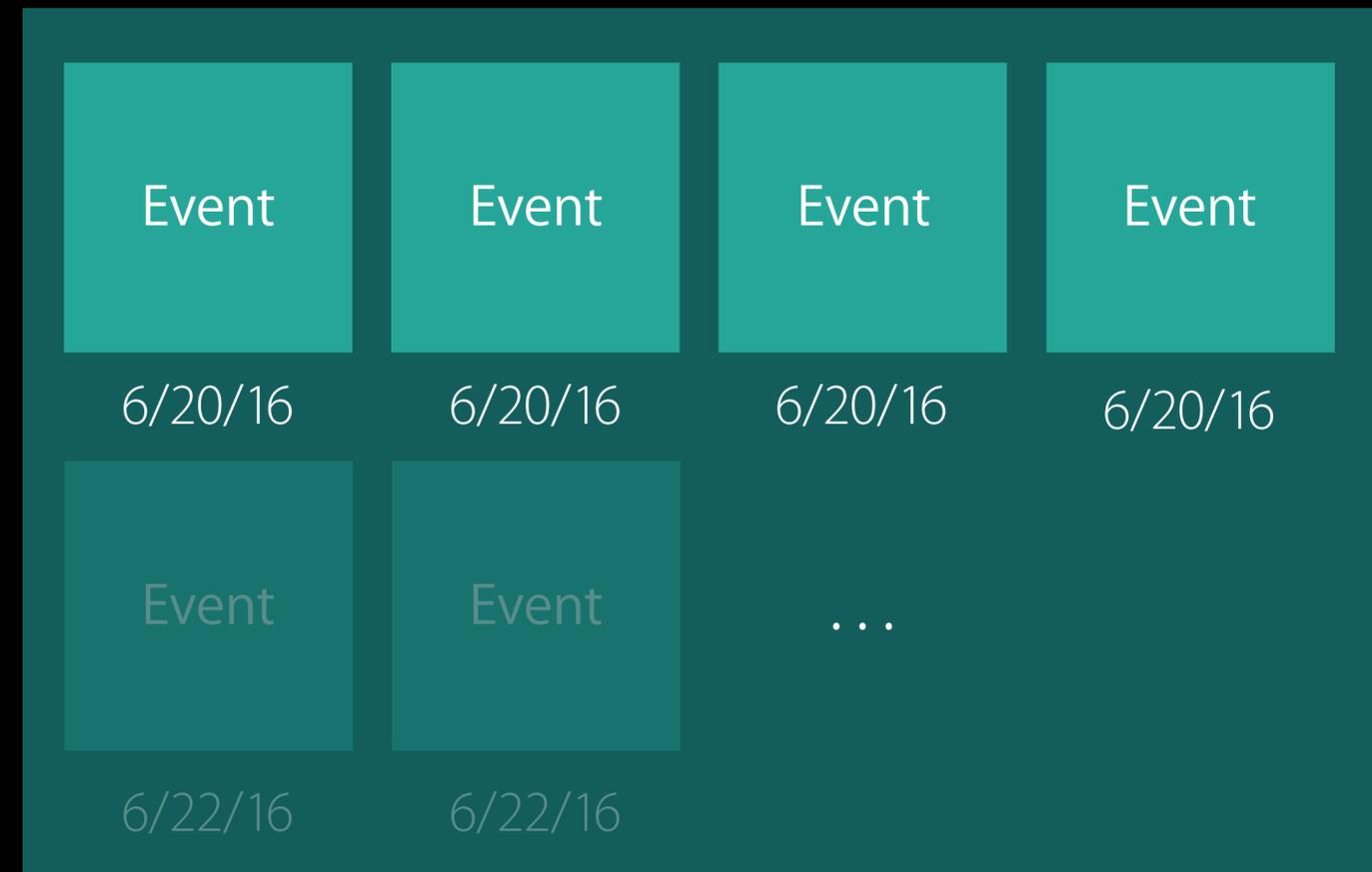


Events

# Care Plan Store

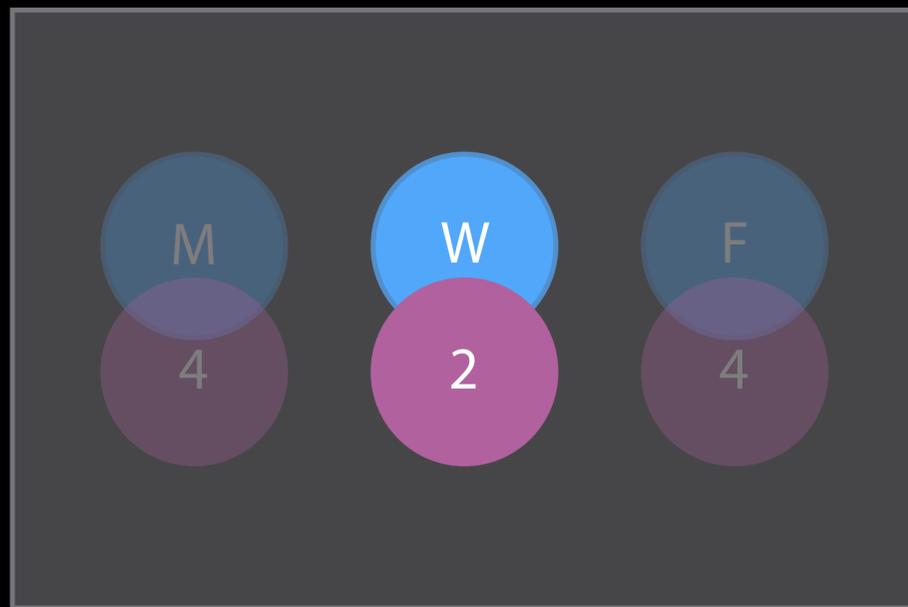


Schedule

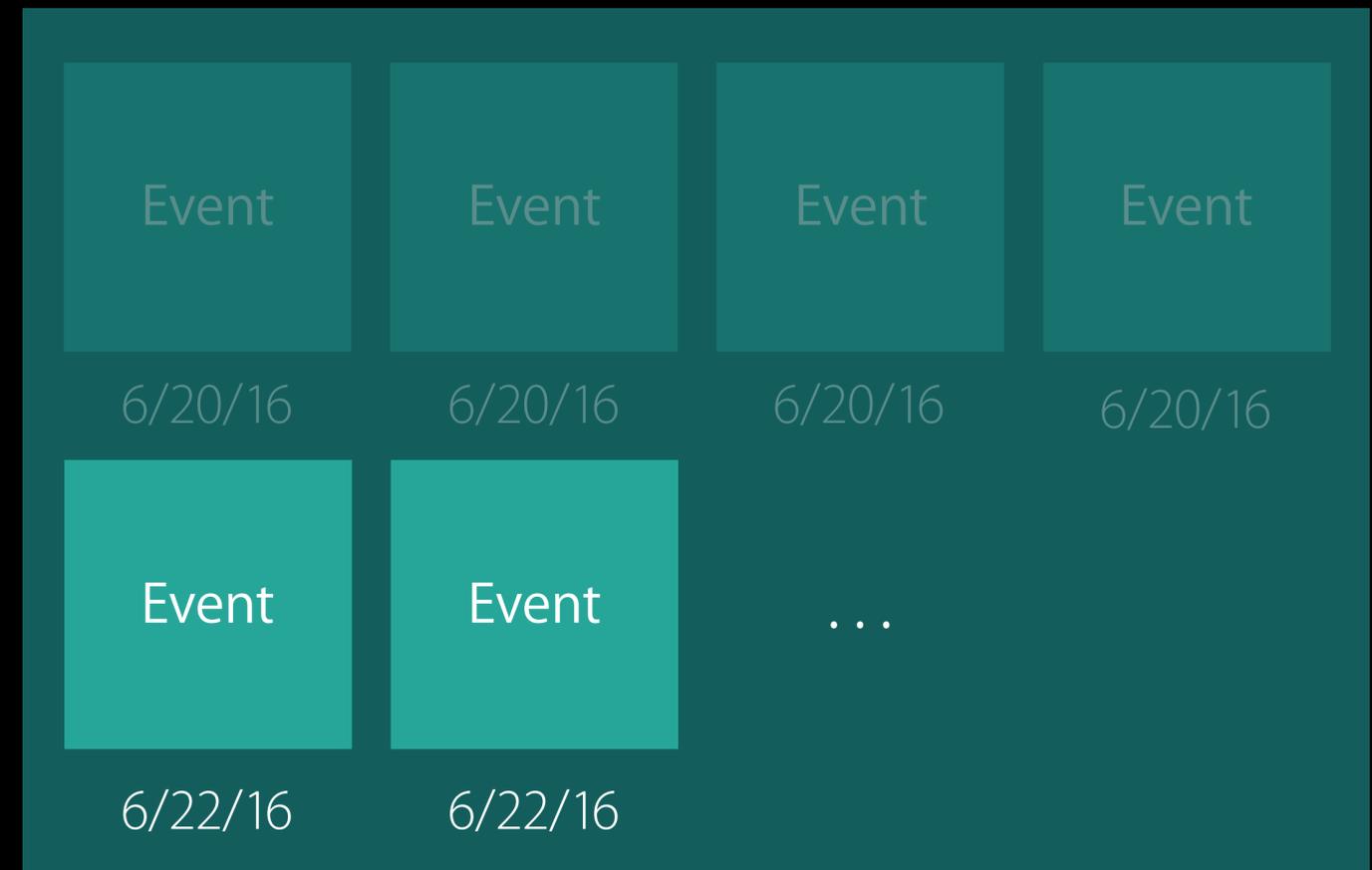


Events

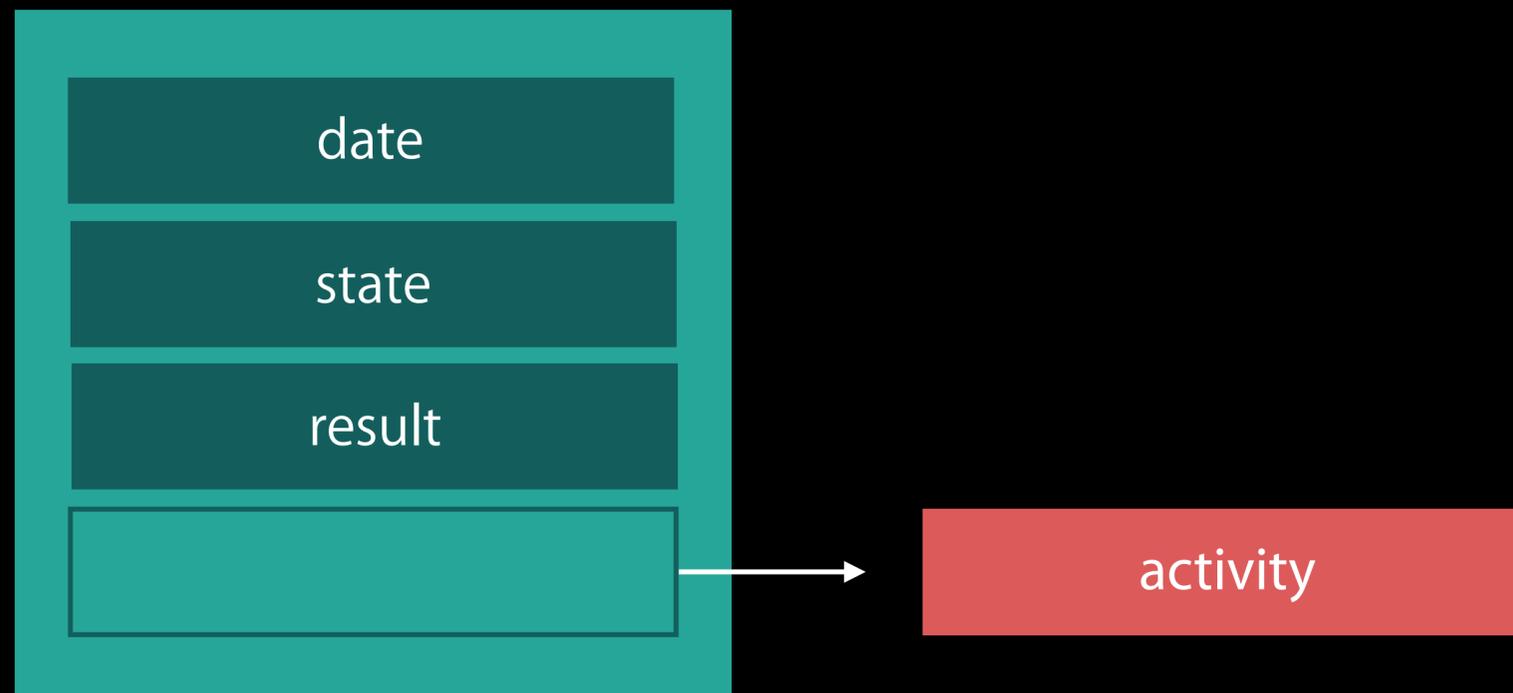
# Care Plan Store



Schedule



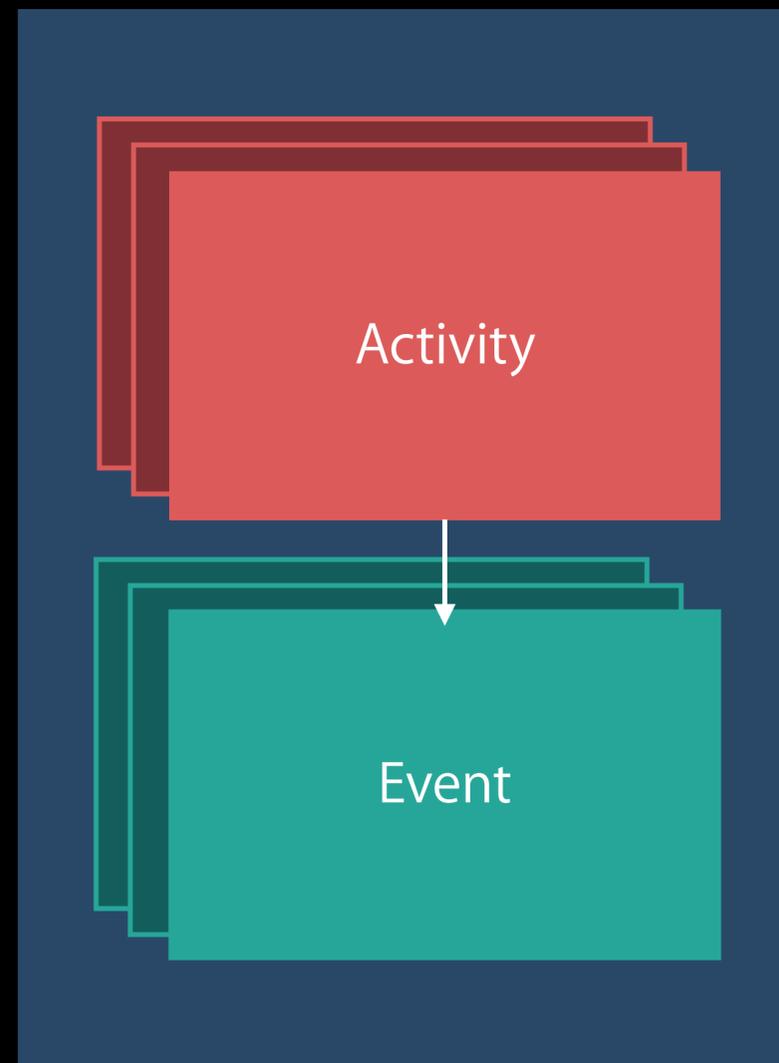
Events



Event

activity

# Care Plan Store



Care Plan Store

```
// Creating Care Plan Store
// Define a persistent directory url

var myCarePlanStore: OCKCarePlanStore

// Determine the file URL for the store.
let searchPaths =
NSSearchPathForDirectoriesInDomains(.applicationSupportDirectory, .userDomainMask, true)
let applicationSupportPath = searchPaths[0]
let myDirectoryURL = URL(fileURLWithPath: applicationSupportPath)

myCarePlanStore = OCKCarePlanStore(persistenceDirectoryURL: myDirectoryURL)
```

```
// Creating Care Plan Store
```

```
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```

```
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```

```
// Determine the file URL for the store.
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```
myCarePlanStore = OCKCarePlanStore(persistenceDirectoryURL: myDirectoryURL)
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```

```
myCarePlanStore = OCKCarePlanStore(persistenceDirectoryURL: myDirectoryURL)
```

```
// Creating Care Plan Store
// Define a persistent directory url

var myCarePlanStore: OCKCarePlanStore

// Determine the file URL for the store.
let searchPaths =
NSSearchPathForDirectoriesInDomains(.applicationSupportDirectory, .userDomainMask, true)
let applicationSupportPath = searchPaths[0]
let myDirectoryURL = URL(fileURLWithPath: applicationSupportPath)

myCarePlanStore = OCKCarePlanStore(persistenceDirectoryURL: myDirectoryURL)
```

```
func addIbuprofenActivity() {
    // Create a weekly schedule.
    let startDate = DateComponents(year: 2016, month: 01, day: 01)
    let schedule = OCKCareSchedule.weeklySchedule(withStartDate: startDate,
    occurrencesOnEachDay: [0, 4, 0, 2, 0, 4, 0])

    // Create an intervention activity. Make sure to NSLocalizedString for all strings.
    let ibuprofenActivity =
    OCKCarePlanActivity.intervention(withIdentifier: "ibuprofenMedication", groupIdIdentifier:
    "painMedications", title: "Ibuprofen", text: "200mg", tint color: UIColor.blue(),
    instructions: "Take with food.", imageURL: NSURL.fileURL(withPath: "ibuprofen.png"),
    schedule: schedule, userInfo: nil)

    // Add activity to care plan store.
    myCarePlanStore.add(ibuprofenActivity, { success, error in
        // Perform error checking.
        ...
    })
}
```

```
func addIbuprofenActivity() {
    // Create a weekly schedule.
    let startDate = DateComponents(year: 2016, month: 01, day: 01)
    let schedule = OCKCareSchedule.weeklySchedule(withStartDate: startDate,
    occurrencesOnEachDay: [0, 4, 0, 2, 0, 4, 0])

    // Create an intervention activity. Make sure to NSLocalizedString for all strings.
    let ibuprofenActivity =
    OCKCarePlanActivity.intervention(withIdentifier: "ibuprofenMedication", groupIdIdentifier:
    "painMedications", title: "Ibuprofen", text: "200mg", tintColor: UIColor.blue(),
    instructions:"Take with food.", imageURL: NSURL.fileURL(withPath: "ibuprofen.png"),
    schedule: schedule, userInfo: nil)

    // Add activity to care plan store.
    myCarePlanStore.add(ibuprofenActivity, { success, error in
        // Perform error checking.
        ...
    })
}
```

```
func addIbuprofenActivity() {
    // Create a weekly schedule.
    let startDate = DateComponents(year: 2016, month: 01, day: 01)
    let schedule = OCKCareSchedule.weeklySchedule(withStartDate: startDate,
    occurrencesOnEachDay: [0, 4, 0, 2, 0, 4, 0])

    // Create an intervention activity. Make sure to NSLocalizedString for all strings.
    let ibuprofenActivity =
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    "painMedications", title: "Ibuprofen", text: "200mg", tint color: UIColor.blue(),
    instructions: "Take with food.", imageURL: NSURL.fileURL(withPath: "ibuprofen.png"),
    schedule: schedule, userInfo: nil)

    // Add activity to care plan store.
    myCarePlanStore.add(ibuprofenActivity, { success, error in
        // Perform error checking.
        ...
    })
}
```

```
func addIbuprofenActivity() {
    // Create a weekly schedule.
    let startDate = DateComponents(year: 2016, month: 01, day: 01)
    let schedule = OCKCareSchedule.weeklySchedule(withStartDate: startDate,
    occurrencesOnEachDay: [0, 4, 0, 2, 0, 4, 0])

    // Create an intervention activity. Make sure to NSLocalizedString for all strings.
    let ibuprofenActivity =
    OCKCarePlanActivity.intervention(withIdentifier: "ibuprofenMedication", groupIdIdentifier:
    "painMedications", title: "Ibuprofen", text: "200mg", tint color: UIColor.blue(),
    instructions: "Take with food.", imageURL: NSURL.fileURL(withPath: "ibuprofen.png"),
    schedule: schedule, userInfo: nil)

    // Add activity to care plan store.
    myCarePlanStore.add(ibuprofenActivity, { success, error in
        // Perform error checking.
        ...
    })
}
```



# Care Plan Store

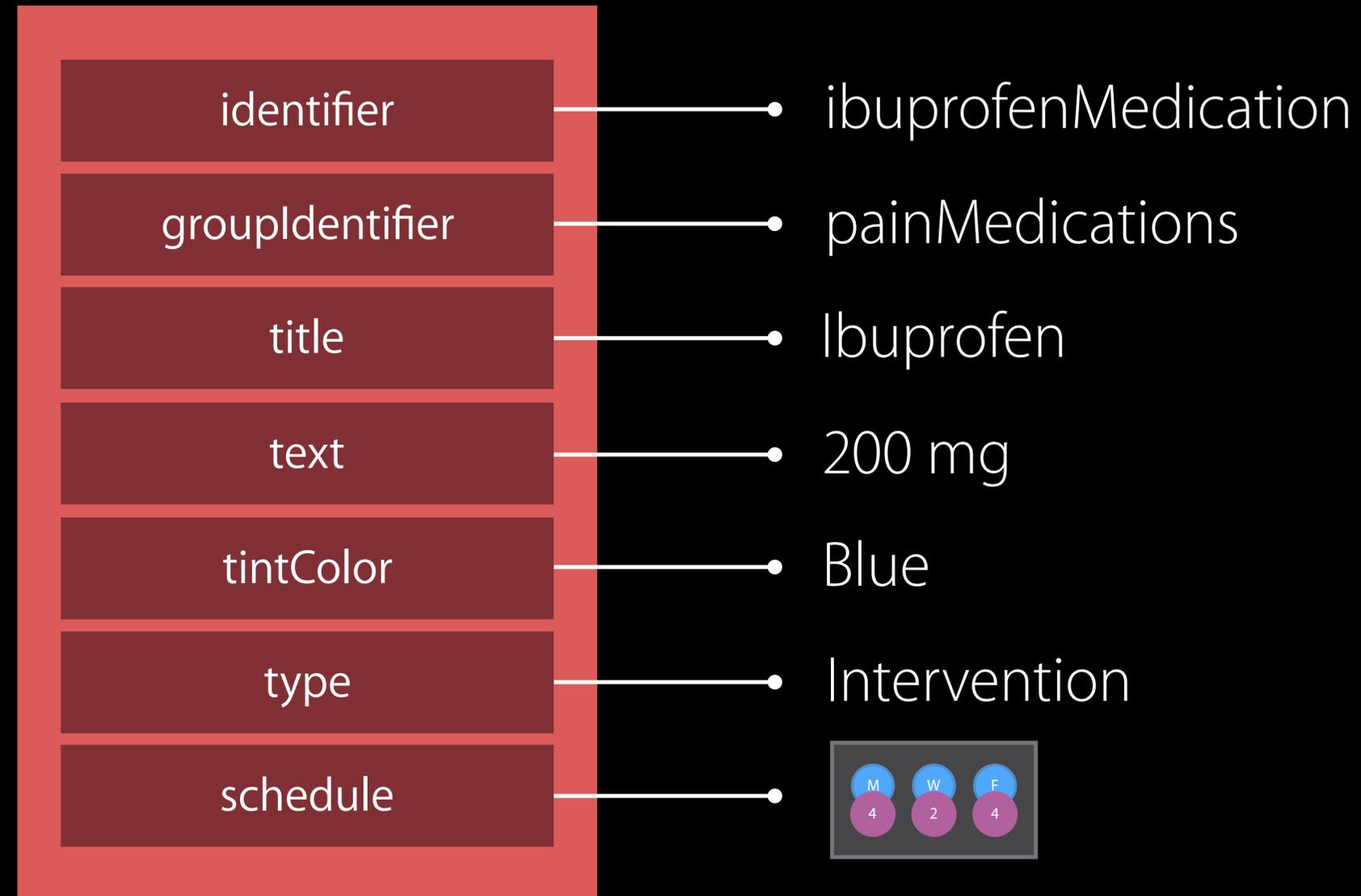
Encrypted data storage



# Care Card

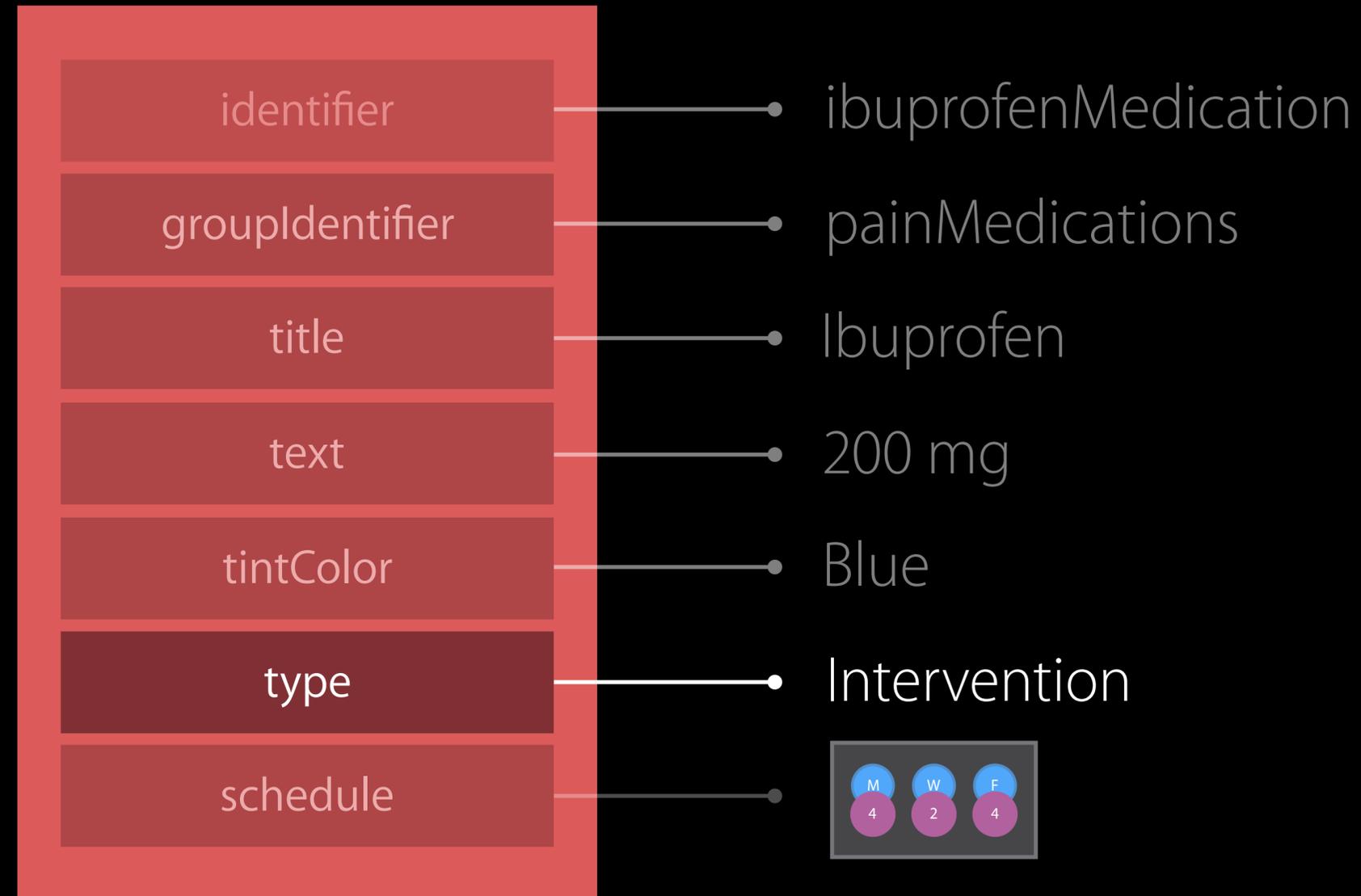
Interactive treatment plan

# Care Plan Store



Activity

# Care Plan Store



Activity

```
// Creating a Care Card
// Link it to a Care Plan Store

// Create a Care Card view controller.
let viewController = OCKCareCardViewController(carePlanStore: myCarePlanStore)

// Embed the view controller in a navigation controller.
let navController = UINavigationController(rootViewController: viewController)

self.present(navController, animated: true, completion: nil)
```

```
// Creating a Care Card
// Link it to a Care Plan Store

// Create a Care Card view controller.
let viewController = OCKCareCardViewController(carePlanStore: myCarePlanStore)

// Embed the view controller in a navigation controller.
let navController = UINavigationController(rootViewController: viewController)

self.present(navController, animated: true, completion: nil)
```

```
// Creating a Care Card
// Link it to a Care Plan Store

// Create a Care Card view controller.
let viewController = OCKCareCardViewController(carePlanStore: myCarePlanStore)

// Embed the view controller in a navigation controller.
let navController = UINavigationController(rootViewController: viewController)

self.present(navController, animated: true, completion: nil)
```

```
// Creating a Care Card
// Link it to a Care Plan Store

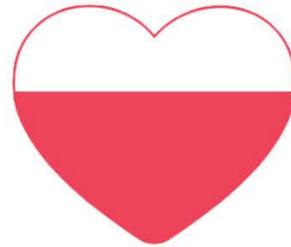
// Create a Care Card view controller.
let viewController = OCKCareCardViewController(carePlanStore: myCarePlanStore)

// Embed the view controller in a navigation controller.
let navController = UINavigationController(rootViewController: viewController)

self.present(navController, animated: true, completion: nil)
```

# Care Card

Today

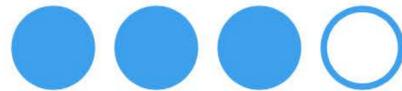


## Care Completion

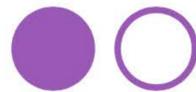
June 17, 2016

64%

### Ibuprofen 200mg



### Stand and move a little For at least 2 minutes



### Diet Fluids only, every 6 hours



### Keep bandage dry Do not change gauze



### Physical Therapy Knee and back



Care Card



Symptom Tracker



Insights



Connect

# Care Card

Today



## Care Completion

June 17, 2016

64%

Ibuprofen 200mg



Stand and move a little For at least 2 minutes



Diet Fluids only, every 6 hours



Keep bandage dry Do not change gauze



Physical Therapy Knee and back



Care Card



Symptom Tracker



Insights



Connect

# Care Card

Today

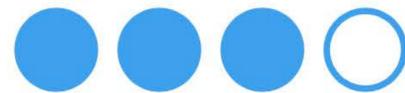


## Care Completion

June 17, 2016

64%

### Ibuprofen 200mg



### Stand and move a little For at least 2 minutes



### Diet Fluids only, every 6 hours



### Keep bandage dry Do not change gauze



### Physical Therapy Knee and back



Care Card



Symptom Tracker



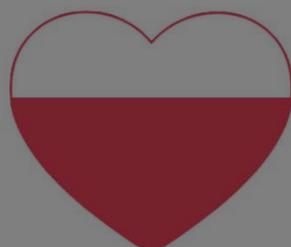
Insights



Connect

# Care Card

Today



## Care Completion

June 17, 2016

64%

**Ibuprofen 200mg**



**Stand and move a little** For at least 2 minutes



**Diet** Fluids only, every 6 hours



**Keep bandage dry** Do not change gauze



**Physical Therapy** Knee and back



Care Card



Symptom Tracker



Insights



Connect

# Ibuprofen

200mg

## INSTRUCTIONS

Take with food. If you experience any side effects, discontinue immediately and contact your physician.

## ADDITIONAL INFORMATION



Care Card



Symptom Tracker



Insights



Connect

# Care Card

Today

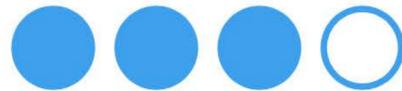


## Care Completion

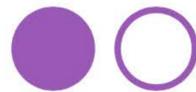
June 17, 2016

64%

Ibuprofen 200mg



Stand and move a little For at least 2 minutes



Diet Fluids only, every 6 hours



Keep bandage dry Do not change gauze



Physical Therapy Knee and back



Care Card



Symptom Tracker



Insights



Connect

# Care Card

Today



## Care Completion

June 17, 2016

64%

Ibuprofen 200mg



Stand and move a little For at least 2 minutes



Diet Fluids only, every 6 hours



Keep bandage dry Do not change gauze



Physical Therapy Knee and back



Care Card



Symptom Tracker



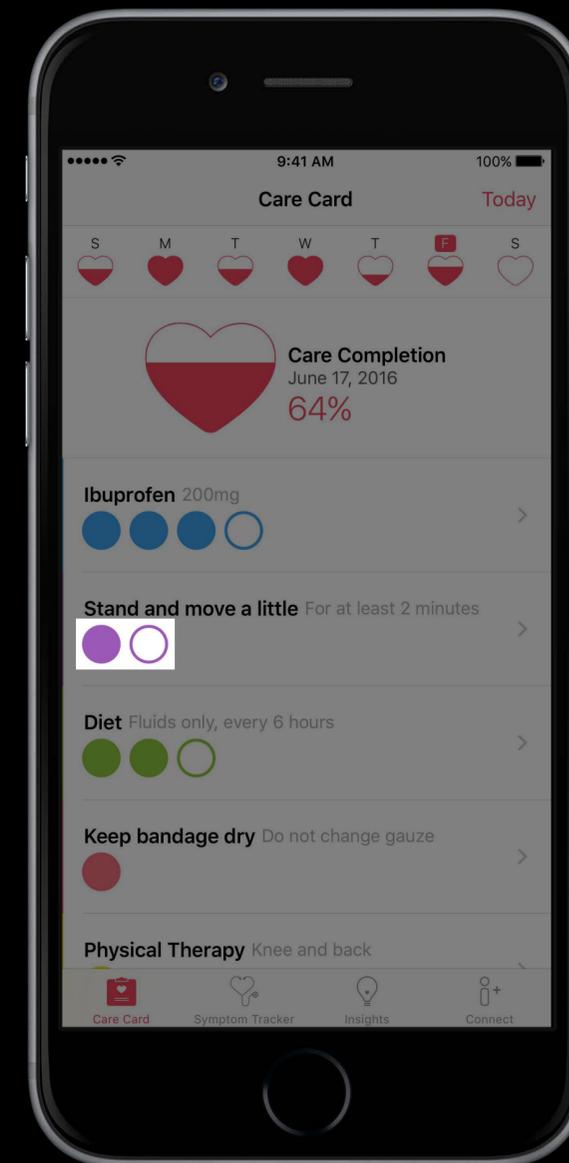
Insights



Connect

# Updating Events

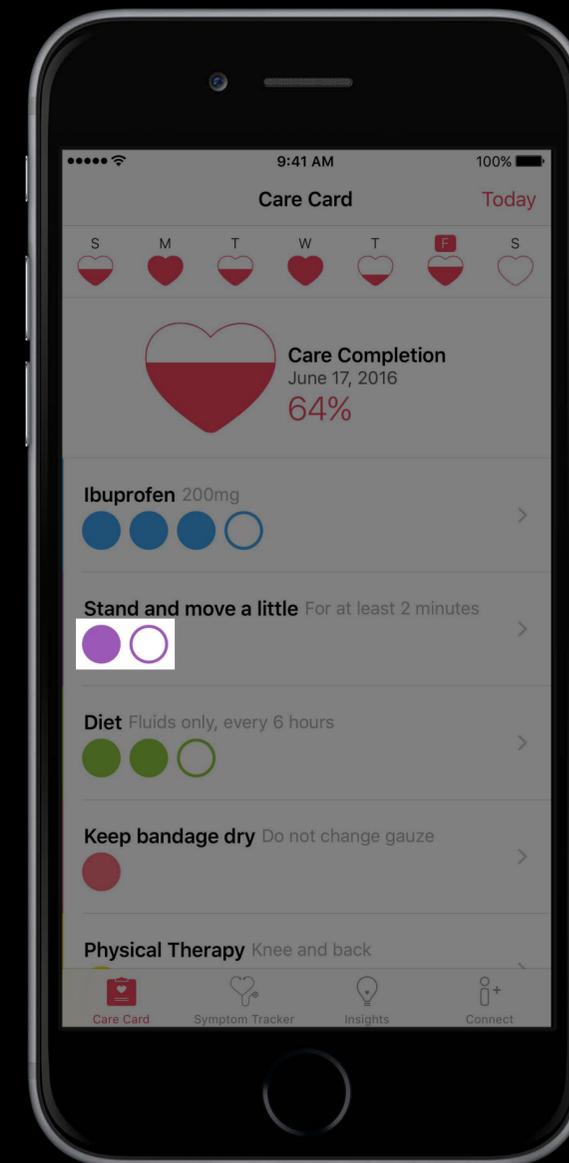
## Care Card



# Updating Events

## Care Card

Self-reported

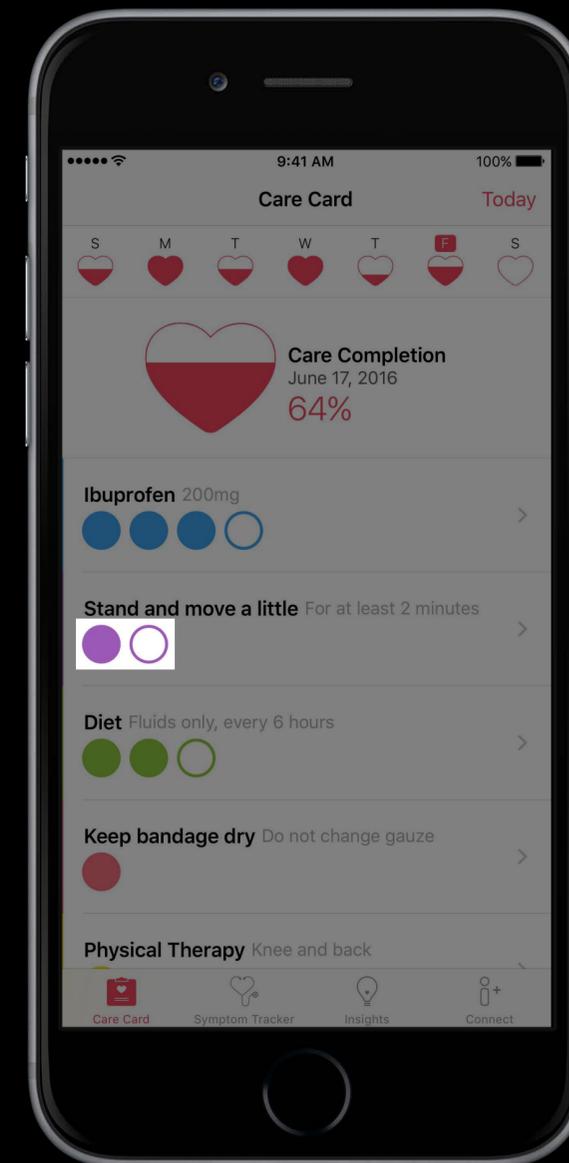


# Updating Events

## Care Card

Self-reported

Task completion



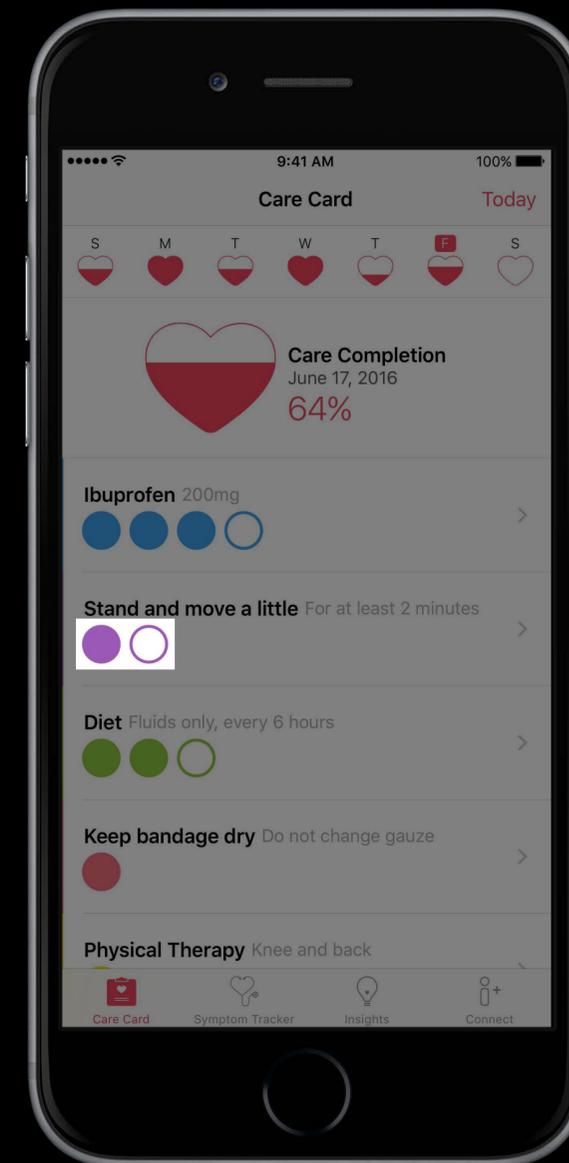
# Updating Events

## Care Card

Self-reported

Task completion

Device sensors via HealthKit



# Care Card

Today

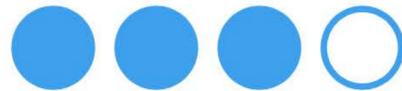


## Care Completion

June 17, 2016

64%

### Ibuprofen 200mg



### Stand and move a little For at least 2 minutes



### Diet Fluids only, every 6 hours



### Keep bandage dry Do not change gauze



### Physical Therapy Knee and back



Care Card



Symptom Tracker



Insights



Connect



# Care Card

Interactive treatment plan



# Symptom and Measurement Tracker

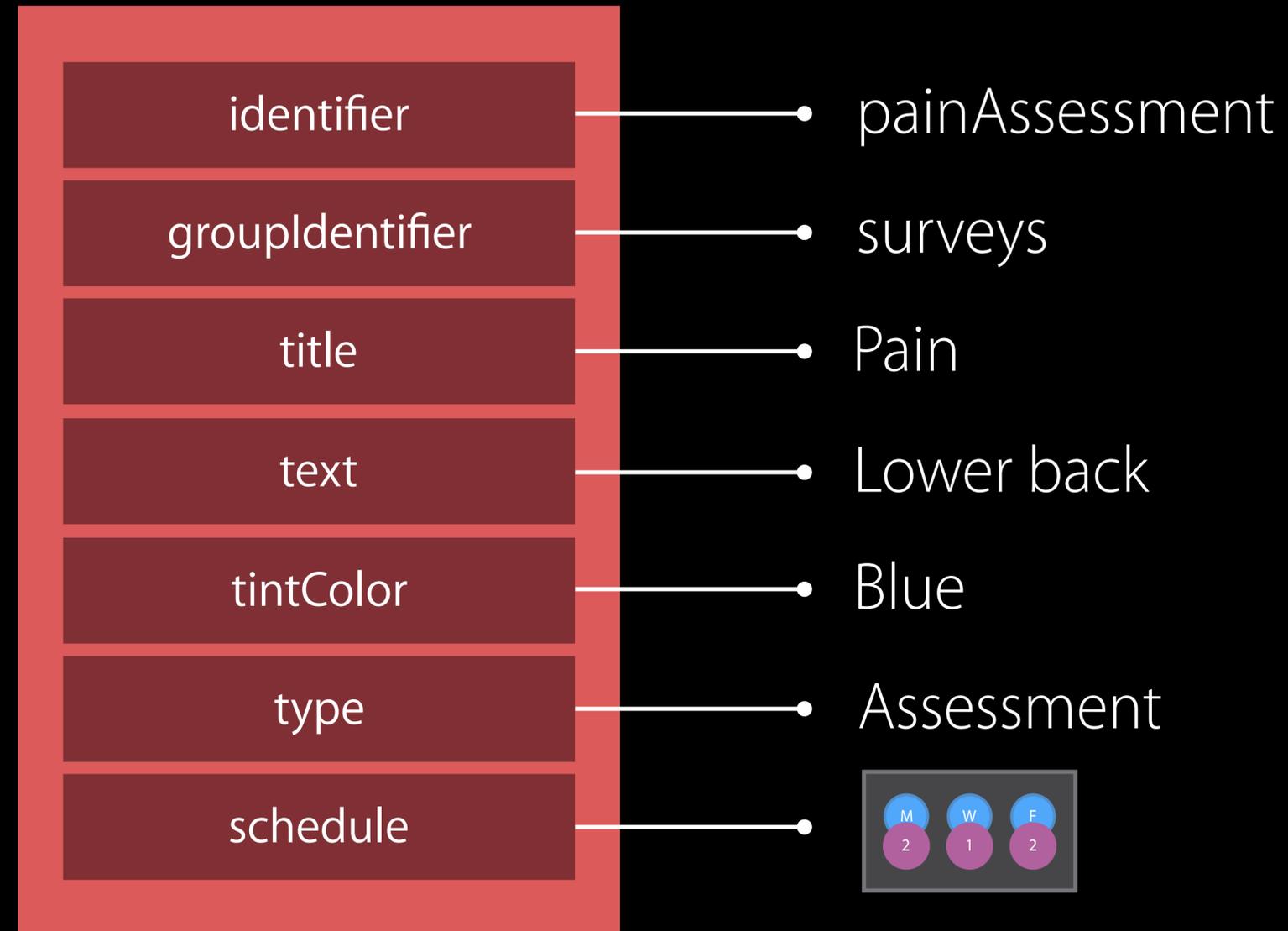
Subjective and objective data

# Care Plan Store



Activity

# Care Plan Store



Activity

```
// Create a Symptom Tracker
// Link it to a Care Plan Store

// Create a Symptom Tracker view controller.
let viewController = OCKSymptomTrackerViewController(carePlanStore: myCarePlanStore)
viewController.delegate = self

// Embed the view controller in a navigation controller.
let navController = UINavigationController(rootViewController: viewController)
```

```
// Create a Symptom Tracker  
// Link it to a Care Plan Store
```

```
// Create a Symptom Tracker view controller.  
let viewController = OCKSymptomTrackerViewController(carePlanStore: myCarePlanStore)  
viewController.delegate = self
```

```
// Embed the view controller in a navigation controller.  
let navController = UINavigationController(rootViewController: viewController)
```

```
// Create a Symptom Tracker
// Link it to a Care Plan Store

// Create a Symptom Tracker view controller.
let viewController = OCKSymptomTrackerViewController(carePlanStore: myCarePlanStore)
viewController.delegate = self

// Embed the view controller in a navigation controller.
let navigationController = UINavigationController(rootViewController: viewController)
```



9:41 AM

100%

# Symptom Tracker

Today



## Activity Completion

June 17, 2016

### Pain

Lower back

6  
of 10 >

### Range of Motion

Arm movement

50  
degrees >

### Discoloration

Around surgical area

None  
present >

### Weight

Bluetooth scale

145  
lbs >



Care Card



Symptom Tracker



Insights



Connect



9:41 AM

100%

# Symptom Tracker

Today



## Activity Completion

June 17, 2016

### Pain

Lower back

6  
of 10 >

### Range of Motion

Arm movement

50  
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Bluetooth scale

145  
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Care Card



Symptom Tracker



Insights



Connect



9:41 AM

100%

# Symptom Tracker

Today



## Activity Completion

June 17, 2016

### Pain

Lower back

6  
of 10 >

### Range of Motion

Arm movement

50  
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Around surgical area

None  
present >

### Weight

Bluetooth scale

145  
lbs >



Care Card



Symptom Tracker

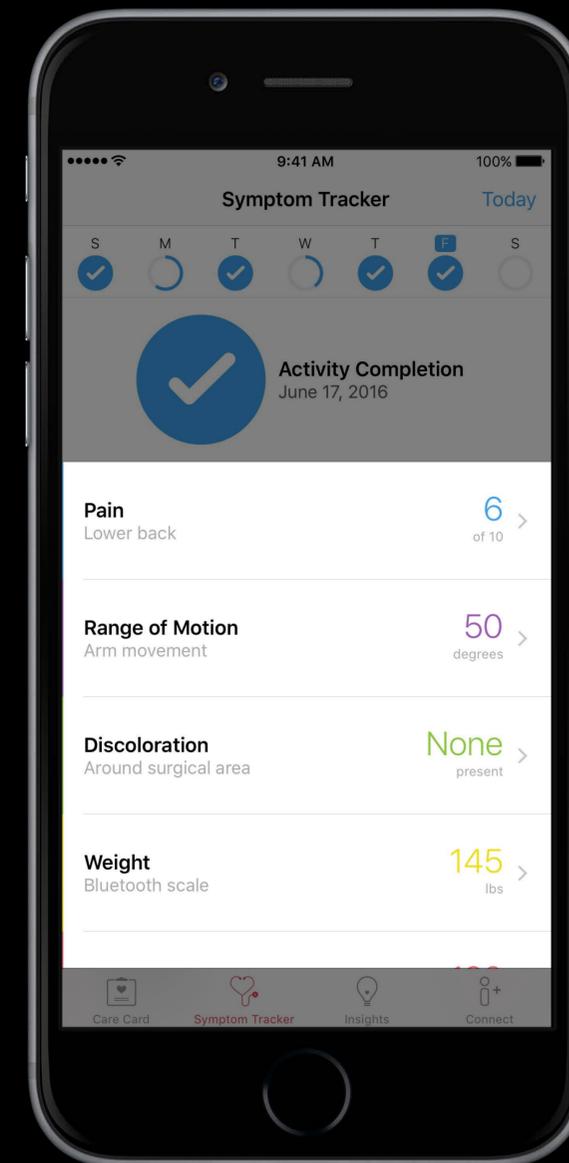


Insights



Connect

# Assessments



# Assessments

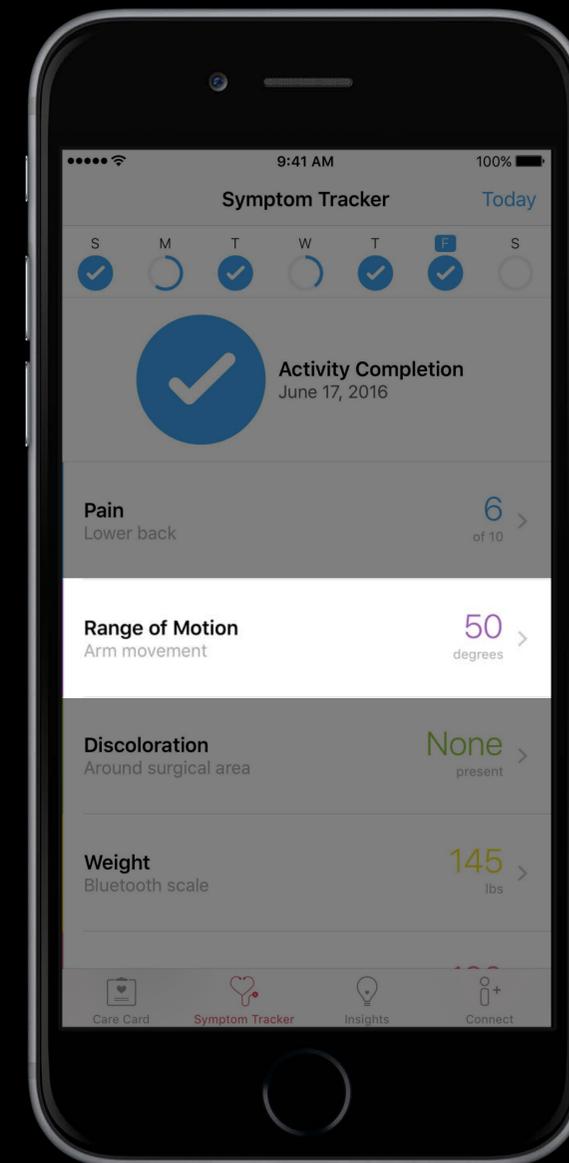
Survey



# Assessments

Survey

Active task

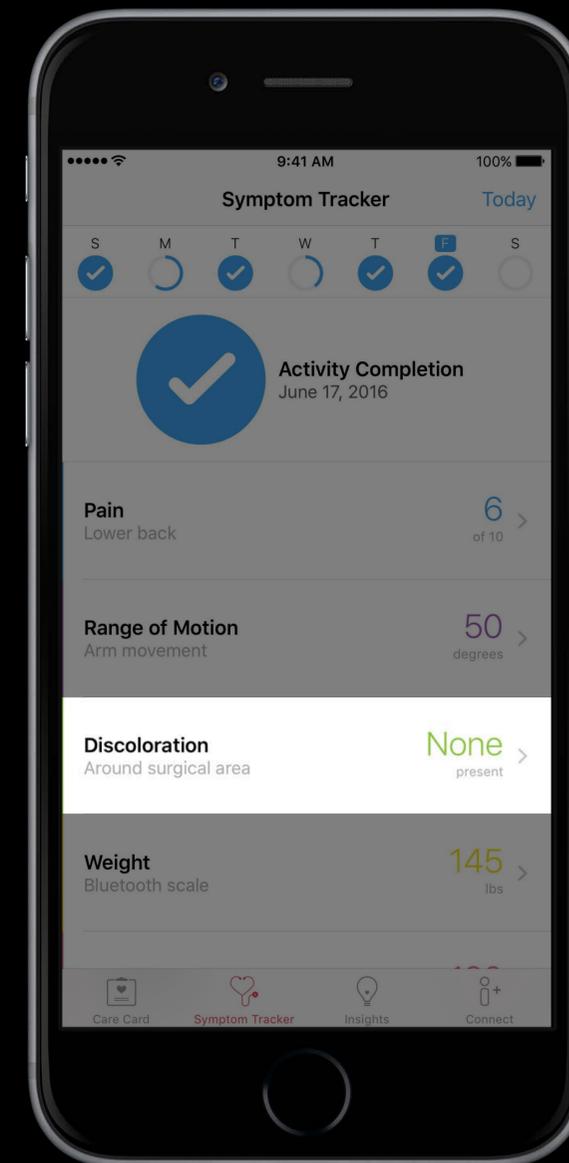


# Assessments

Survey

Active task

Self-reported



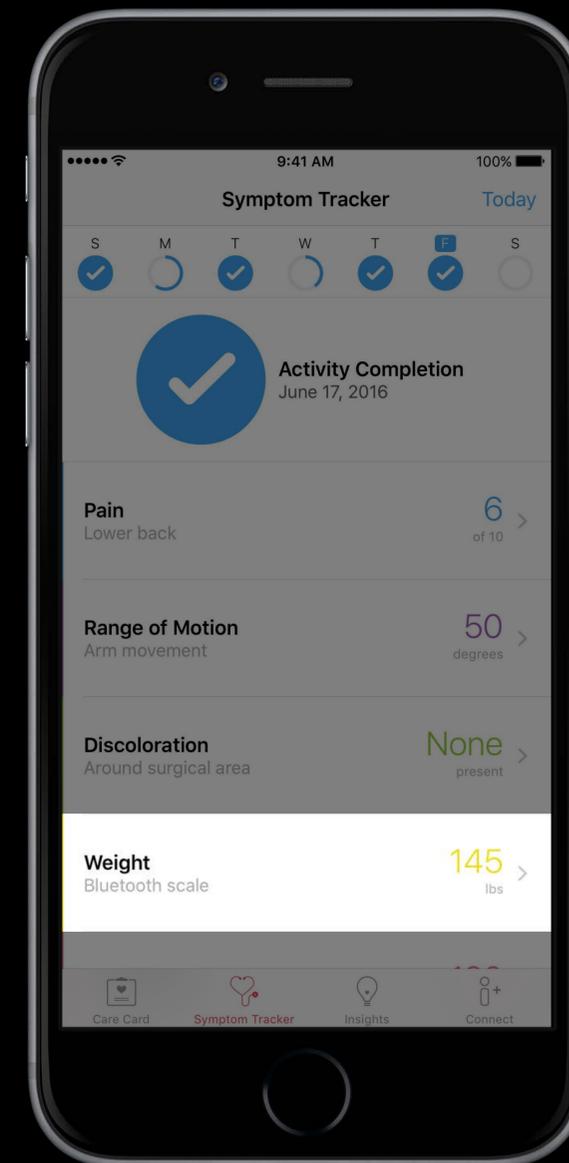
# Assessments

Survey

Active task

Self-reported

HealthKit / Bluetooth device



```
// Symptom Tracker Delegate
// Implement delegate to present assessments

func symptomTrackerViewController(_ viewController: OCKSymptomTrackerViewController,
didSelectRowWithAssessmentEvent assessmentEvent: OCKCarePlanEvent) {
    // Look up the assessment activity.
    let activity = assessmentEvent.activity
    presentViewController(for: activity)
}
```

```
func updateResult(of event: OCKCarePlanEvent) {
    // Obtain values for event.
    let painScoreValue = getPainScore()

    // Create a result object.
    let result = OCKCarePlanEventResult(valueString: painScoreValue, unitString: "of 10",
    userInfo: nil)

    // Update the Care Plan Store.
    myCarePlanStore.update(event, with: result, state: .completed, completion: { success,
    event, error in
        // Perform error checking.
        ...
    })
}
```

```
func updateResult(of event: OCKCarePlanEvent) {  
    // Obtain values for event.  
    let painScoreValue = getPainScore()  
  
    // Create a result object.  
    let result = OCKCarePlanEventResult(valueString: painScoreValue, unitString: "of 10",  
    userInfo: nil)  
  
    // Update the Care Plan Store.  
    myCarePlanStore.update(event, with: result, state: .completed, completion: { success,  
    event, error in  
        // Perform error checking.  
        ...  
    })  
}
```

```
func updateResult(of event: OCKCarePlanEvent) {
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    let painScoreValue = getPainScore()

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    // Update the Care Plan Store.
    myCarePlanStore.update(event, with: result, state: .completed, completion: { success,
    event, error in
        // Perform error checking.
        ...
    })
}
```

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    // Obtain values for event.
    let painScoreValue = getPainScore()

    // Create a result object.
    let result = OCKCarePlanEventResult(valueString: painScoreValue, unitString: "of 10",
    userInfo: nil)

    // Update the Care Plan Store.
    myCarePlanStore.update(event, with: result, state: .completed, completion: { success,
    event, error in
        // Perform error checking.
        ...
    })
}
```

# Symptom Tracker

Today



## Activity Completion

June 17, 2016

### Pain

Lower back

6  
of 10 >

### Range of Motion

Arm movement

50  
degrees >

### Discoloration

Around surgical area

None  
present >

### Weight

Bluetooth scale

145  
lbs >



Care Card



Symptom Tracker



Insights

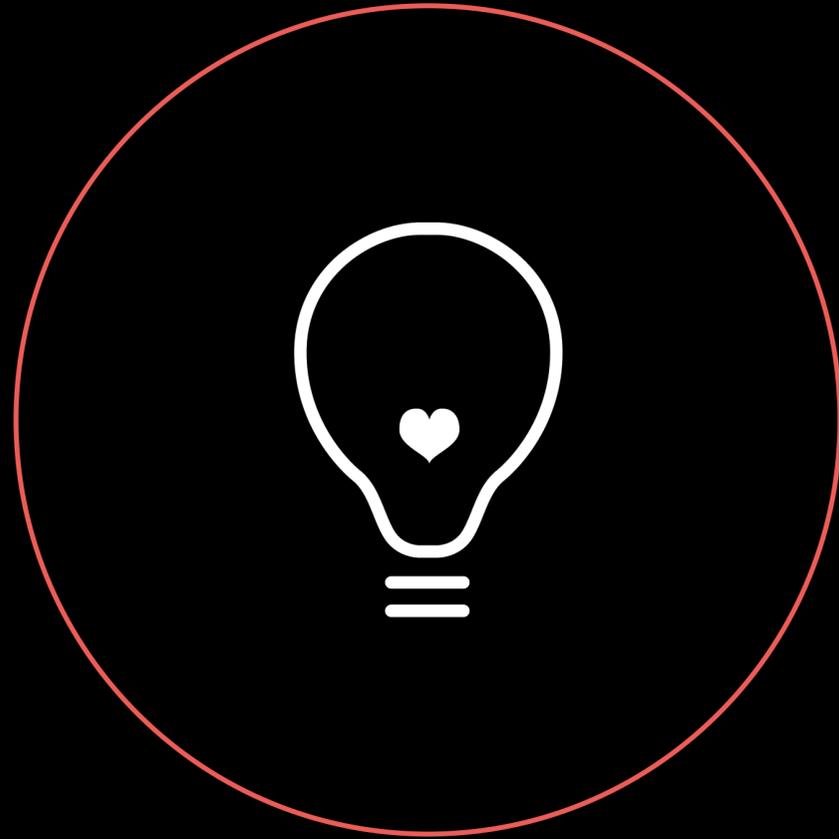


Connect



# Symptom and Measurement Tracker

Subjective and objective data



# Insights

Understanding your data

# Insights

Items

# Insights

Items

Messages

- Tip
- Alert

# Insights

## Items

### Messages

- Tip
- Alert

### Charts

- Grouped bar chart
- Custom chart

# Insights

## Weekly Insights

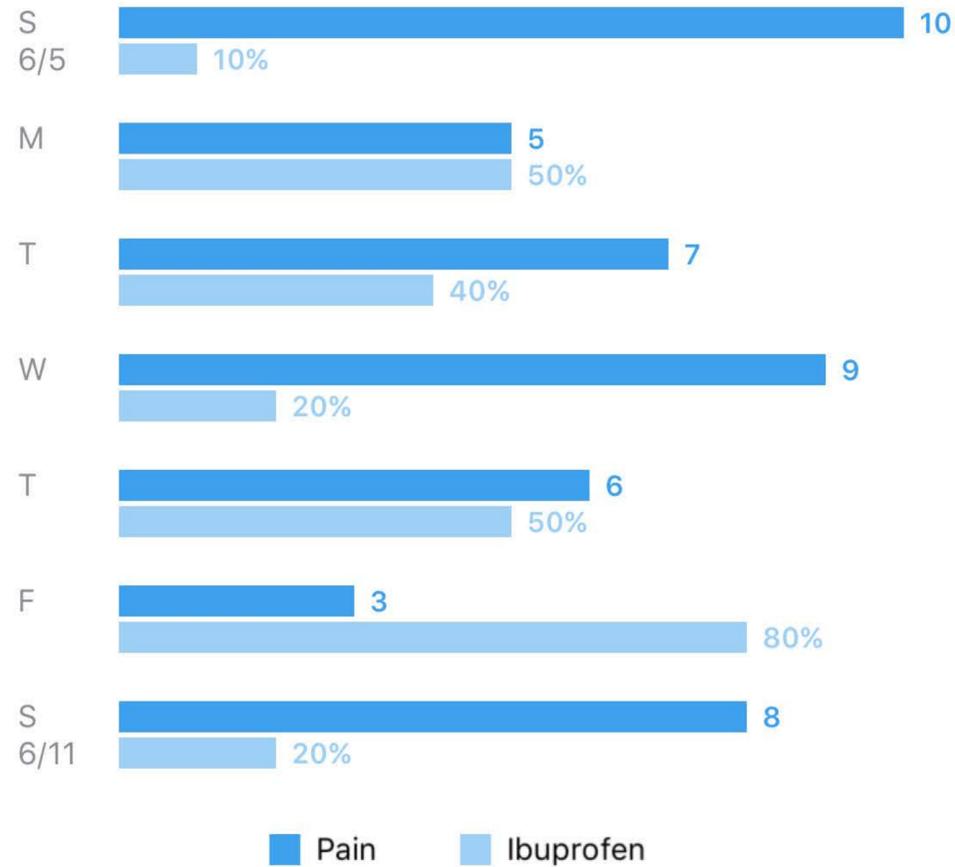
6/5 - 6/11

### Medication Adherence \*

Your Ibuprofen adherence was 40% last week

### Pain

with Ibuprofen



### Pain Score Update

Your pain score ranged between 10 to 3 in the past



Care Card



Symptom Tracker



Insights



Connect



9:41 AM

100%

# Insights

## Weekly Insights

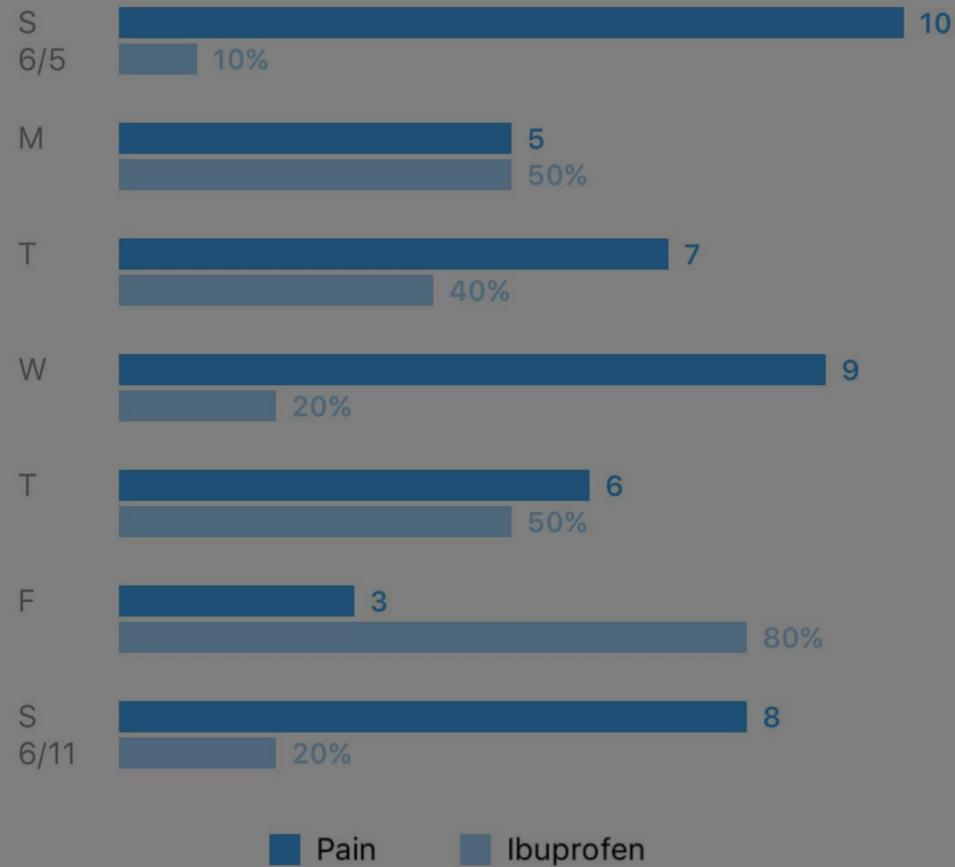
6/5 - 6/11

### Medication Adherence \*

Your Ibuprofen adherence was 40% last week

### Pain

with Ibuprofen



### Pain Score Update

Your pain score ranged between 10 to 3 in the past



Care Card



Symptom Tracker



Insights



Connect

```
func queryStoreForIbuprofenActivity() {
    // Query the Care Plan Store for Ibuprofen data.
    let startDate = DateComponents(year: 2016, month: 06, day: 05)
    let endDate = DateComponents(year: 2016, month: 06, day: 11)

    carePlanStore.enumerateEvents(of: ibuprofenActivity, startDate: startDate, endDate:
endDate, handler: { event in
        if event?.state == .completed {
            // Calculate adherence
            ...
        }
    }, completion: { success, error? in
        // Perform error checking
        ...
    })
}
```

```
func queryStoreForIbuprofenActivity() {  
    // Query the Care Plan Store for Ibuprofen data.  
    let startDate = DateComponents(year: 2016, month: 06, day: 05)  
    let endDate = DateComponents(year: 2016, month: 06, day: 11)  
  
    carePlanStore.enumerateEvents(of: ibuprofenActivity, startDate: startDate, endDate:  
endDate, handler: { event in  
        if event?.state == .completed {  
            // Calculate adherence  
            ...  
        }  
    }, completion: { success, error? in  
        // Perform error checking  
        ...  
    })  
}
```

```
func queryStoreForIbuprofenActivity() {
    // Query the Care Plan Store for Ibuprofen data.
    let startDate = DateComponents(year: 2016, month: 06, day: 05)
    let endDate = DateComponents(year: 2016, month: 06, day: 11)

    carePlanStore.enumerateEvents(of: ibuprofenActivity, startDate: startDate, endDate:
endDate, handler: { event in
        if event?.state == .completed {
            // Calculate adherence
            ...
        }
    }, completion: { success, error? in
        // Perform error checking
        ...
    })
}
```

```
var ibuprofenMessageItem: OCKInsightItem

func createIbuprofenMessageItem() {
    // Generate message using Care Plan Store data.
    let adherencePercentage = calculateIbuprofenAdherence()
    let message = "Your Ibuprofen adherence was \(adherencePercentage) last week."

    ibuprofenMessageItem = OCKMessageItem(title: "Medication Adherence", text: message,
    tint color: UIColor.red(), messageType: .tip)
}
```

```
var ibuprofenMessageItem: OCKInsightItem
```

```
func createIbuprofenMessageItem() {  
    // Generate message using Care Plan Store data.  
    let adherencePercentage = calculateIbuprofenAdherence()  
    let message = "Your Ibuprofen adherence was \ (adherencePercentage) last week."  
  
    ibuprofenMessageItem = OCKMessageItem(title: "Medication Adherence", text: message,  
    tint color: UIColor.red(), messageType: .tip)  
}
```

```
var ibuprofenMessageItem: OCKInsightItem
```

```
func createIbuprofenMessageItem() {
```

```
    // Generate message using Care Plan Store data.
```

```
    let adherencePercentage = calculateIbuprofenAdherence()
```

```
    let message = "Your Ibuprofen adherence was \ (adherencePercentage) last week."
```

```
    ibuprofenMessageItem = OCKMessageItem(title: "Medication Adherence", text: message,
```

```
    tint color: UIColor.red(), messageType: .tip)
```

```
}
```

```
var ibuprofenMessageItem: OCKInsightItem
```

```
func createIbuprofenMessageItem() {
```

```
    // Generate message using Care Plan Store data.
```

```
    let adherencePercentage = calculateIbuprofenAdherence()
```

```
    let message = "Your Ibuprofen adherence was \ (adherencePercentage) last week."
```

```
    ibuprofenMessageItem = OCKMessageItem(title: "Medication Adherence", text: message,
```

```
    tint color: UIColor.red(), messageType: .tip)
```

```
}
```

# Insights

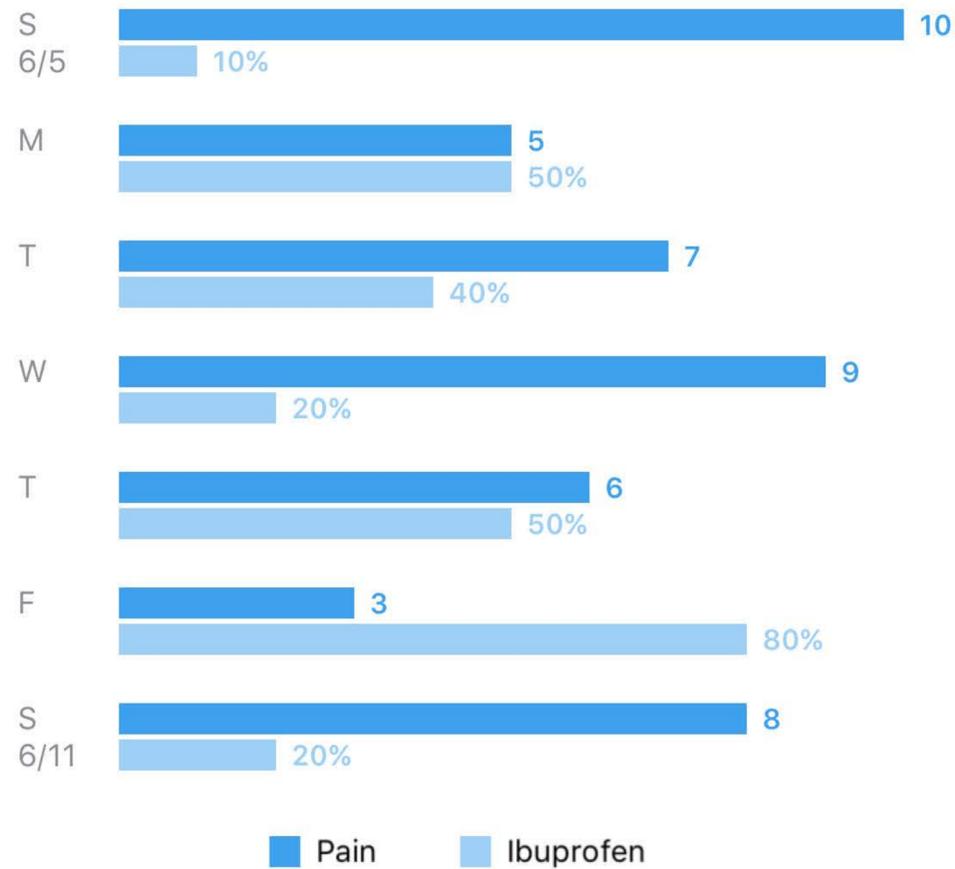
## Weekly Insights 6/5 - 6/11

### Medication Adherence \*

Your Ibuprofen adherence was 40% last week

### Pain

with Ibuprofen



### Pain Score Update

Your pain score ranged between 10 to 3 in the past



Care Card



Symptom Tracker



Insights



Connect

```
var barChartItem: OCKInsightItem

func createBarChartItem() {
    let painSeries = OCKBarSeries(title: "Pain", values: [10, 5, 7, 9, 6, 3, 8],
valueLabels: ["10", "5", "7", "9", "6", "3", "8"], tintColor: UIColor.blue())

    let ibuprofenSeries = OCKBarSeries(title: "Ibuprofen", values: [1, 5, 4, 2, 5, 8, 2],
valueLabels: ["10%", "50%", "40%", "20%", "50%", "80%", "20%"], tintColor:
UIColor.blue().withAlphaComponent(0.75))

    barChartItem = OCKBarChart(title: "Pain", text: "with Ibuprofen", tintColor:
UIColor.blue(), axisTitles: ["S", "M", "T", "W", "T", "F", "S"], axisSubtitles: ["6/5",
"", "", "", "", "", "6/11"], dataSeries: [painSeries, ibuprofenSeries],
minimumScaleRangeValue: 0, maximumScaleRangeValue: 10)
}
```

```
var barChartItem: OCKInsightItem
```

```
func createBarChartItem() {  
    let painSeries = OCKBarSeries(title: "Pain", values: [10, 5, 7, 9, 6, 3, 8],  
valueLabels: ["10", "5", "7", "9", "6", "3", "8"], tintColor: UIColor.blue())  
  
    let ibuprofenSeries = OCKBarSeries(title: "Ibuprofen", values: [1, 5, 4, 2, 5, 8, 2],  
valueLabels: ["10%", "50%", "40%", "20%", "50%", "80%", "20%"], tintColor:  
UIColor.blue().withAlphaComponent(0.75))  
  
    barChartItem = OCKBarChart(title: "Pain", text: "with Ibuprofen", tintColor:  
UIColor.blue(), axisTitles: ["S", "M", "T", "W", "T", "F", "S"], axisSubtitles: ["6/5",  
"", "", "", "", "", "6/11"], dataSeries: [painSeries, ibuprofenSeries],  
minimumScaleRangeValue: 0, maximumScaleRangeValue: 10)  
}
```

```
var barChartItem: OCKInsightItem
```

```
func createBarChartItem() {
```

```
    let painSeries = OCKBarSeries(title: "Pain", values: [10, 5, 7, 9, 6, 3, 8],  
valueLabels: ["10", "5", "7", "9", "6", "3", "8"], tintColor: UIColor.blue())
```

```
    let ibuprofenSeries = OCKBarSeries(title: "Ibuprofen", values: [1, 5, 4, 2, 5, 8, 2],  
valueLabels: ["10%", "50%", "40%", "20%", "50%", "80%", "20%"], tintColor:  
UIColor.blue().withAlphaComponent(0.75))
```

```
    barChartItem = OCKBarChart(title: "Pain", text: "with Ibuprofen", tintColor:  
UIColor.blue(), axisTitles: ["S", "M", "T", "W", "T", "F", "S"], axisSubtitles: ["6/5",  
"", "", "", "", "", "6/11"], dataSeries: [painSeries, ibuprofenSeries],  
minimumScaleRangeValue: 0, maximumScaleRangeValue: 10)
```

```
}
```

```
var barChartItem: OCKInsightItem
```

```
func createBarChartItem() {
```

```
    let painSeries = OCKBarSeries(title: "Pain", values: [10, 5, 7, 9, 6, 3, 8],  
valueLabels: ["10", "5", "7", "9", "6", "3", "8"], tintColor: UIColor.blue())
```

```
    let ibuprofenSeries = OCKBarSeries(title: "Ibuprofen", values: [1, 5, 4, 2, 5, 8, 2],  
valueLabels: ["10%", "50%", "40%", "20%", "50%", "80%", "20%"], tintColor:  
UIColor.blue().withAlphaComponent(0.75))
```

```
    barChartItem = OCKBarChart(title: "Pain", text: "with Ibuprofen", tintColor:  
UIColor.blue(), axisTitles: ["S", "M", "T", "W", "T", "F", "S"], axisSubtitles: ["6/5",  
"", "", "", "", "", "6/11"], dataSeries: [painSeries, ibuprofenSeries],  
minimumScaleRangeValue: 0, maximumScaleRangeValue: 10)
```

```
}
```

```
var barChartItem: OCKInsightItem
```

```
func createBarChartItem() {
```

```
    let painSeries = OCKBarSeries(title: "Pain", values: [10, 5, 7, 9, 6, 3, 8],  
valueLabels: ["10", "5", "7", "9", "6", "3", "8"], tintColor: UIColor.blue())
```

```
    let ibuprofenSeries = OCKBarSeries(title: "Ibuprofen", values: [1, 5, 4, 2, 5, 8, 2],  
valueLabels: ["10%", "50%", "40%", "20%", "50%", "80%", "20%"], tintColor:  
UIColor.blue().withAlphaComponent(0.75))
```

```
    barChartItem = OCKBarChart(title: "Pain", text: "with Ibuprofen", tintColor:  
UIColor.blue(), axisTitles: ["S", "M", "T", "W", "T", "F", "S"], axisSubtitles: ["6/5",  
"", "", "", "", "", "6/11"], dataSeries: [painSeries, ibuprofenSeries],  
minimumScaleRangeValue: 0, maximumScaleRangeValue: 10)
```

```
}
```

```
// Creating an Insights Dashboard
// Provide an array of insight items

// Create an Insights view controller.
let viewController = OCKInsightsViewController(insightItems: [ibuprofenMessageItem,
barChartItem], headerTitle: "Weekly Insights", headerSubtitle: "6/5 - 6/11")
```

# Insights

## Weekly Insights

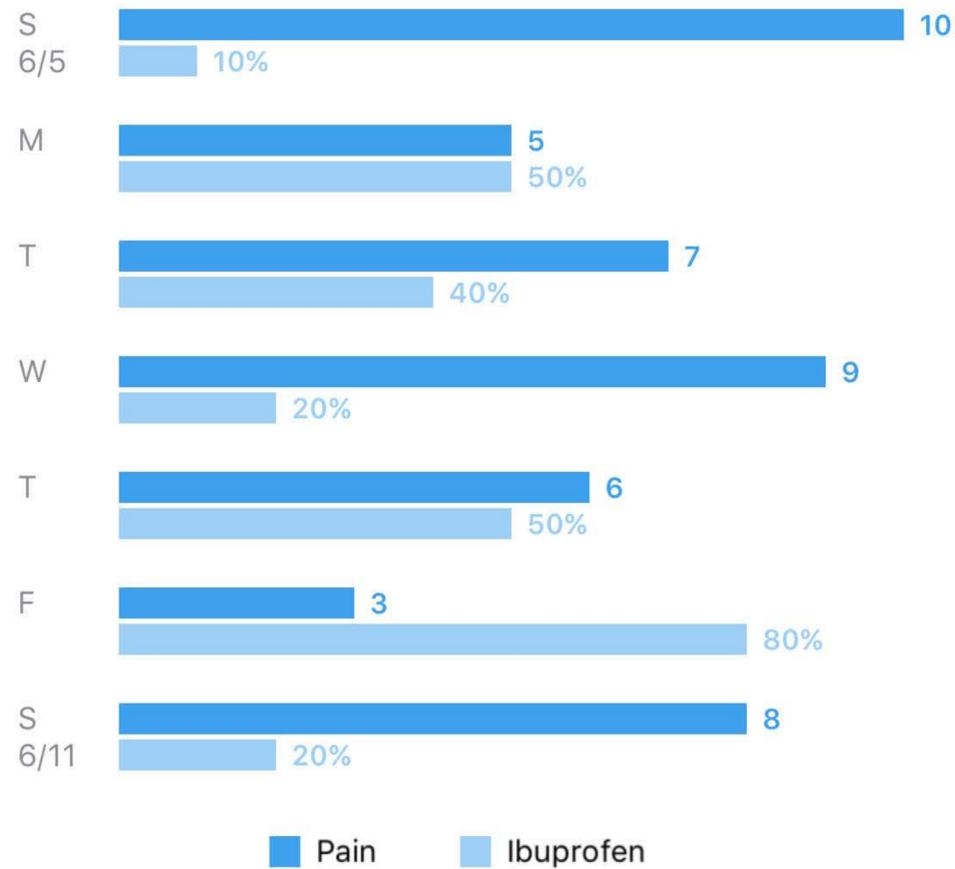
6/5 - 6/11

### Medication Adherence \*

Your Ibuprofen adherence was 40% last week

### Pain

with Ibuprofen



### Pain Score Update ●

Your pain score ranged between 10 to 3 in the past



Care Card



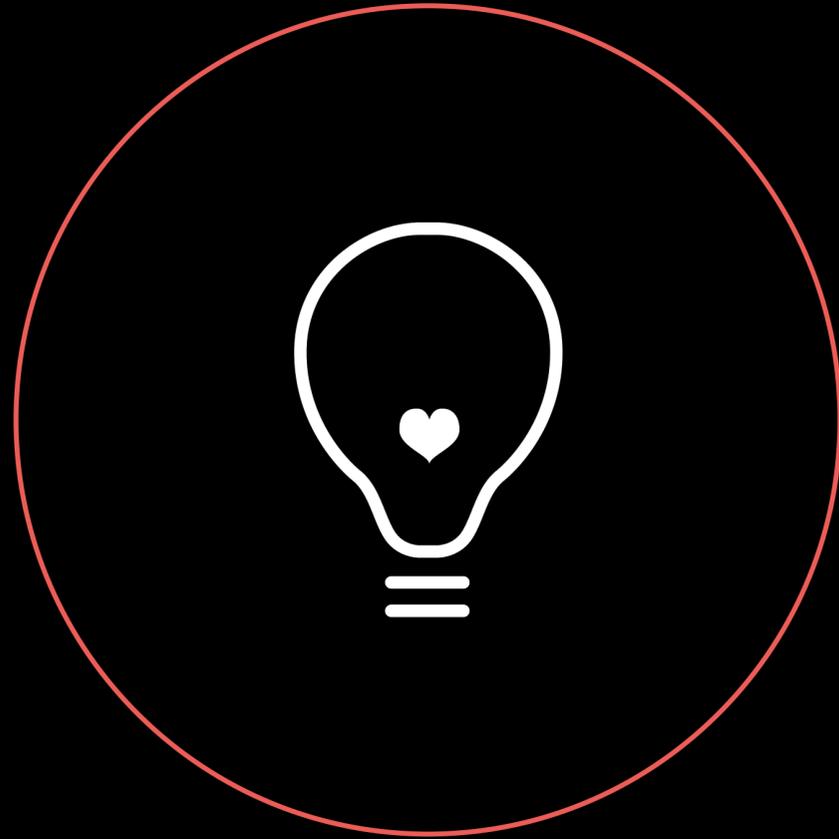
Symptom Tracker



Insights

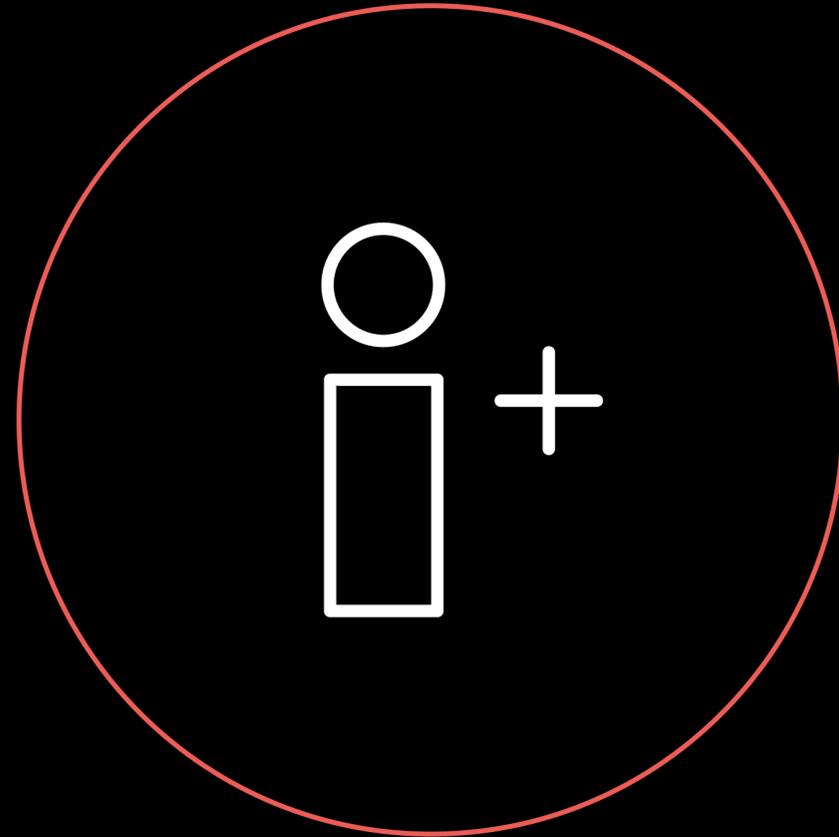


Connect



# Insights

Understanding your data



Connect

Communicate and share

# Connect

## Contacts

# Connect

## Contacts

### Care Team

- Physician
- Nurse

# Connect

## Contacts

### Care Team

- Physician
- Nurse

### Personal

- Friend
- Family



9:41 AM

100%

## Connect

### CARE TEAM



**Dr. Paul Cashman**  
Physician



**Greg Apodaca**  
Nurse



### FRIENDS & FAMILY



**Kevin Frank**  
Father



**Katie Abeles**  
Sister



**Chance Graham**  
Uncle



Care Card



Symptom Tracker



Insights



Connect



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## Connect

### CARE TEAM



**Dr. Paul Cashman**  
Physician



**Greg Apodaca**  
Nurse



### FRIENDS & FAMILY



**Kevin Frank**  
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**Chance Graham**  
Uncle



Care Card



Symptom Tracker



Insights



Connect



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## Connect

### CARE TEAM



**Dr. Paul Cashman**  
Physician



**Greg Apodaca**  
Nurse



### FRIENDS & FAMILY



**Kevin Frank**  
Father



**Katie Abeles**  
Sister



**Chance Graham**  
Uncle



Care Card



Symptom Tracker



Insights



Connect

```
var physicianContact: OCKContact

func createPhysicianContact() {
    physicianContact = OCKContact(contactType: .careTeam, name: "Dr. Paul Cashman",
    relation: "Physician", tint_color: UIColor.blue(), phoneNumber:
    CNPhoneNumber(stringValue: "361-555-0111"), messageNumber: CNPhoneNumber(stringValue:
    "361-555-0121"), emailAddress: "paulcash1@icloud.com", monogram: "PC", image:
    UIImage(named: "doctor"))
}
```

```
var physicianContact: OCKContact
```

```
func createPhysicianContact() {  
    physicianContact = OCKContact(contactType: .careTeam, name: "Dr. Paul Cashman",  
    relation: "Physician", tintColor: UIColor.blue(), phoneNumber:  
    CNPhoneNumber(stringValue: "361-555-0111"), messageNumber: CNPhoneNumber(stringValue:  
    "361-555-0121"), emailAddress: "paulcash1@icloud.com", monogram: "PC", image:  
    UIImage(named: "doctor"))  
}
```

```
var physicianContact: OCKContact
```

```
func createPhysicianContact() {
```

```
    physicianContact = OCKContact(contactType: .careTeam, name: "Dr. Paul Cashman",  
    relation: "Physician", tintColor: UIColor.blue(), phoneNumber:  
    CNPhoneNumber(stringValue: "361-555-0111"), messageNumber: CNPhoneNumber(stringValue:  
    "361-555-0121"), emailAddress: "paulcash1@icloud.com", monogram: "PC", image:  
    UIImage(named: "doctor"))
```

```
}
```

```
// Creating a Connect View Controller
// Provide an array of contacts

let viewController = OCKConnectViewController(contacts: [physicianContact, nurseContact,
fatherContact, sisterContact, uncleContact])
viewController.delegate = self

// Embed the view controller in a navigation controller.
let navController = UINavigationController(rootViewController: viewController)
```

```
// Creating a Connect View Controller
```

```
// Provide an array of contacts
```

```
let viewController = OCKConnectViewController(contacts: [physicianContact, nurseContact,  
fatherContact, sisterContact, uncleContact])  
viewController.delegate = self
```

```
// Embed the view controller in a navigation controller.
```

```
let navController = UINavigationController(rootViewController: viewController)
```

```
// Creating a Connect View Controller
```

```
// Provide an array of contacts
```

```
let viewController = OCKConnectViewController(contacts: [physicianContact, nurseContact,  
fatherContact, sisterContact, uncleContact])
```

```
viewController.delegate = self
```

```
// Embed the view controller in a navigation controller.
```

```
let navigationController = UINavigationController(rootViewController: viewController)
```

# Connect

## CARE TEAM



**Dr. Paul Cashman**  
Physician



**Greg Apodaca**  
Nurse



## FRIENDS & FAMILY



**Kevin Frank**  
Father



**Katie Abeles**  
Sister



**Chance Graham**  
Uncle



Care Card



Symptom Tracker



Insights



Connect



9:41 AM

100%

## Connect

### CARE TEAM



**Dr. Paul Cashman**  
Physician



**Greg Apodaca**  
Nurse



### FRIENDS & FAMILY



**Kevin Frank**  
Father



**Katie Abeles**  
Sister



**Chance Graham**  
Uncle



Care Card



Symptom Tracker



Insights



Connect

 Connect



**Dr. Paul Cashman**  
Physician

CONTACT INFO

phone  
361-555-0111



text  
361-555-0121



email  
paulcash1@icloud.com



SHARING

Send reports



Care Card



Symptom Tracker



Insights



Connect

 Connect



**Dr. Paul Cashman**  
Physician

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SHARING

Send reports



Care Card



Symptom Tracker



Insights



Connect

 Connect



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paulcash1@icloud.com



SHARING

Send reports



Care Card



Symptom Tracker



Insights



Connect

```
// Connect Delegate
// Implement the delegate to enable sharing

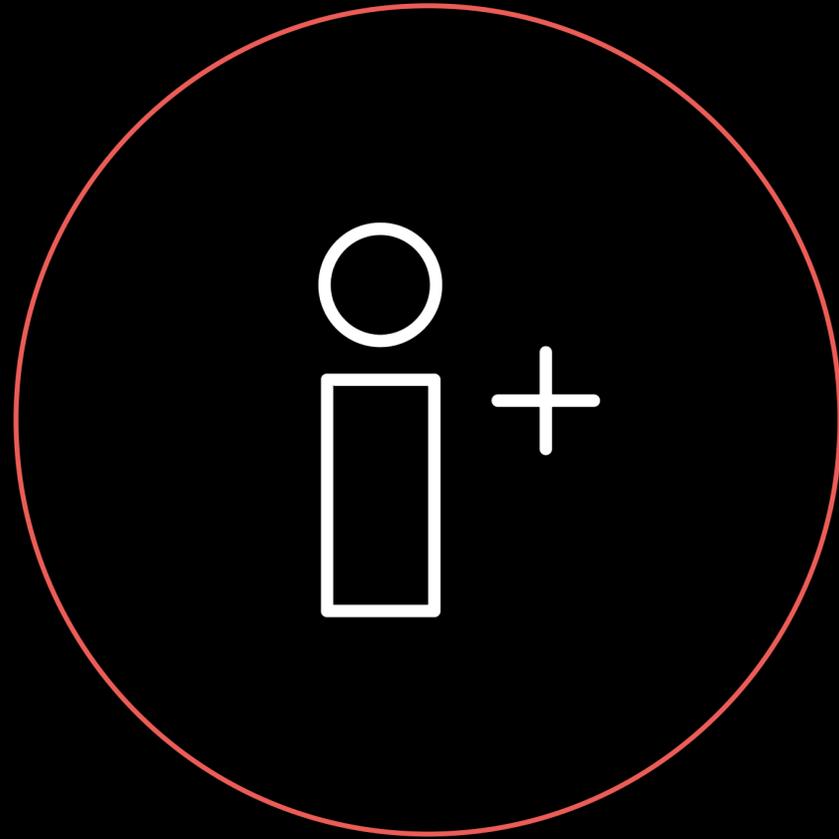
func connectViewController(_ connectViewController: OCKConnectViewController,
didSelectShareButtonFor contact: OCKContact, presentationSourceView sourceView: UIView) {
    generatePDFReport()
    sharePDFReport()
}
```

```
// Connect Delegate  
// Implement the delegate to enable sharing
```

```
func connectViewController(_ connectViewController: OCKConnectViewController,  
didSelectShareButtonFor contact: OCKContact, presentationSourceView sourceView: UIView) {  
    generatePDFReport()  
    sharePDFReport()  
}
```

```
// Connect Delegate
// Implement the delegate to enable sharing

func connectViewController(_ connectViewController: OCKConnectViewController,
didSelectShareButtonFor contact: OCKContact, presentationSourceView sourceView: UIView) {
    generatePDFReport()
    sharePDFReport()
}
```



Connect

Communicate and share



# Document Explorer

Share the data

# Document Exporter

Elements

# Document Exporter

Elements

Headers and footers

# Document Exporter

Elements

Headers and footers

Texts and paragraphs

# Document Exporter

Elements

Headers and footers

Texts and paragraphs

Images

# Document Exporter

## Elements

Headers and footers

Texts and paragraphs

Images

Charts

# Document Exporter

## Elements

Headers and footers

Texts and paragraphs

Images

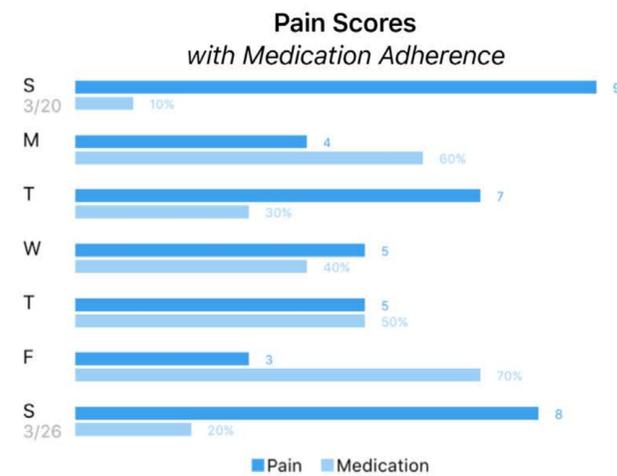
Charts

Tables



### John Appleseed

In the past week, John Appleseed's overall weekly adherence was 86%. His medication adherence was 40%. There were several incomplete dosages. The chart below shows the comparison of John's medication adherence and pain scores.



John's pain score saw a 6 point change in the past week. At the starting of the week, he reported a pain score of 9. On Friday, he reported a pain score of 3. The table below shows the reported pain scores for the past week, along with other symptoms and measurements reported by John.

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Pain	9	7	7	6	4	3	3
Weight	145.8	145.6	145.8	145.8	144.7	145.2	145.3
Temperature	99.1	99.3	98.7	99.1	98.9	99.2	98.5
Tapping	14	15	18	20	20	21	23

His temperature has been consistent, and tapping tests show increased tapping accuracy.

```
func createPDF() {
    let paragraph = OCKDocumentElementParagraph(content: "In the past week, John Appleseed's overall weekly adherence was 86%. His medication adherence was 40%. There were several incomplete dosages. The chart below shows the comparison of John's medication adherence and pain scores.")

    let chart = OCKDocumentElementChart(chart: barChartItem)
    let table = OCKDocumentElementTable(headers: [ "", "Sun", "Mon", "Tue", "Wed", "Thu", "Fri", "Sat"], rows: [ ["Pain", "10", "5", "7", "9", "6", "3", "8"] ])

    let document = OCKDocument(title: "John Appleseed", elements: [paragraph, chart, table])

    let pdfURL = persistenceDirectoryURL.appendingPathComponent("CareKit.pdf")

    document.createPDFData(completion: { data, error in
        try! data.write(to: pdfURL, options: NSData.WritingOptions.atomicWrite)
    })
}
```

```
func createPDF() {  
    let paragraph = OCKDocumentElementParagraph(content: "In the past week, John Appleseed's overall weekly adherence was 86%. His medication adherence was 40%. There were several incomplete dosages. The chart below shows the comparison of John's medication adherence and pain scores.")  
  
    let chart = OCKDocumentElementChart(chart: barChartItem)  
    let table = OCKDocumentElementTable(headers: ["", "Sun", "Mon", "Tue", "Wed", "Thu", "Fri", "Sat"], rows: [["Pain", "10", "5", "7", "9", "6", "3", "8"]])  
  
    let document = OCKDocument(title: "John Appleseed", elements: [paragraph, chart, table])  
  
    let pdfURL = persistenceDirectoryURL.appendingPathComponent("CareKit.pdf")  
  
    document.createPDFData(completion: { data, error in  
        try! data.write(to: pdfURL, options: NSData.WritingOptions.atomicWrite)  
    })  
}
```

```
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    let table = OCKDocumentElementTable(headers: ["", "Sun", "Mon", "Tue", "Wed", "Thu", "Fri", "Sat"], rows: [["Pain", "10", "5", "7", "9", "6", "3", "8"]])

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```

```
func createPDF() {
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    let table = OCKDocumentElementTable(headers: ["", "Sun", "Mon", "Tue", "Wed", "Thu", "Fri", "Sat"], rows: [["Pain", "10", "5", "7", "9", "6", "3", "8"]])

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```

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    let chart = OCKDocumentElementChart(chart: barChartItem)
    let table = OCKDocumentElementTable(headers: ["", "Sun", "Mon", "Tue", "Wed", "Thu", "Fri", "Sat"], rows: [["Pain", "10", "5", "7", "9", "6", "3", "8"]])

    let document = OCKDocument(title: "John Appleseed", elements: [paragraph, chart, table])

    let pdfURL = persistenceDirectoryURL.appendingPathComponent("CareKit.pdf")

    document.createPDFData(completion: { data, error in
        try! data.write(to: pdfURL, options: NSData.WritingOptions.atomicWrite)
    })
}

```

 Connect



**Dr. Paul Cashman**  
Physician

CONTACT INFO

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text  
361-555-0121



email  
paulcash1@icloud.com



SHARING

Send reports



Care Card



Symptom Tracker



Insights



Connect

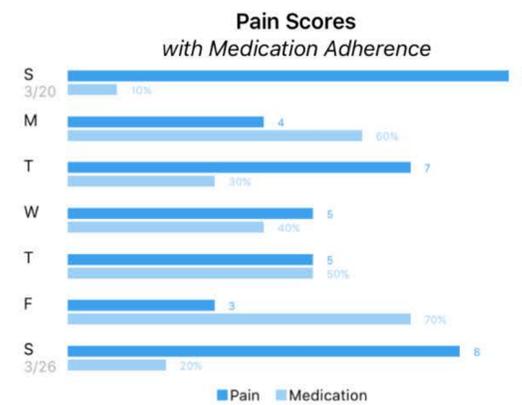


6/5 - 6/11



**John Appleseed**

In the past week, John Appleseed's overall weekly adherence was 86%. His medication adherence was 40%. There were several incomplete dosages. The chart below shows the comparison of John's medication adherence and pain scores.



John's pain score saw a 6 point change in the past week. At the starting of the week, he reported a pain score of 9. On Friday, he reported a pain score of 3. The table below shows the reported pain scores for the past week, along with other symptoms and measurements reported by John.

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Pain	9	7	7	6	4	3	3
Weight	145.8	145.6	145.8	145.8	144.7	145.2	145.3
Temperature	99.1	99.3	98.7	99.1	98.9	99.2	98.5
Tapping	14	15	18	20	20	21	23

His temperature has been consistent, and tapping tests show increased tapping accuracy.



9:41 AM

100%

Done

CareKit

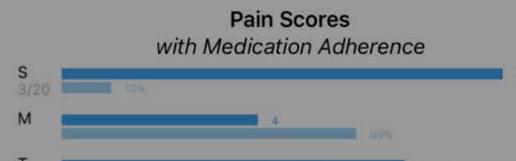


6/5 - 6/11



John Appleseed

In the past week, John Appleseed's overall weekly adherence was 86%. His medication adherence was 40%. There were several incomplete dosages. The chart below shows the comparison of John's medication adherence and pain scores.



**AirDrop.** Tap to turn on Wi-Fi and Bluetooth to share with AirDrop.



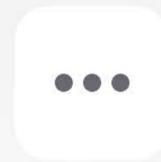
Mail



Add to Notes



Copy to iBooks



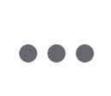
More



Copy



Print



More

Cancel



# Document Explorer

Share the data

# CareKit Modules



Document Exporter

# CareKit Modules



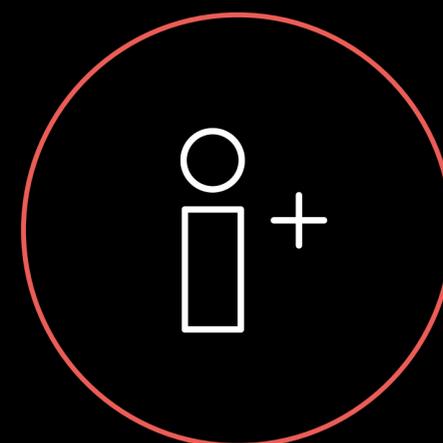
Care Card



Symptom Tracker



Insights Dashboard



Connect



Care Plan Store



Document Exporter

# Customizing with CareKit



# Exercises

Today



## Care Completion

June 17, 2016

78%

### Knee to Chest-bilateral



### Piriformis Stretch Supine



### Hamstring Stretch, Supine v2



### Hip Extension, Prone v2



Exercises



Assessments



Insights



Connect



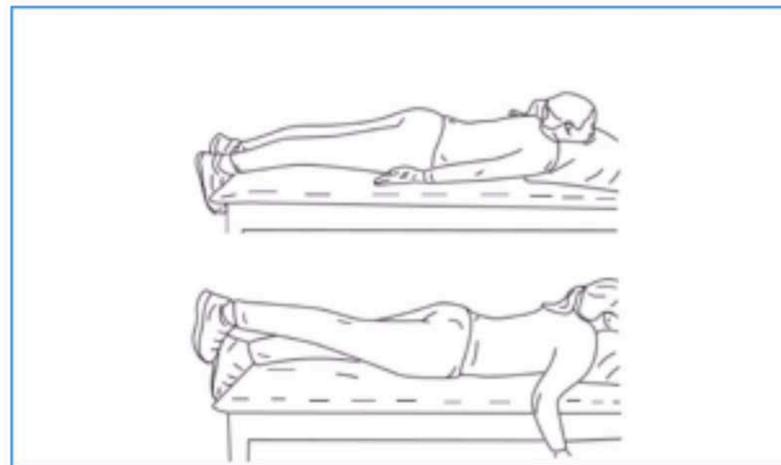
Profile

Close

# Hip Extension, Prone v2

3 Times Daily  
1 Set 5 Reps 3 Seconds 2 Seconds Rest

Lying on your stomach, lift one leg into the air keeping the knee straight. Both hips should stay on the mat. Lower leg down slowly.



Watch Video

Record Video

# Exercises

Today



## Care Completion

June 3, 2016

89%

### Knee to Chest-bilateral



### Piriformis Stretch Supine



### Hamstring Stretch, Supine v2



### Hip Extension, Prone v2



Exercises



Assessments



Insights



Connect



Profile

What's Next?

What's Next?

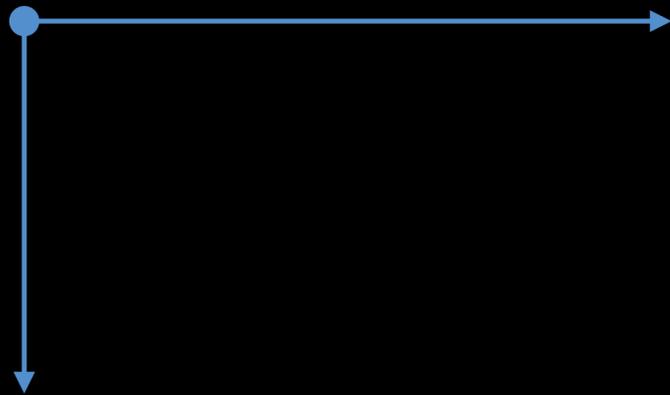
# What's Next?

Patient App



# What's Next?

Provider Cloud



Patient App



# What's Next?

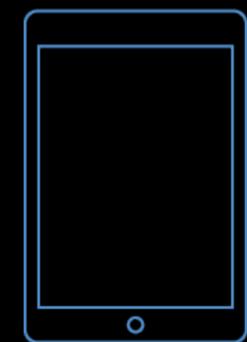
Provider Cloud



Patient App



Care Team



Open Source

# Open Source

It will become what YOU make of it!

Please Contribute!!

# Please Contribute!!

[github.com/carekit-apple/carekit](https://github.com/carekit-apple/carekit)

# Collaboration

Your role

# Collaboration

Your role

Issues on GitHub

# Collaboration

Your role

Issues on GitHub

Develop the feature

# Collaboration

Your role

Issues on GitHub

Develop the feature

Review process

# Collaboration

Our role

# Collaboration

Our role

Accessibility

# Collaboration

Our role

Accessibility

Localization

# Collaboration

Our role

Accessibility

Localization

QA testing

# Collaboration

Our role

Accessibility

Localization

QA testing

Merge into framework

More Information

<https://developer.apple.com/wwdc16/237>

# Related Sessions

---

Getting the Most Out of HealthKit

Nob Hill

Wednesday 9:00AM

---

What's New in ResearchKit

Nob Hill

Friday 10:00AM

---

# Labs

---

ResearchKit and CareKit Lab

Fort Mason

Friday 3:30PM

---



W

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D

C

1

6