Use Case 1: Turn On The Device

Patient

:MainWindow

:Device

:Battery

:TreatmentData

Patient interacts with :MainWindow

:MainWindow → :Device : powerButton()

:Device → :Battery : drainBattery(int)

:Device → :Battery : getPower()

:Battery --> :Device : power

alt [power == 0]

:Device → :Device : powerDown()

alt [idle == true]

:Device → :Device : powerDown()
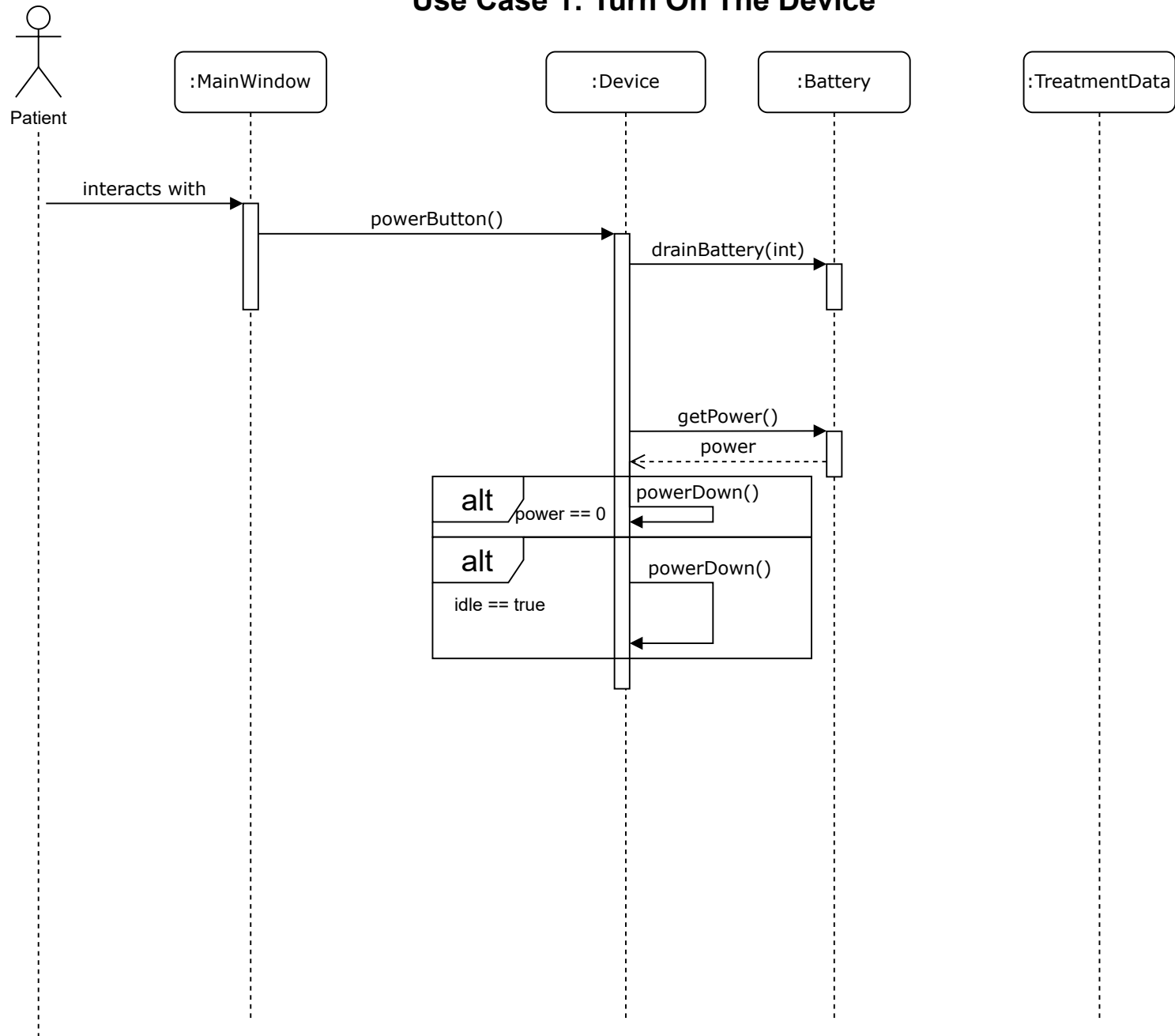
Use Case 2: Administer Treatment

Patient

:MainWindow   :Device   :Battery   :TreatmentData

Patient → :MainWindow : interacts with

:MainWindow → :Device : powerButton()

:Device → :Battery : drainBattery(int)

Patient → :MainWindow : Choose time

:MainWindow → :Device : setTreatmentTime()

:Device → :TreatmentData : setLength()

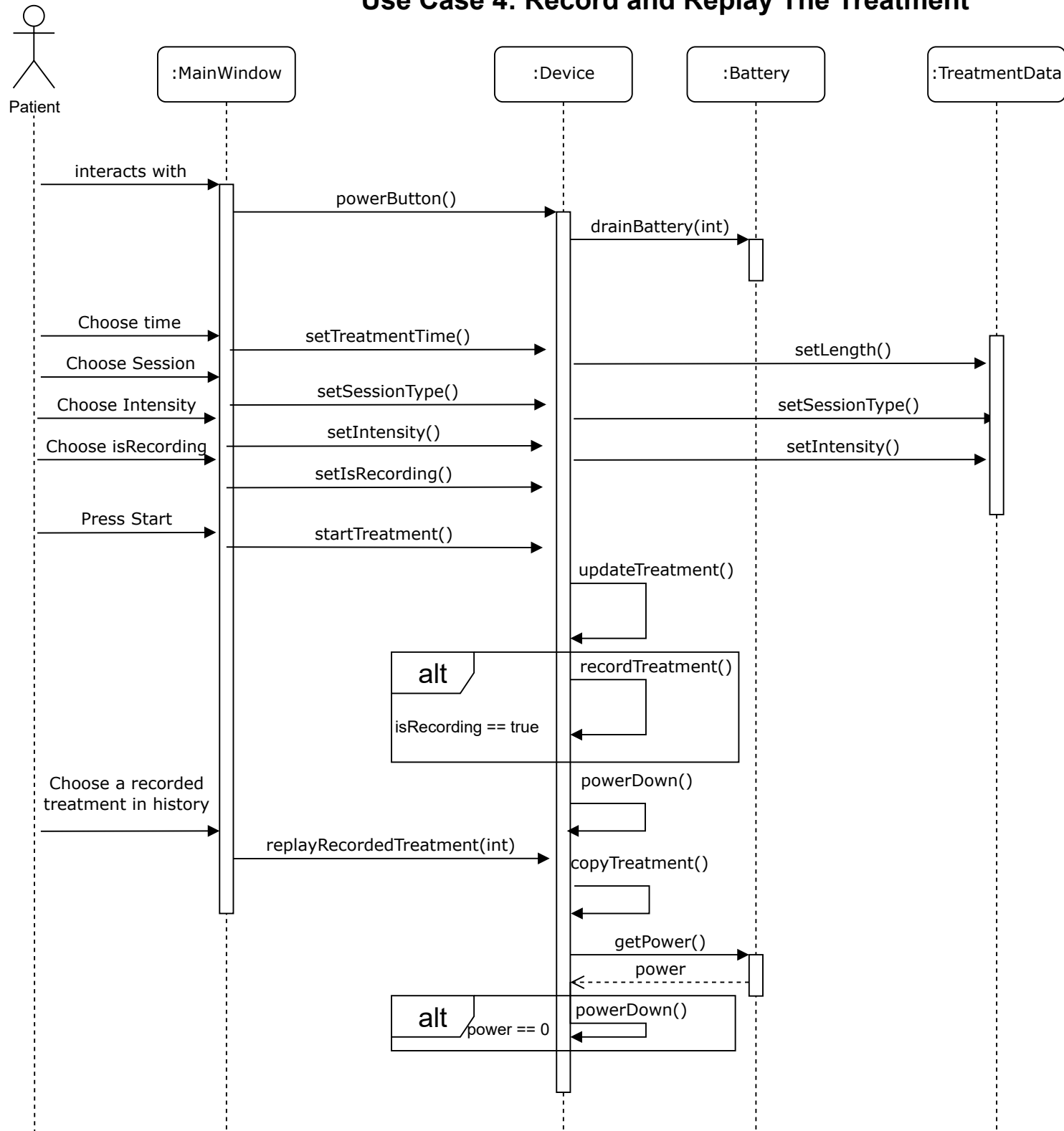Patient → :MainWindow : Choose Session

:MainWindow → :Device : setSessionType()

:Device → :TreatmentData : setSessionType()

Patient → :MainWindow : Choose Intensity

:MainWindow → :Device : setIntensity()

:Device → :TreatmentData : setIntensity()

Patient → :MainWindow : Choose isRecording

:MainWindow → :Device : setIsRecording()

Patient → :MainWindow : Press Start

:MainWindow → :Device : startTreatment()

:Device : updateTreatment()

alt [isRecording == true]

:Device : recordTreatment()

:Device : powerDown()

:Device → :Battery : getPower()

:Battery --> :Device : power

alt [power == 0]

:Device : powerDown()

Use Case 3: Change Treatment Intensity

Patient

:MainWindow

:Device

:Battery

:TreatmentData

interacts with

powerButton()

drainBattery(int)

Choose Intensity

setIntensity()

setIntensity()

getPower()

power

alt power == 0

powerDown()

alt

idle == true

powerDown()
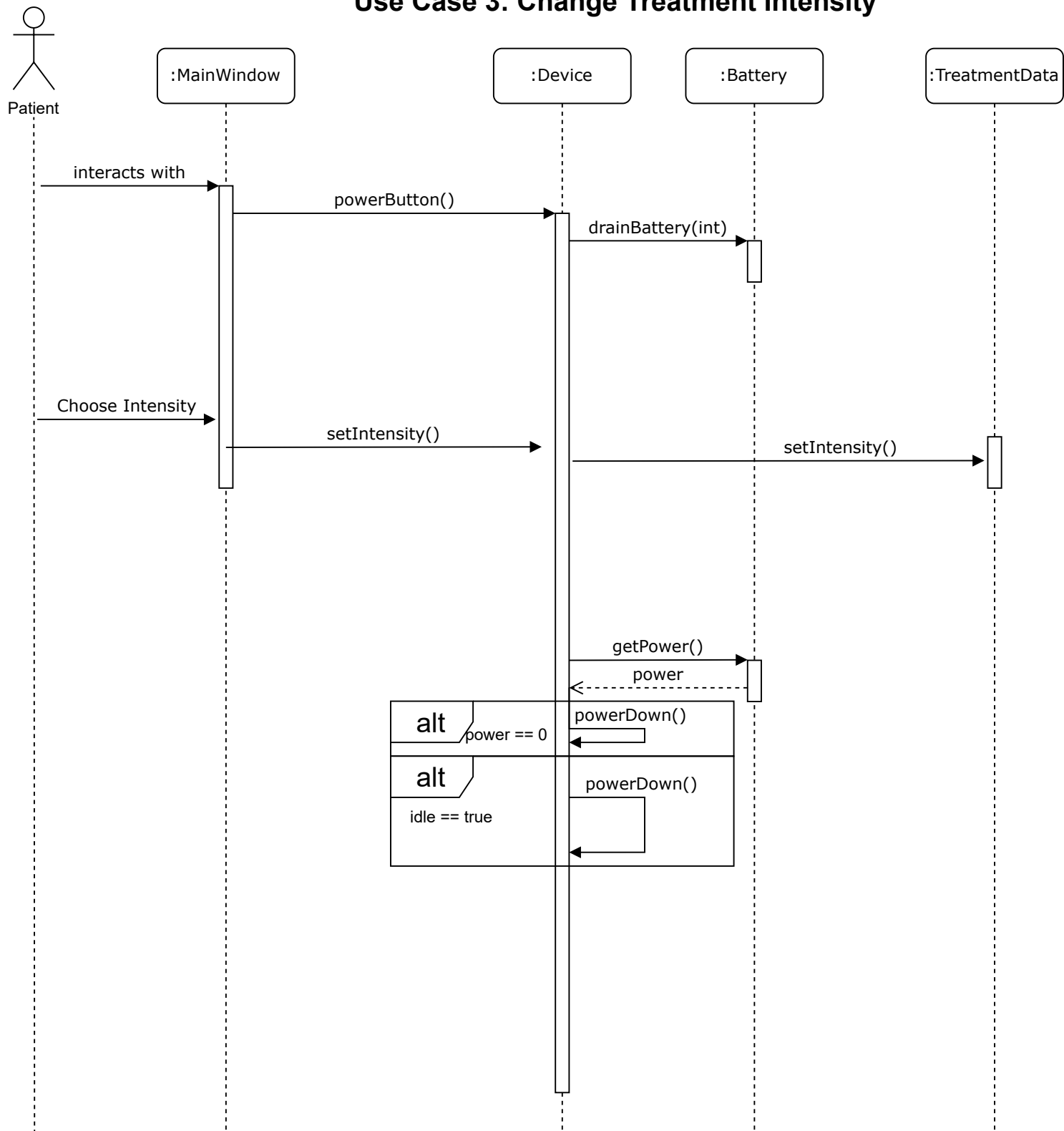
Use Case 4: Record and Replay The Treatment

Use Case 5: Turn Off The Device

Patient

:MainWindow

:Device

:Battery

:TreatmentData

interacts with

powerButton()

drainBattery(int)

Hits power

powerButton()

getPower()

power

alt / power == 0

powerDown()

alt

idle == true

powerDown()
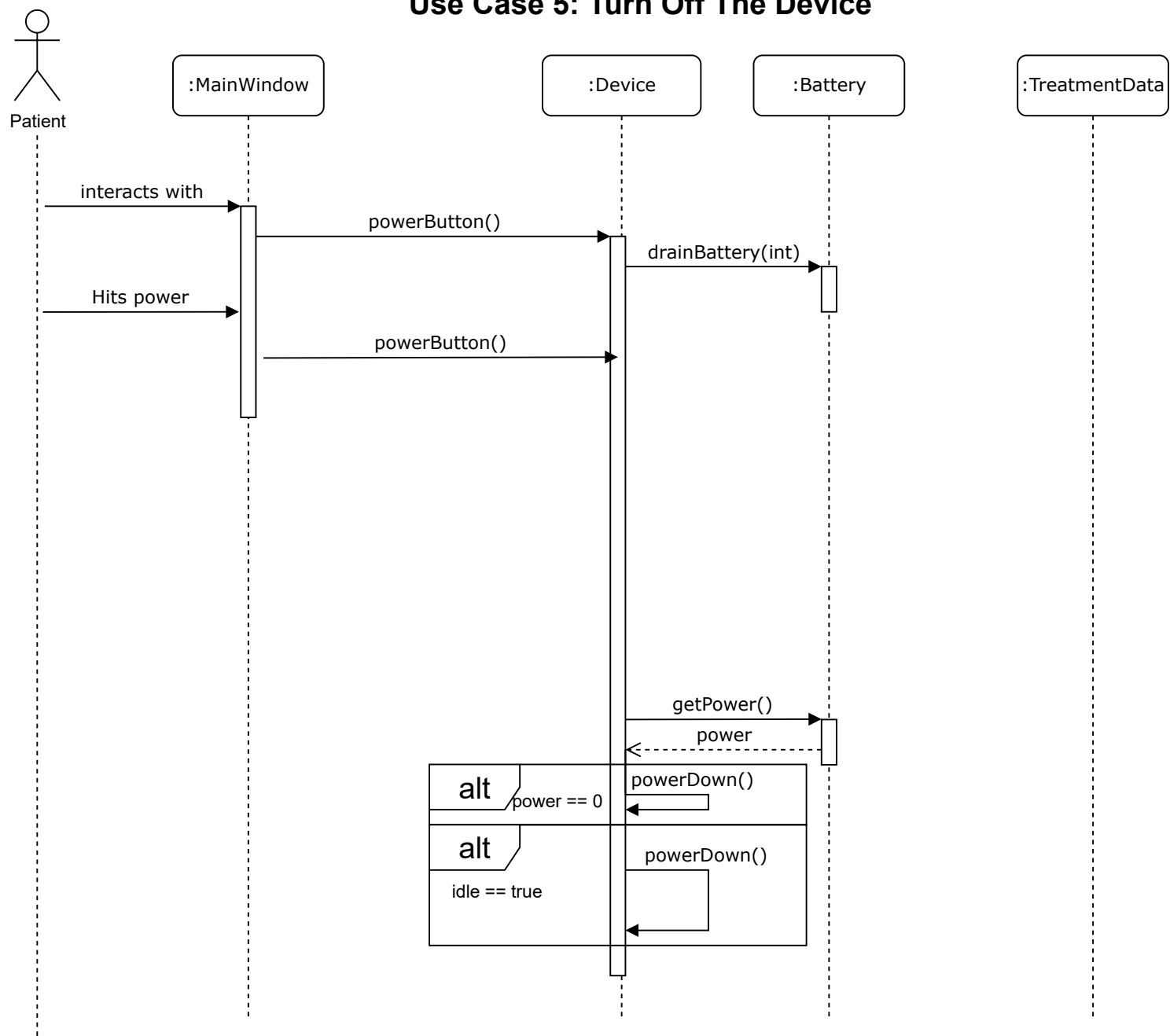
Use Case 6: Update MainWindow

Patient

:MainWindow :Device :Battery :TreatmentData

interacts with

powerButton()

drainBattery(int)

getBatteryPower()

getPower()

power

power

getIntensity()

getIntensity()

intensity

intensity

getTreatmentTimeRemaining()

treatmentTimeRemaining

isPowerOn()

turnedOn

getPower()

power

alt [power == 0]

powerDown()

alt [idle == true]

powerDown()