

SMART on FHIR Use Cases: cPRO and TrueNTH

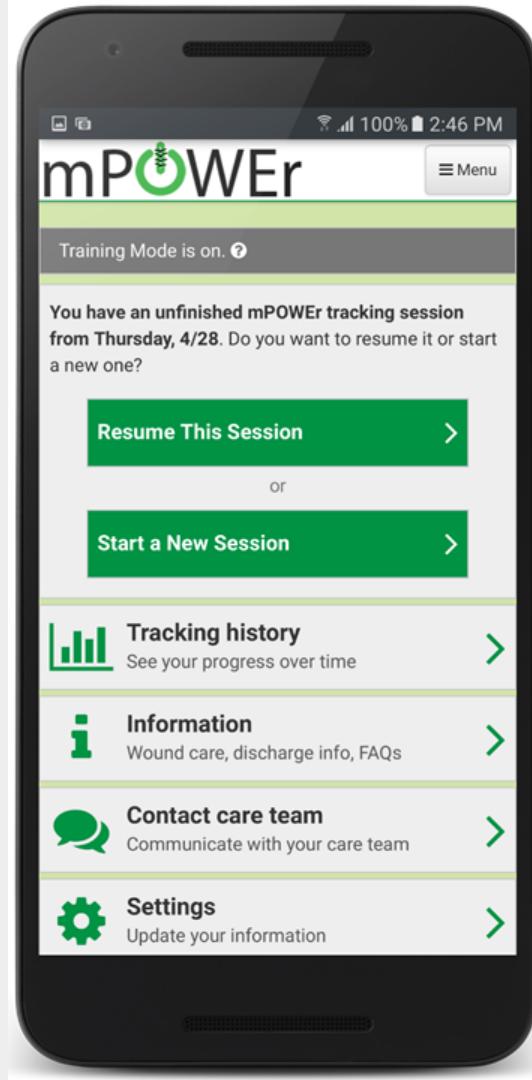
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Clinical Informatics Research Group
University of Washington



cPRO

(computerized)
Patient Reported Outcomes
<http://cprohealth.org>



What gender best describes you?

? What's
this?



Male



Female



Male-to-Female Transgender/Transgender Woman



Female-to-Male Transgender/Transgender Man



A gender not listed above

◀ Previous

Next ▶

Change language:

English

Español

MENU ≡  Welcome, STPatient Demo

TRUE NTH
A MOVEMBER INITIATIVE

SUMMARY

URINARY
PROBLEMS

SEXUAL
CONCERN

BOWEL
PROBLEMS

TIRED, WEAK AND
HOT FLASHES

EMOTIONAL AND
MENTAL HEALTH

REPORT FOR
YOUR DOCTORS

Compare yourself to men aged ALL AGES ▾

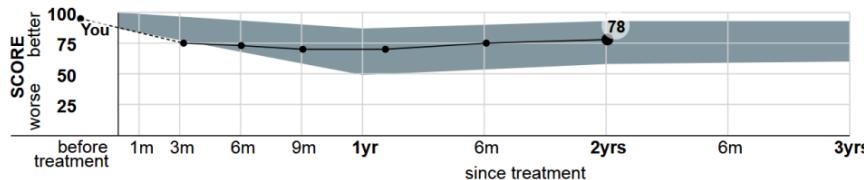
PRINT

who have had RADICAL PROSTATECTOMY (NON-NERVE-SPARING) ▾

Patient use of PRO data in the context of self management

Urinary Problems

Understanding the graphs READ MORE



Your Urinary Problems score:
78/100
on year 2
You reported that this is a **small problem**.

The Radical prostatectomy (non-nerve-sparing) journey

The graphs above show how symptoms change over time in the prostate cancer journey.

Your symptoms are the black dots on the charts. If your dot is within the blue-grey line, then your symptoms are similar to other men you are being compared to.

Summary of your responses

In your responses, you reported:

- Overall, problems with urinating are a small problem for you.
- More than once per week leakage.



Welcome, mcjustin+180214A@uw.edu mcjustin+180214A@uw.edu

TRUE
NTH

A NOVEMBER INITIATIVE

P3P HOME > MY TOP CONCERN > STATISTICS > MY DECISION ROLE > REPORT FOR MY DOCTOR > MORE ABOUT PROSTATE CANCER > WHAT DO YOU THINK? > ABOUT P3P

Click to see other topics:

Outcomes

Years I Expect to Live

Bladder Function

Sexual Function

Bowel Function

Lifestyle

Work or Occupation Activities

Recreational Activities

People

Spouse/Partner

Co-worker

Friend

Family Member

Current Symptoms

Sexual

Bladder

Bowel

My Top Concerns

Based on your answers, we have put the things that are most important to you right here. They are in groups that you will see in the list on the left. Read them at your own pace. You can stop and come back whenever you want. The first time you go through the topics, you need to go in order from top to bottom in the list of links on the left.

Years I Expect to Live

Based on your answers, how long you expect to live (this is also called survival) is important to you as you decide on your prostate cancer care. You should think about how long you expect to live based on your general health, not just your recent diagnosis of prostate cancer.



Interventions such as patient decision aids, and coaching for communication with providers

Age and other things that affect survival

Many men with localized prostate cancer will live at least 10 years after their diagnosis. However, some men will die sooner for another reason, like advanced age, accidents, or other illnesses (for example, diabetes or heart disease). Unhealthy behaviors like tobacco use can also affect survival.

Interventions such as patient decision aids, and coaching for communication with providers

Click to see other topics:
Outcomes
<input checked="" type="checkbox"/> Years I Expect to Live
<input type="checkbox"/> Bladder Function
<input type="checkbox"/> Sexual Function
<input type="checkbox"/> Bowel Function
Lifestyle
<input type="checkbox"/> Work or Occupation Activities
<input type="checkbox"/> Recreational Activities
People
<input type="checkbox"/> Spouse/Partner
<input type="checkbox"/> Co-worker
<input type="checkbox"/> Friend
<input type="checkbox"/> Family Member
Current Symptoms
<input type="checkbox"/> Sexual
<input type="checkbox"/> Bladder
<input type="checkbox"/> Bowel

Age and other things that affect survival

Many men with [localized prostate cancer](#) will live at least 10 years after their diagnosis. However, some men will die sooner for another reason, like advanced age, accidents, or other illnesses (for example, diabetes or heart disease). Unhealthy behaviors like tobacco use can also affect survival. There are certain tools, such as life tables, which list how long on average people will live based on their gender, race, and age. Your doctor may refer to such a table when he or she talks to you.

In general, prostate cancer is a slow-growing cancer. For men with a **low risk** of cancer spreading or returning, there is no proof that any one kind of care will help them live longer than another kind of care. In fact, for some men with **very low risk** cancer, treatment may cause more harm than good. For men with a **medium to high risk** (faster growing) cancer, studies show that removing or treating the cancer is better than not having treatment.

The most important thing that predicts the [risk](#) of your cancer growing or spreading is the [Gleason score](#). There is good research that this score will predict the chance that a man's cancer will spread and how many years he will live. Your doctor will talk to you about your Gleason Score and risk of your cancer spreading or returning.

TALK TO YOUR DOCTOR

Talk to your doctor about your age and how long you expect to live. For example, you might say:

"I feel like a young man at ... (say your age) and like I've got many years to go. What does this have to do with my decision about prostate cancer care?"

Or you might say:

"I've had a full life, and now I am ... (say your age) (OR say) I've had a full life, and I have ... (say another disease or illness you have). I'm not sure I'm going to live many more years. Help me understand how this fits in my decision about prostate cancer care."

NEXT TOPIC: [BLADDER FUNCTION](#) ➤

OR

SKIP AHEAD TO [LIFESTYLE](#) ➡

Clinician use of PRO data, contextualized to the domain

Printed: 5/26/2016
Last Completed Session: 5/25/2016 2:41pm

PainTracker™

Patient-reported Recent Treatments		Treatment Goals and Expectations			
Type	Last 3 Dates	Total	Rank	Goals (5/25/16)	Expectations (5/24/16)
Injection	5/24/16, 5/23/16, 5/20/16...	5	1st	A diagnosis	Consultation only
Started Phys. Therapy	5/23/16	1	2nd	Help in coping with the pain	Counseling
Started Psych. Therapy	5/9/16	1	3rd	Help getting back to important activities	Stress Management

Pain Intensity & Interference —●— Pain Intensity ···▲··· Interference

10 Worse 5/25/2016 ● Pain Intensity: 7 ▲ Interference: 5
8
6
4
2
0 Better 5/24 5/25

Depression —●— PHQ-9 (0-27) ···▲··· GAD-7 (0-21)

27 Worse 5/25/2016 ● PHQ-9 (0-27): 14 ▲ GAD-7 (0-21): 13
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0 Better 5/24 5/25

Sleep Initiation & Maintenance —●— Sleep Initiation ···▲··· Sleep Maintenance

10 Worse 5/25/2016 ● Sleep Initiation: 6 ▲ Sleep Maintenance: 7
8
6
4
2
0 Better 5/24 5/25

ODI & Important Activity Difficulty —●— ODI (0-100) ···▲··· Important Activity Difficulty

100 Worse 5/25/2016 ● ODI (0-100): 54 ▲ Important Activity Difficulty: 8
80
60
40
20
0 Better 5/24 5/25

PT.NO: five
FIVE, FIVE
DOB: 1955-01-01 SEX: F

UW Medicine
Huronview Medical Center — Northwest Hospital & Medical Center
Valley Medical Center — UW Medical Center
University of Washington Physicians Seattle, Washington
PainTracker
Page 1 of 2

U3303*
UH0003 REV JULY 14
WHITE - MEDICAL RECORD

MRN: jm043016A

Name: John Doe

Date of Birth: 1950-01-01

Questionnaire Selection

Below is a list of questionnaires available for this patient. The "Questionnaires to Administer" list on the right shows what the patient is set to receive. You can add or remove questionnaires by dragging to and from the "Available Questionnaires" list on the left.

High Priority

Med Priority

Low Priority

Total time: 4:35

Available Questionnaires

AUDIT-C Alcohol Screen (0:46)

DAST-10 Drug Screen (0:46)

Generalized Anxiety Disorder-7 (0:40)

IPV (0:30)

Questionnaires to Administer

Learning Needs Assessment (LNA) (2:29)

Smoking and Tobacco (1:00)

Fall Risk Assessment (0:15)

PHQ-9 Depression (0:51)

[Reset Questionnaires to Administer List](#)[Start New Survey Session](#)

Provider-customizable content, to minimize impacts on workflow

cPRO & SMART on FHIR

EHR Integration

App / website launch &
user authentication from:

- EMR (providers)
- Tethered Patient Portals (patients)

Reading data from the
EHR (and to a lesser
extent, writing to it)

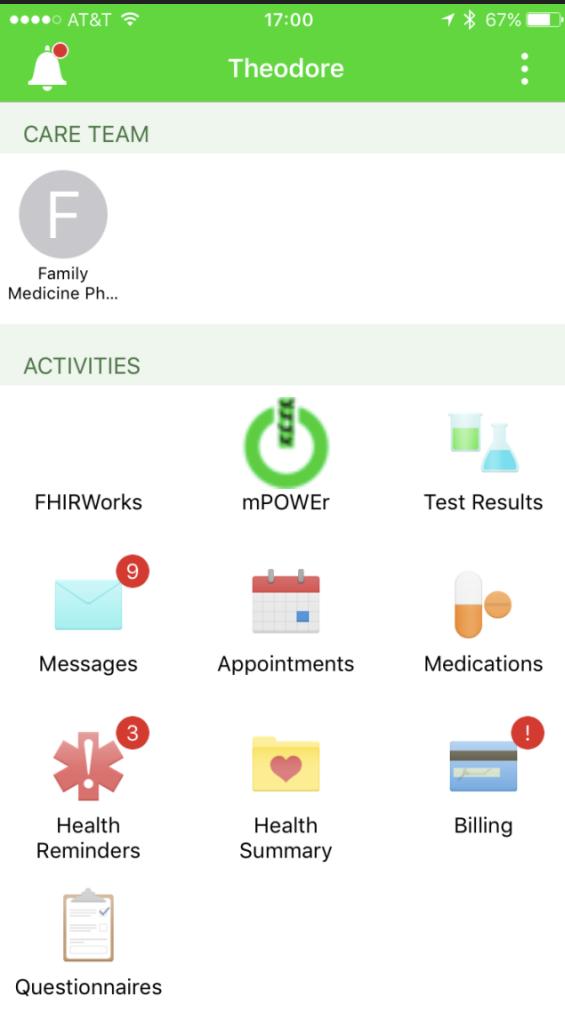
cPRO & SMART on FHIR

Epic FHIRWorks 2017 &
2018

Integrations with Epic
applications:

Hyperspace EMR

MyChart Patient Portal



MyChart 17:00 67% AT&T

mpower-dev.cirg.washington.edu

Important!

If you have concerns about your wound, contact the clinic.

Clinic staff do not get notified automatically when you track your wound in mPOWER.

If you contact the clinic, let them know you have been using mPOWER to record symptoms and wound photos.

Continue to mPOWER >

Tracking history See your progress over time

Information Wound care, discharge info, FAQs

Contact care team Communicate with your care team

11:14 70% AT&T

mPOWER (NO...)

mPOWER - Development version - not for clinical use.

mPOWER

You're tracking your recovery from procedure on 03/15/2017.

What would you like to do today?

Track your wound Please track your wound today >

Take a picture Upload a photo of your wound >

Tracking history See your progress over time >

Information Wound care, discharge info, FAQs >

Contact care team Communicate with your care team >

Settings Update your information >

•••• AT&T 11:18 84%

< T mPOWER - Care (NO...)

mPOWER - Development version - not for clinical use.



≡ Menu

Your mPOWER Tracking History

You haven't tracked your wound yet.

Tracking sessions for surgery on 03/15/2017

03/16/2017 1 days since surgery | No photos

No photos were uploaded during this session.

Your Symptoms Over Time

Symptom

Drainage

Drainage Fluid

Drainage Color

Dressing

Pain

Redness

Warmth



•••• AT&T 11:15 86%

< T mPOWER - Surveys #15...

mPOWER - Development version - not for clinical use.



≡ Menu

Add Wound Photos

Adding photos for Tb-d4ihkex9k53OQ3sqp4QbwBLVUUScIS9mQZHKEc MyChart User

Take a Photo

< Previous

Next >

Take Photo



Photo Library



More



Cancel

•••• AT&T 11:16 85%

< T mPOWER - Surveys #15...

Adding photos for Tb-d4ihkex9k53OQ3sqp4QbwBLVUUScIS9mQZHKEc MyChart User



Uploading...

Add Another Photo

< Previous

Next >

cPRO
(mPOWEr)
within the
EMR (Epic
Hyperspace)

mPOWEr

mPOWEr

[Edit](#) Teams/Clinics:

(Graphic wound photos) John Smith

MRN: 9999999 | Male | DOB: 11/23/1974, 42

Recent Procedure

Trauma wound washout Surgeon: Evans
Procedure date: 07/13/2017 | POD: 15 days
Discharge date: 07/13/2017 | Post D/C: 15 days

Photo & Session Count

Photos uploaded by staff: 0
Photos uploaded by patient: 5
Symptom reports by patient: 5

Patient Drains

This patient isn't tracking any drains.

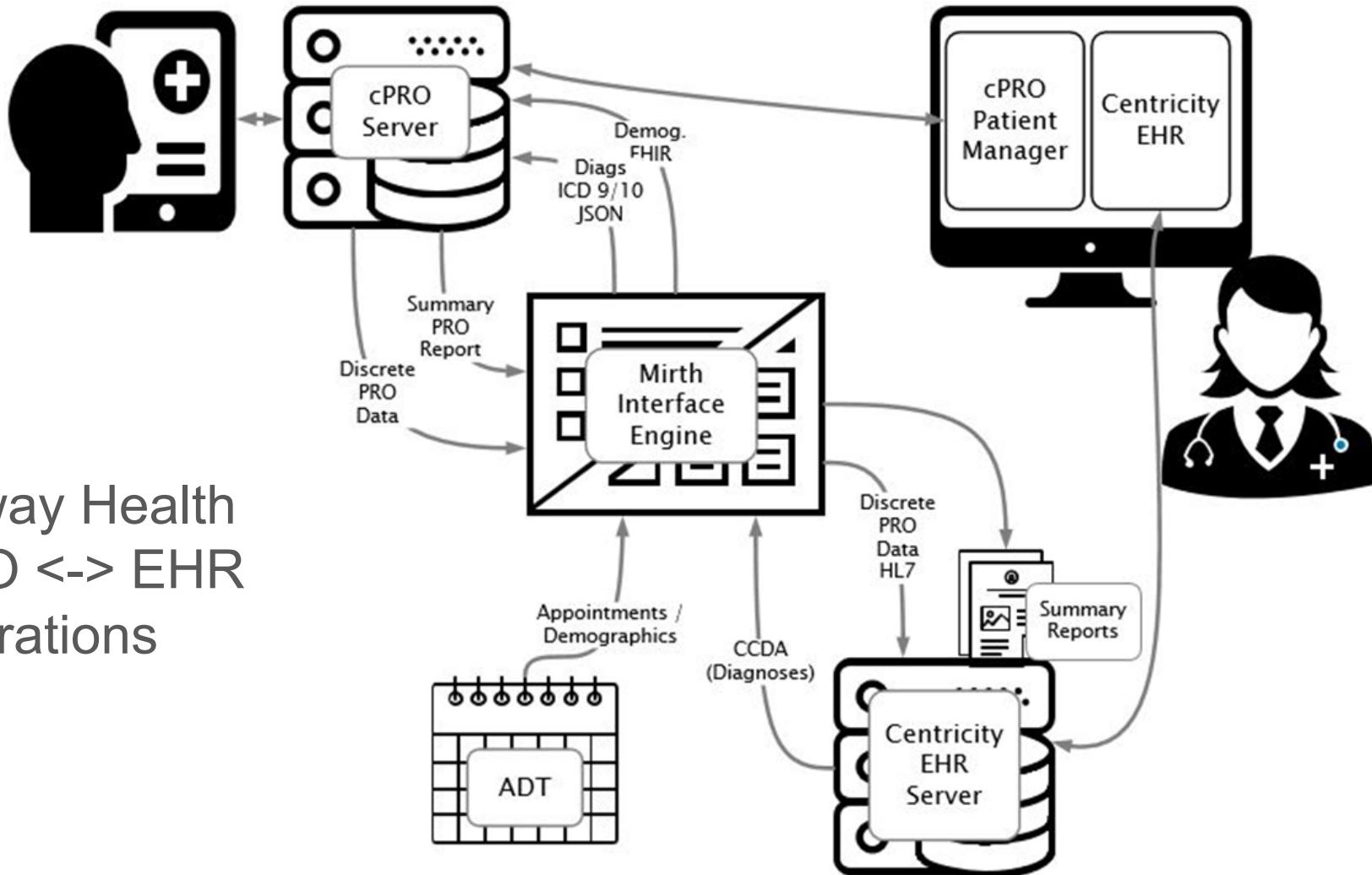
Add New Photo(s)

[Expand All Sessions](#)

Taken: 7/31/2017 8:10pm POD: 18 | Uploaded: 7/26/2017 by patient



Fenway Health cPRO <-> EHR Integrations



TrueNTH

A patient-centered portal for
men with prostate cancer

TrueNTH is a collective approach to improving your quality of life
throughout your prostate cancer journey.



OBJECTIVE N°1: TRUENTH COMMUNITY

We are here to help you navigate your prostate
cancer journey.

MORE ABOUT TRUENTH →



TrueNTH Apps

DECISION SUPPORT

Explore your values, your preferences, and the current medical knowledge to help you discuss your treatment options with your doctors.

[GO TO DECISION SUPPORT →](#)

SYMPTOM TRACKER

Compare your symptoms over time with men like you, and manage symptoms that bother you.

[GO TO SYMPTOM TRACKER →](#)

EXERCISE AND DIET

To provide men and the people in their lives with the tools and support they need to optimize their health through exercise and diet.

[EXERCISE AND DIET →](#)

LIVED EXPERIENCE

TrueNTH brings lived experiences from men, their caregivers and clinicians to help you in your prostate cancer journey.

[LIVED EXPERIENCE →](#)



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TrueNTH Symptom Tracker

Compare yourself to men aged

ALL AGES ▾

PRINT

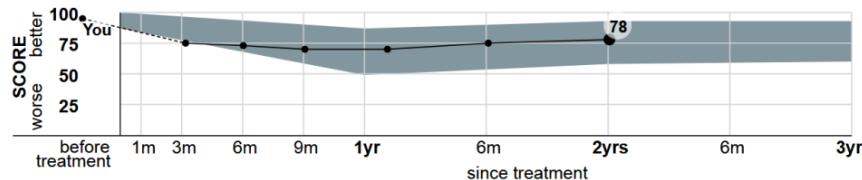
who have had

RADICAL PROSTATECTOMY (NON-NERVE-SPARING) ▾

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READ MORE



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The screenshot shows a dark-themed website for "TRUE NTH" under the "A MOVEMBER INITIATIVE". At the top left is a "MENU" button, and at the top right are "LOG IN" and "JOIN US" buttons. The main heading "Decision Support" is centered above a paragraph of text: "Choosing which treatment path to go down can be confusing and overwhelming. Being informed of the different options and how each fits into your life is critical in making the best choice for you." Below the text is a "START →" button. A "LEARN MORE" button is visible below the start button. At the bottom of the page is a black and white photograph of two men smiling and laughing together. A "WATCH" button is overlaid on the bottom of the photo.

The screenshot shows a mobile application interface for "mPOWER". At the top, it displays "Training Mode is on. ?" and the time "2:46 PM". The top right corner has a "Menu" icon. The main content area has a green header bar with the "mPOWER" logo. Below this, there are two green buttons: "Resume This Session" and "Start a New Session", separated by the text "OR". Below these buttons is a list of five items, each with an icon and text: "Tracking history" (bar chart icon), "Information" (info icon), "Contact care team" (chat bubble icon), and "Settings" (gear icon). Each item has a "See your progress over time" or "Communicate with your care team" subtitle. At the bottom right of the screen is another "Menu" icon.