



## Developing Empathic Care Remote Care

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# Agenda

- Introduction to design-thinking
- Overcoming barriers to empathy in design
  - Technical
  - Healthcare
  - Seniors and technology
- Case Study
  - Boston University Center for Neurorehabilitation

# Session Goals

## Participants will be able to:

- Identify how empathic design impacts people
- Apply design thinking to the patient experience
- Identify barriers to empathic design in health IT
- Understand how empathy can be delivered through IT

# About Us



Anne Weiler  
CEO & co-founder



Kristin Helps, RN  
Director of  
Client Operations

UW Medicine

## Clinical Advisory Board

Keith Marton MD, Former Chief Medical Officer, Providence  
Bruce Rolfe MD, Orthopedic Surgeon  
Sarah Anderson, DPT Doctor of Physical Therapy

## Research Partners

Terry Ellis, PhD Director Boston University for Neurorehabilitation  
Jonathan Bean, MD, Physiatrist, Harvard Medical School  
Elizabeth Phelan, MD, Gerontologist, University of Washington

# A Lesson in Empathy



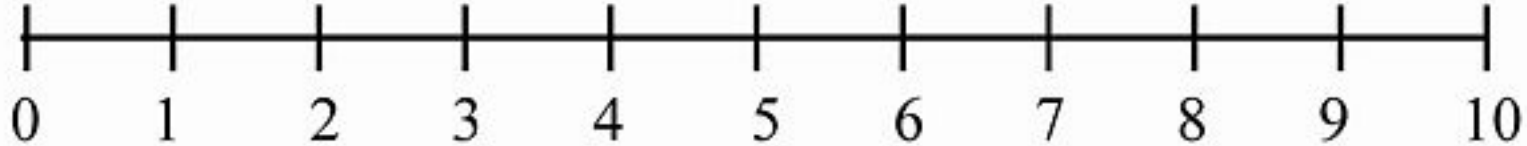
# Design-Thinking

Understand the experience of end-users with three techniques

- Immersion in experience of user
- Observe what they do
- Conversations and personal stories

# Personal Experience Is Important

No Pain    Moderate Pain    Worst Pain



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2



4



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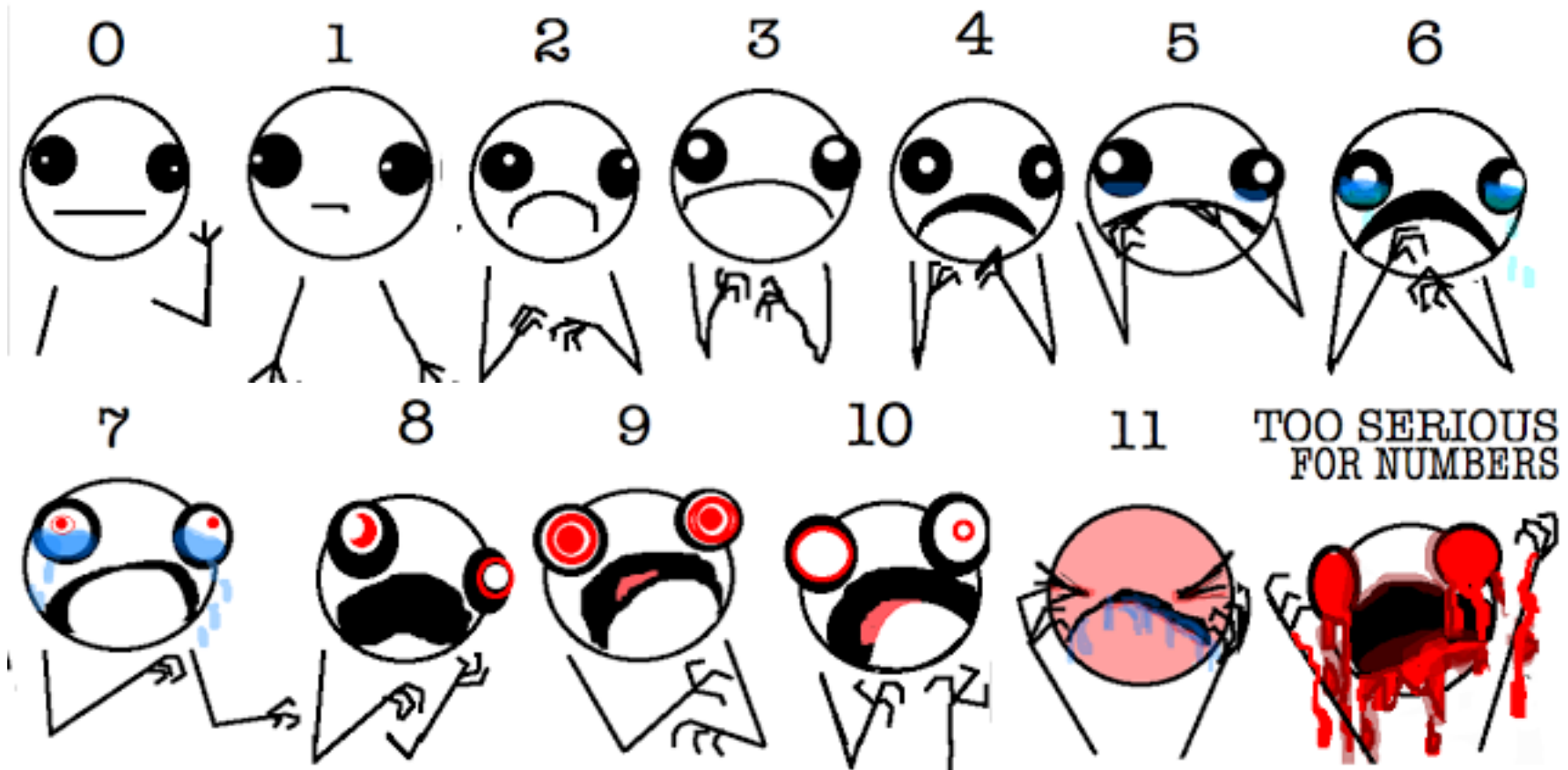


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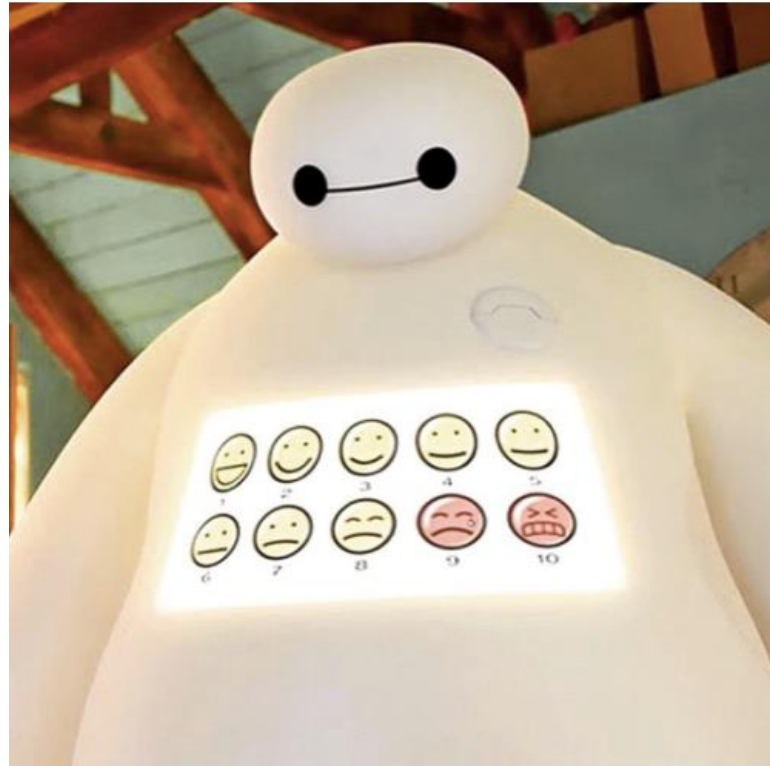
# Personal Experience Is Important





# Personal Experience Is Important

Hello! I am Baymax. Your personal healthcare companion. I was activated by a sound of distress. On a scale of 1-10, how would you rate your pain?



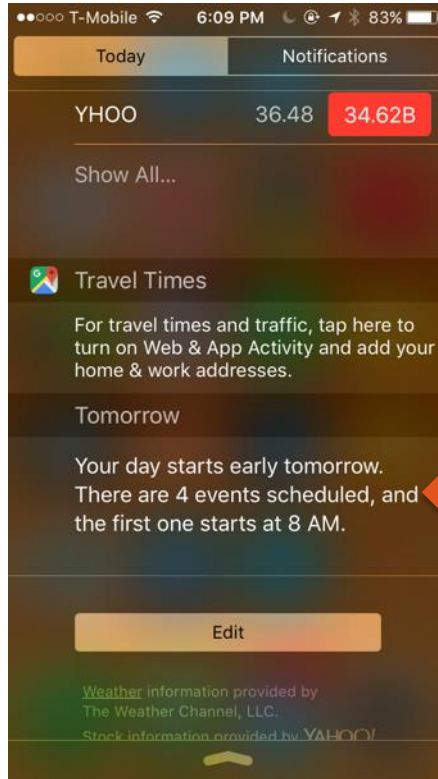
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# Personal Experience and Context

It looks like you're writing a letter.

Would you like help?

- Get help with writing the letter
- Just type the letter without help
- Don't show me this tip again



# Providing Context With Technology

Let users know

- Where am I in the process?
- What is the next step?
- How do I know when I am finished?
- Should I stay or should I go?
- What happened?

# Seniors and Technology

Don't

- Assume you know them
- Make decisions for them
- Dumb it down



# Case Study

- Design for Parkinson's randomized trial



# Study Design



## Participants

- 50-75 years old
- Living in or near Boston
- Blue-collar to professor

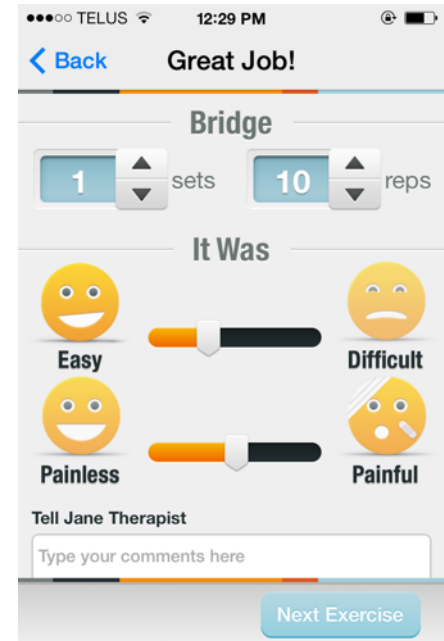
# Focus on the User

- You're not your user. Seek to understand them. Listen more than you speak
- Focus on the problem space not the solution space

“Critical failing of user interviews is that you're asking people to either remember past use or speculate on future use of a system.”  
– Jakob Nielsen

## What We Did:

- Listened and learned: people with Parkinson's don't want to be reminded they have Parkinson's → “Parkinson's” doesn't show up anywhere in our UX or names
- Parkinson's causes cognitive impairment – we focused as much on what to leave out as what to put in



# Enable Mastery and Progress

- Enable just enough set-up to feel ownership
- Intrinsic rewards and feedback

## What We Did:

- Picture and patient's goal
- Immediate tracking feedback

METHOD  
Healthcare System

Welcome back  
Lisa

Your Goal: Live life to the fullest



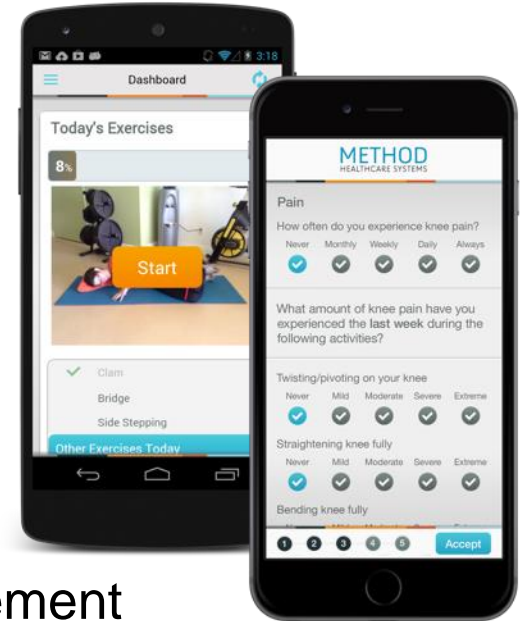


# Pick the Right Technology

- Emotional attachment to our mobile devices
- Crosses age and socio-economic boundaries
- Always with us

## What We Did:

- Mobile first for patients
- Mobile for clinic ease of use
- Web site for analytics, administration, management



# Secure, But Not *Unusably* Secure

- Patients care about security and privacy but want to share with care team

## What We Did:

- Parkinson's patients suffer from tremor. We couldn't ask them to key in 8+ char mixed case + numeric passwords 3 times a day
- Reasonable password complexity & long-duration credential cache
- Use behind the scenes security (logging, intrusion detection)

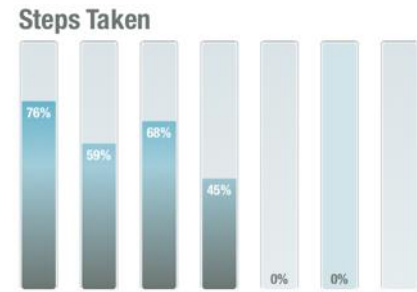
# Automate Data Collection

- Passive data tracking is plentiful
- Decreases burden of entering information
- May tell you more than patient is able to



## What We Did:

- Very simple FitBit integration.
- Avoid drowning clinical users with data (just daily steps)
- Keep patient UX simple



# Adapt to User Behavior

- Notification fatigue is real

## What We Did:

- Patented adaptive notification system responds to patient behavior

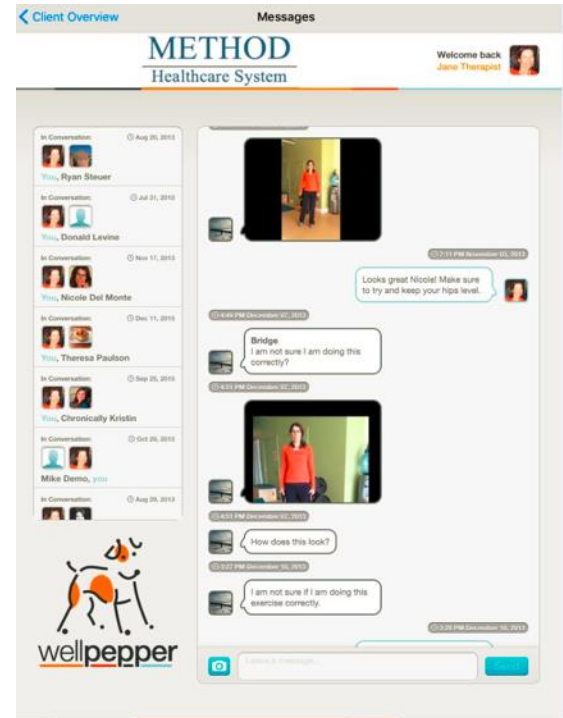


# Enable Human Connection

- Technology connects us
- Scaling and amplifying the impact of care provider was biggest impact

## What We Did:

- Enabled patient/provider chat, broadcast messaging, video and resource sharing
- New features for video diary and group messaging



# Results

- 9/10 patient satisfaction with program
- Lower activation group saw greatest gains
- 9% increase in mobility with mHealth group vs 12% decline in usual care condition

“This program has empowered me, lifted my morale, renewed my hope, and given me tools. Thank you for helping me regain my life!”

*Parkinson's Study Participant, Center for Neurorehabilitation*

**BOSTON**  
UNIVERSITY

# Enabling Empathy with Technology

- Focus on the user
- Enable mastery and progress
- Pick the right technology and level of security
- Automate data collection
- Adapt to user behavior
- Enable human connection