Innovative approaches for the treatment of chronic pain in children

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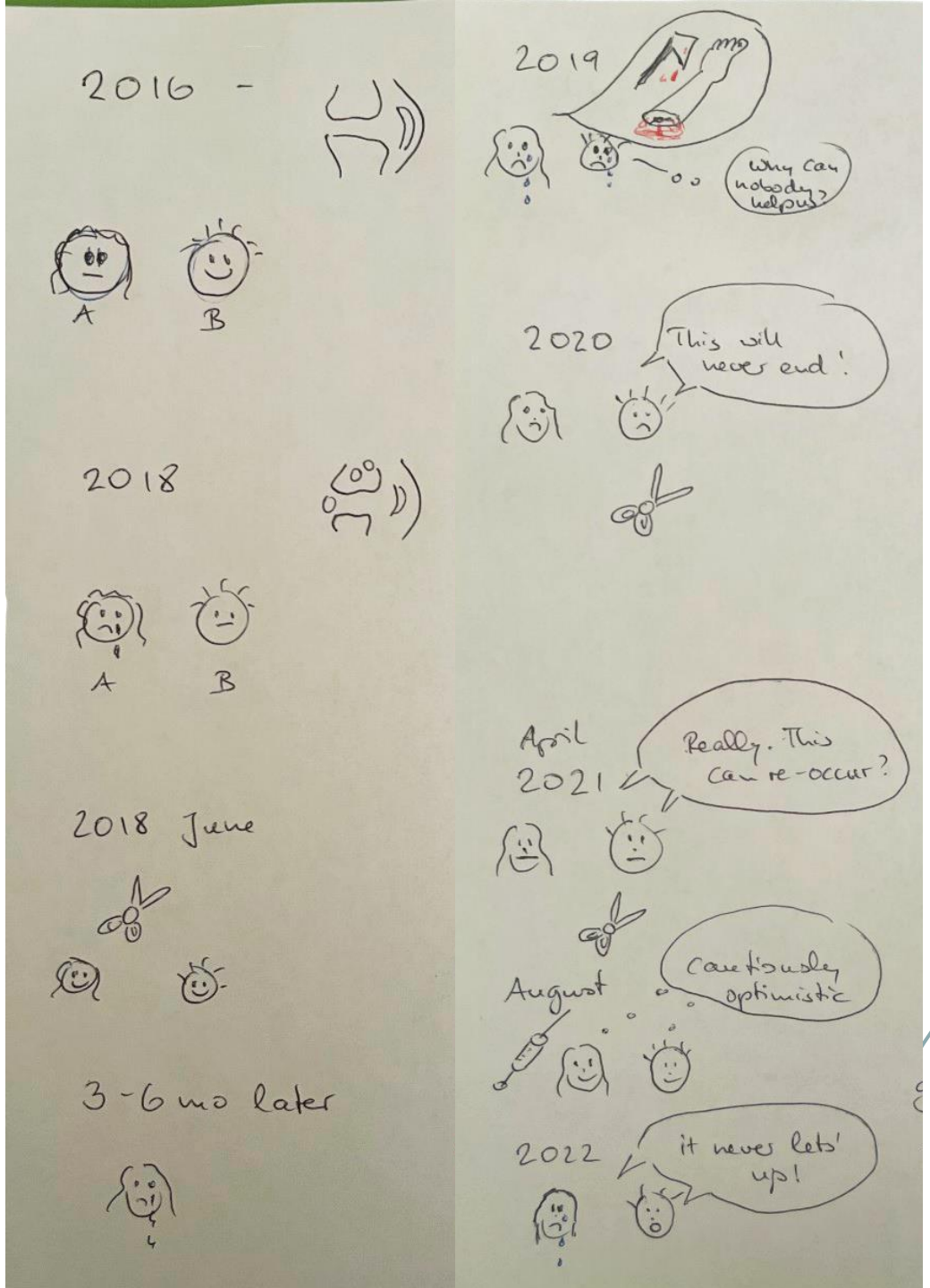
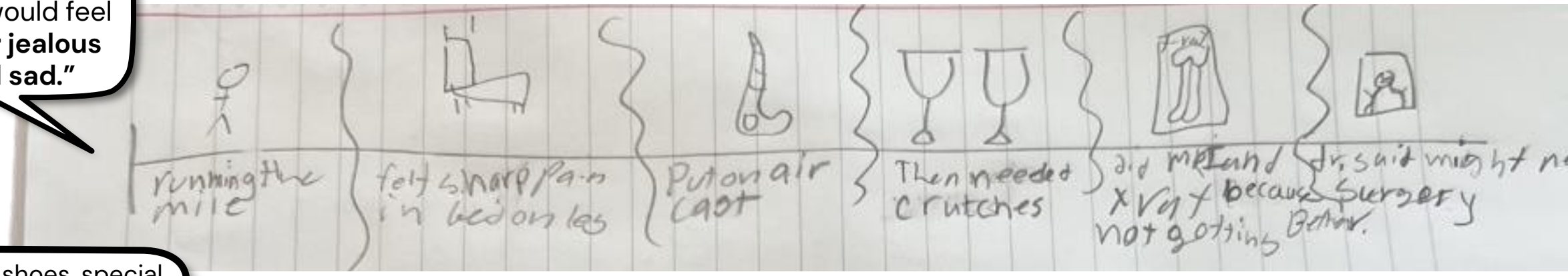
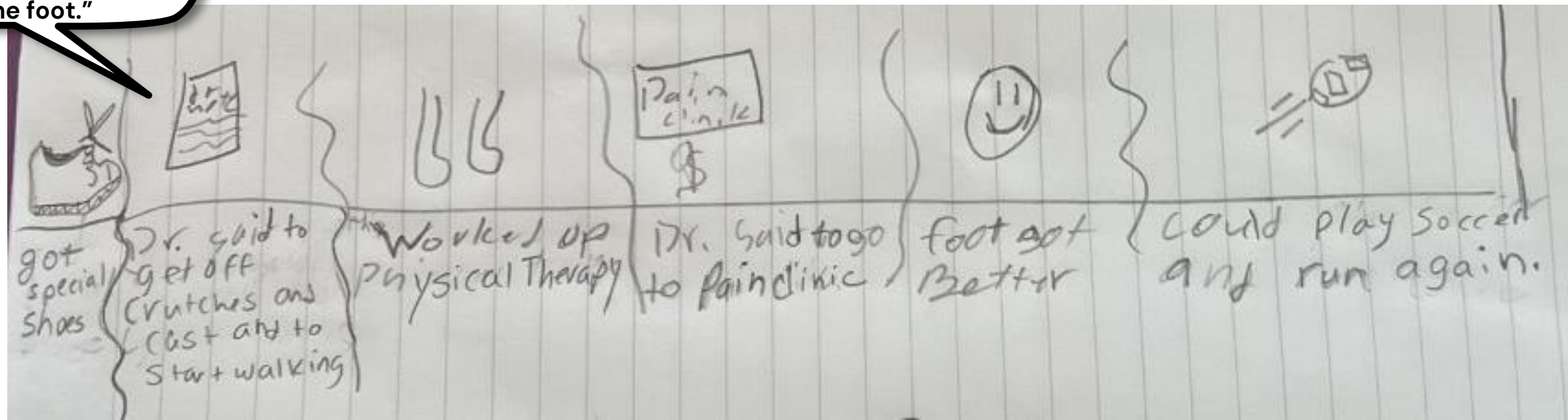
"I think **the emotional component is very undertreated.** So everybody focuses on the aspect of the pain that you can treat."



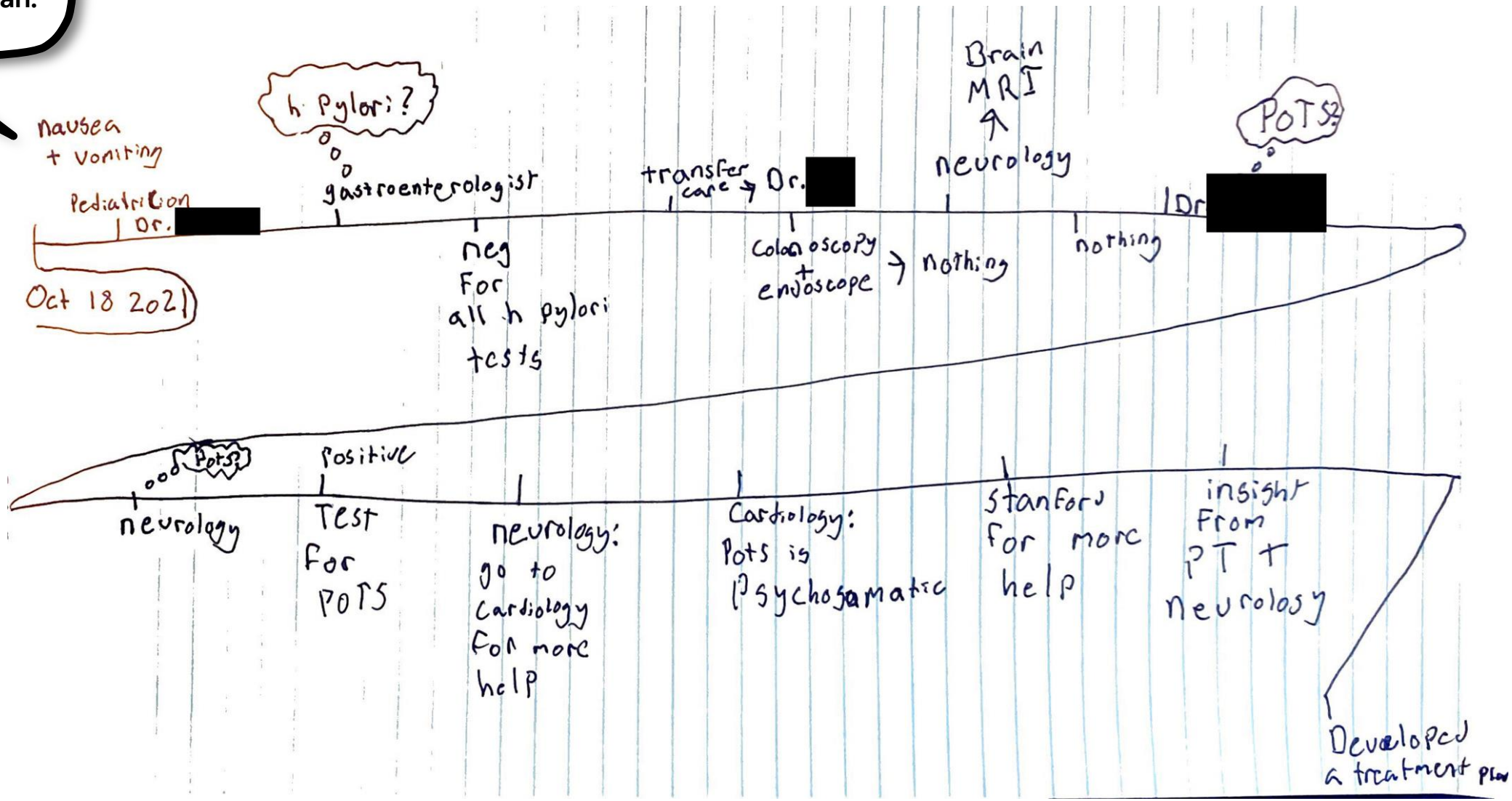
I would see all the kids playing, and I would feel **super jealous and sad."**



I got new shoes, special orthotics to help, and ...physical therapy...And **my foot got better,** and then **I could play sports again without any hurting from the foot."**



We're making some **steady progress**; might have to increase the intensity a little bit to get solid changes... **We're slowly coming up with the treatment plan."**



Limited Chronic Pain Clinics

Currently there are 60 Pediatric Chronic Pain programs in the United States.

Brief Screening of Pain Risk

Research Paper

PAIN

Pediatric Pain Screening Tool: rapid identification of risk in youth with pain complaints

Laura E. Simons[a,b,c,*], Allison Smith[a,b], Camila Ibagon[a], Rachael Coakley[a,b], Deirdre E. Logan[a,b], Neil Schechter[a], David Borsook[a,c], Jonathan C. Hill[c,d]

Journal of Pediatric Psychology, 2017, 1–9
doi: 10.1093/jpepsy/jsx123
Original Research Article

OXFORD

Rapid Screening of Risk in Pediatric Headache: Application of the Pediatric Pain Screening Tool

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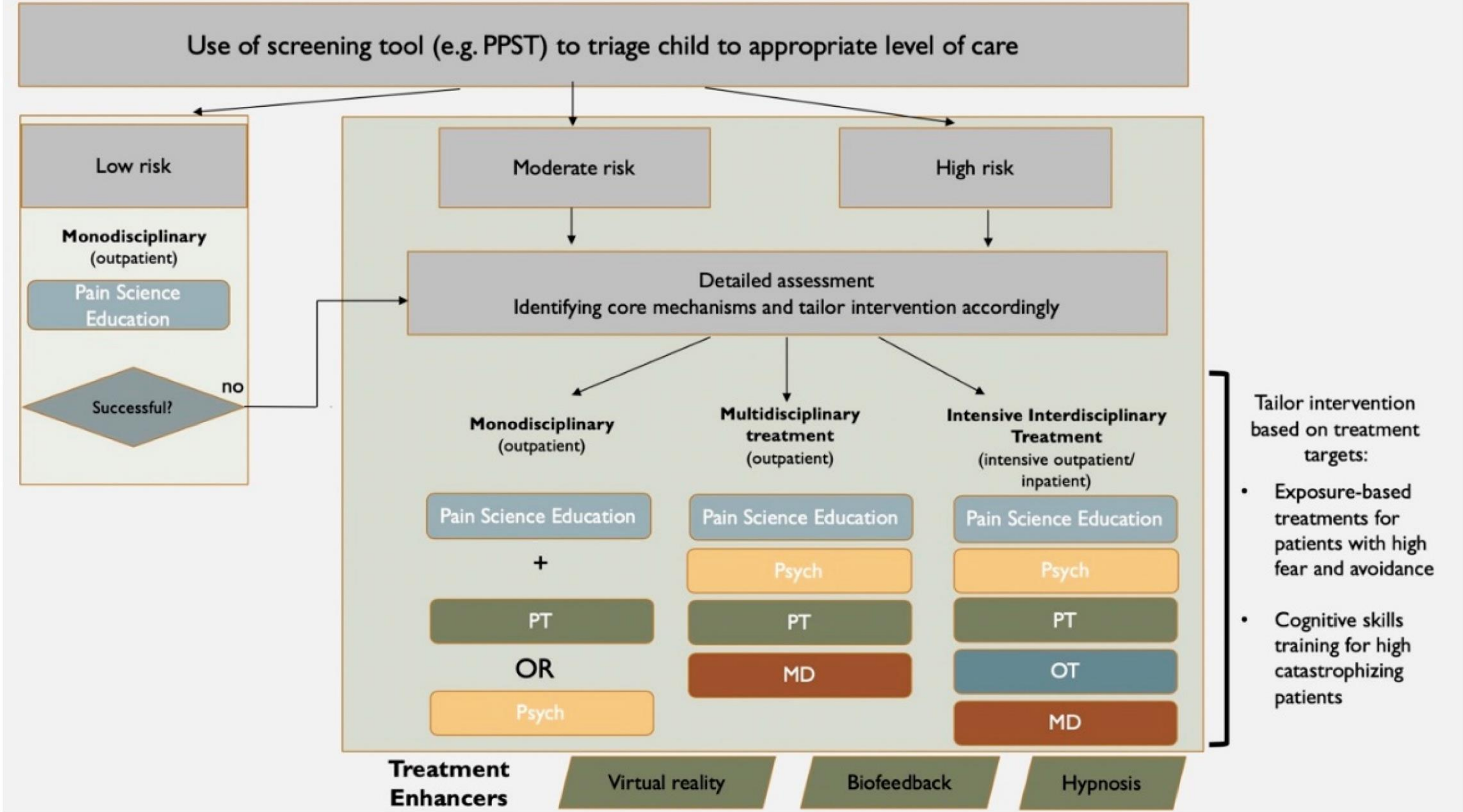
Thinking about the **last 2 weeks** check your response to the following statements:

		Disagree	Agree
1	My pain is in more than one body part.	☐	☐
2	I can only walk a short distance because of my pain.	☐	☐
3	It is difficult for me to be at school all day.	☐	☐
4	It is difficult for me to fall asleep and stay asleep at night.	☐	☐
5	It's not really safe for me to be physically active.	☐	☐
6	I worry about my pain a lot.	☐	☐
7	I feel that my pain is terrible and it's never going to get any better.	☐	☐
8	In general, I don't have as much fun as I used to.	☐	☐

9. Overall, how much has pain been a problem in the last 2 weeks?

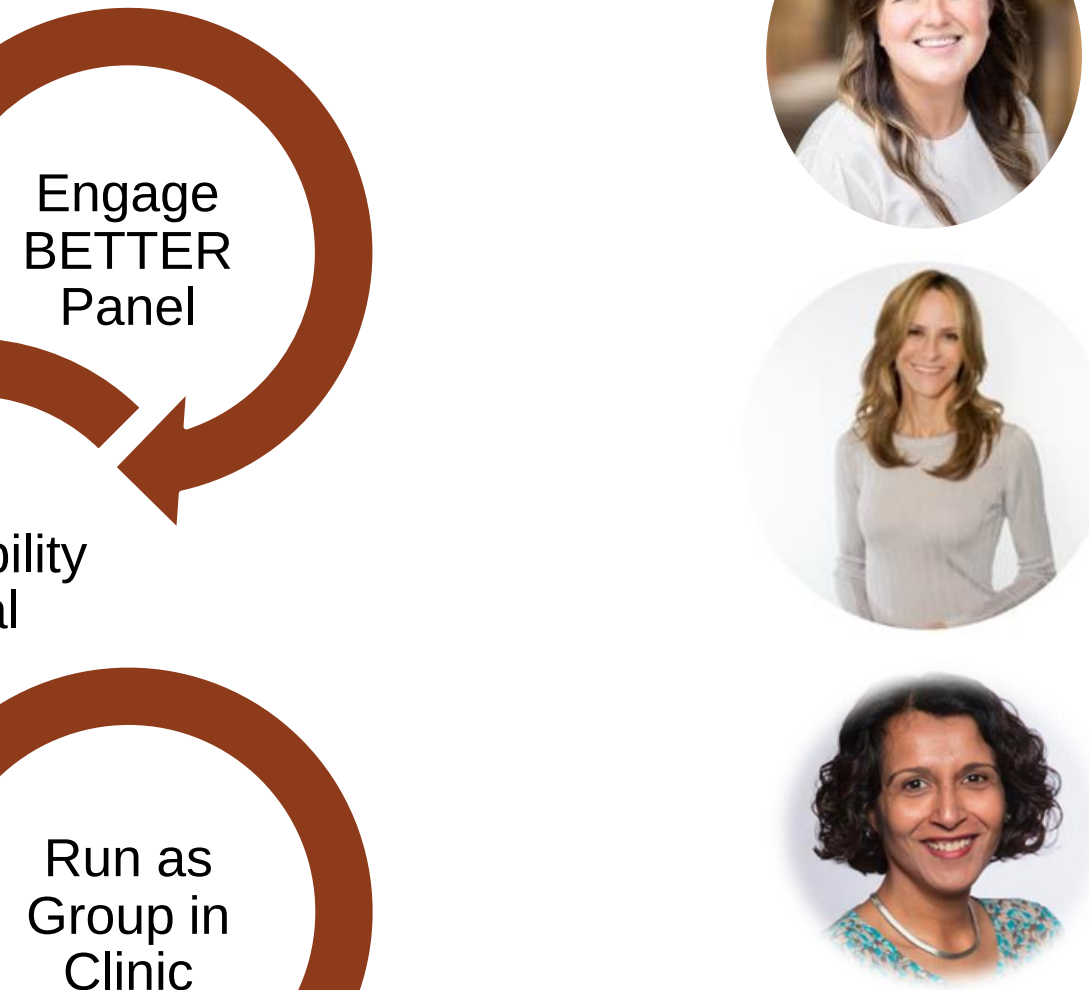
Not at all	A little	Some	A lot	A whole lot
☐	☐	☐	☐	☐



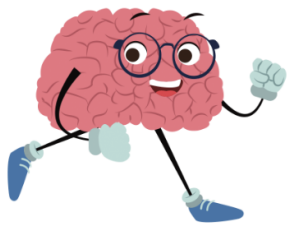
Harrison et al., 2019 JCM

Empowered Relief for Youth

Empowered Relief™



EMPOWERED RELIEF FOR YOUTH



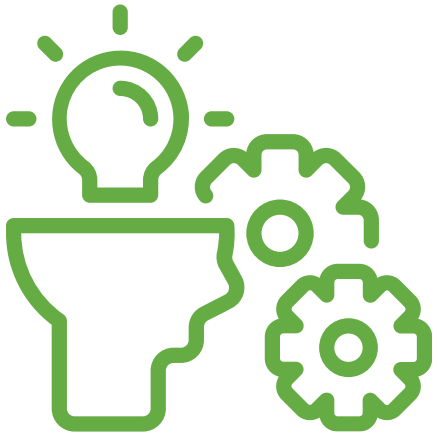
Train your brain away from pain

YOU ARE NOT ALONE

GOALS

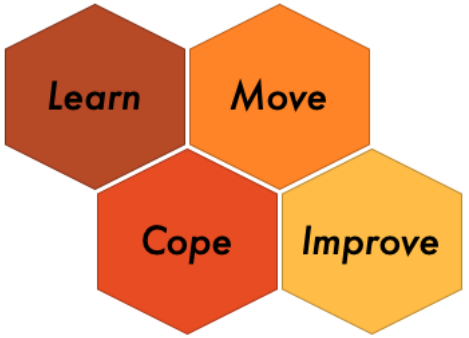
In this class you will...

Learn how pain is processed in the brain and how to best manage it



Learn simple skills that you can use everyday to manage your pain

Create your personalized plan for long-term relief



GET Living

Psychoeducation

Hierarchy Development

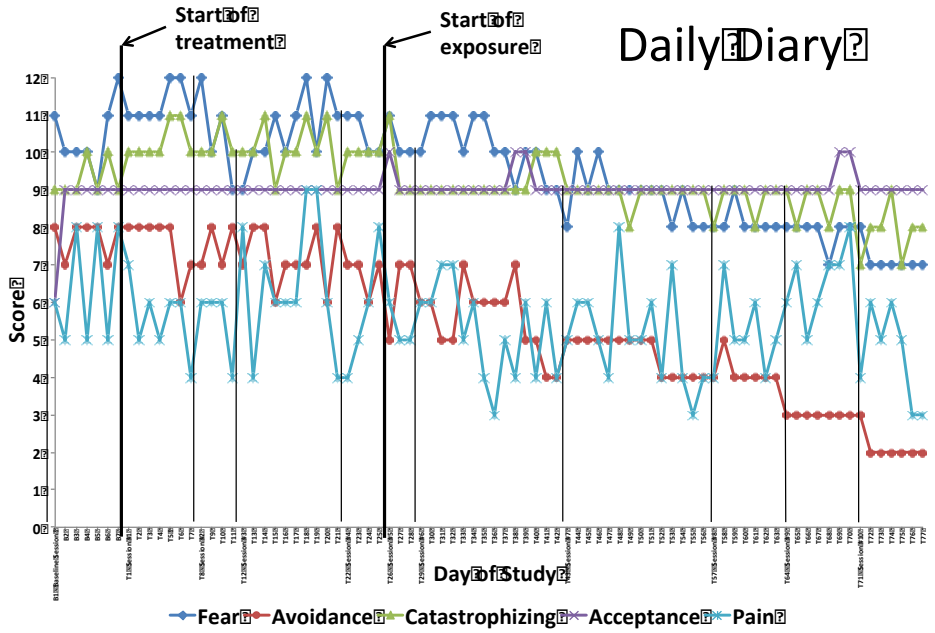
Behavioral Exposure

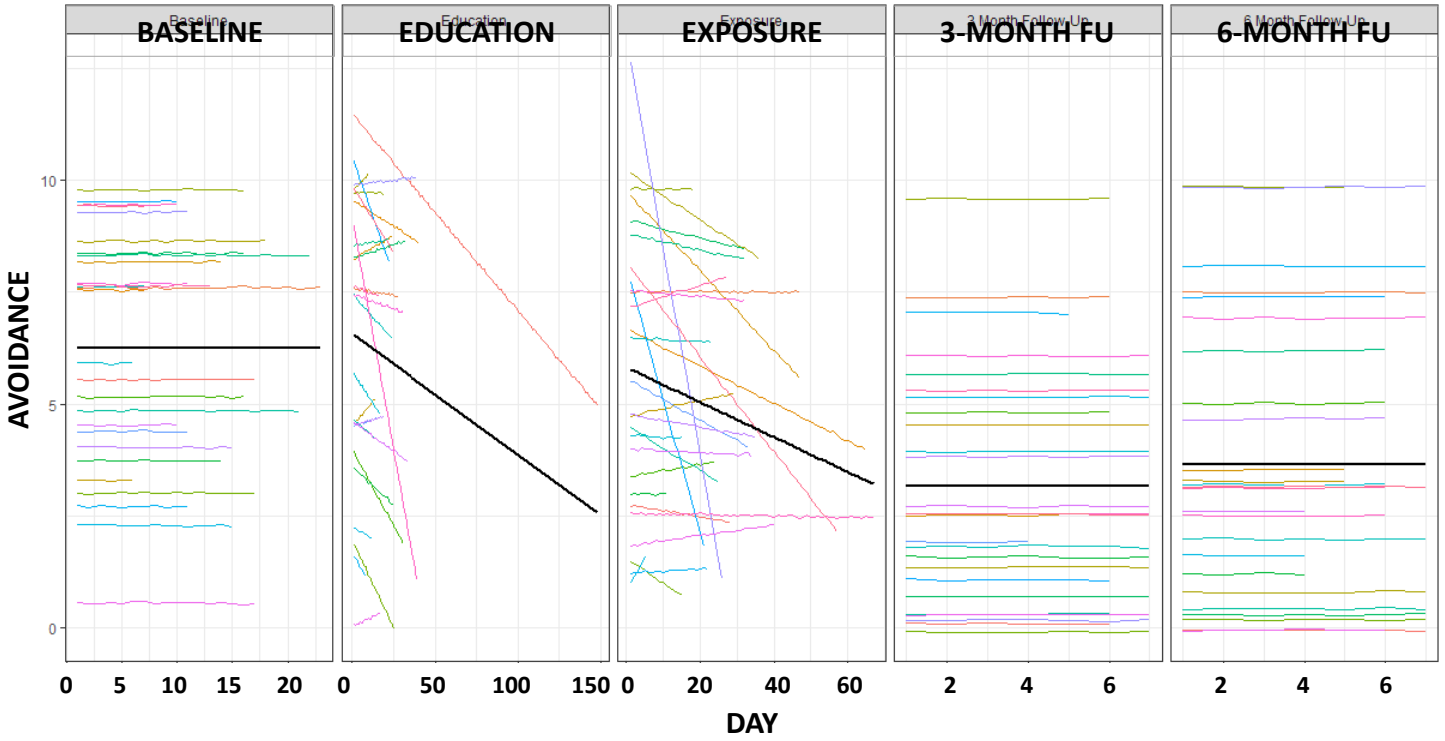
PAIN

Boston Children's Hospital
Until every child is well™

Avoid or engage? Outcomes of graded exposure in youth with chronic pain using a sequential replicated single-case randomized design

Laura E. Simons[a,*], Johan W.S. Vlaeyen[b], Lies Declercq[c], Allison M. Smith[d], Justin Beebe[e], Melinda Hogan[f], Eileen Li[f], Corey A. Kronman[a], Farah Mahmud[d], Jenelle R. Corey[d], Christine B. Sieberg[d,g], Christine Ploski[f]

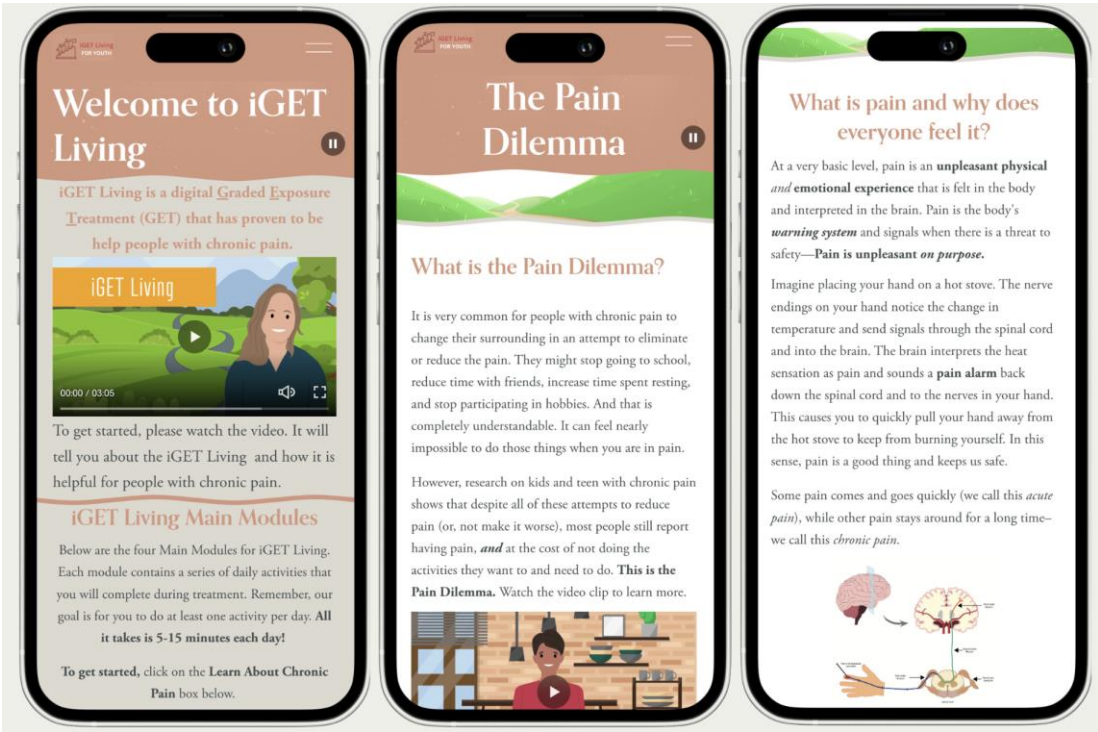




Patient-Centered Development of a Digital Exposure Intervention

"I would like to have some traditional PT exercises included in exposure activities."

"I liked being able to choose my activities for exposures. It made me feel empowered and in charge"



STANFORD MATERNAL & CHILD HEALTH RESEARCH INSTITUTE

Society of PEDIATRIC PSYCHOLOGY

NIH National Institute of Arthritis and Musculoskeletal and Skin Diseases

Original Paper

Virtual Reality in Pain Rehabilitation for Youth With Chronic Pain: Pilot Feasibility Study

Anya Griffin[1], PhD; Luke Wilson[2], BSc; Amanda B Feinstein[1], PhD; Adeline Bortz[3], MSc; Marissa S Heirich[1], BSc; Rachel Gilkerson[4], PT, DPT; Jenny FM Wagner[4], MS, OTR/L; Maria Menendez[4], MD; Thomas J Caruso[1], MD, MEd; Samuel Rodriguez[1], MD; Srinivas Naidu[1], MD; Brenda Golianu[1], MD; Laura E Simons[1], PhD

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[3]PGSP-Stanford University Psy.D. Consortium, Stanford, CA, United States
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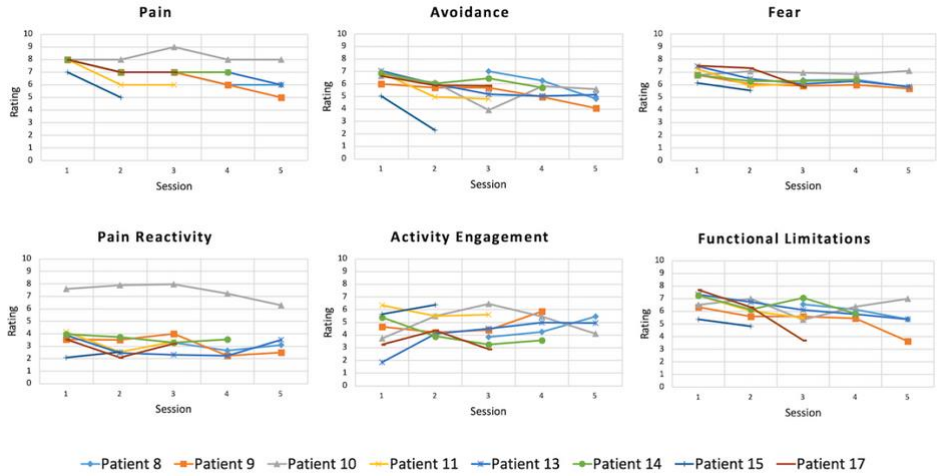


STANFORD CHARIOT PROGRAM

MIGHTY IMMERSION
Cincinnati Children's
SickKids
Lucile Packard Children's Hospital Stanford
Stanford Children's Health

POSITIVE FEEDBACK

"[PRVR] was a fun way of doing physical therapy."

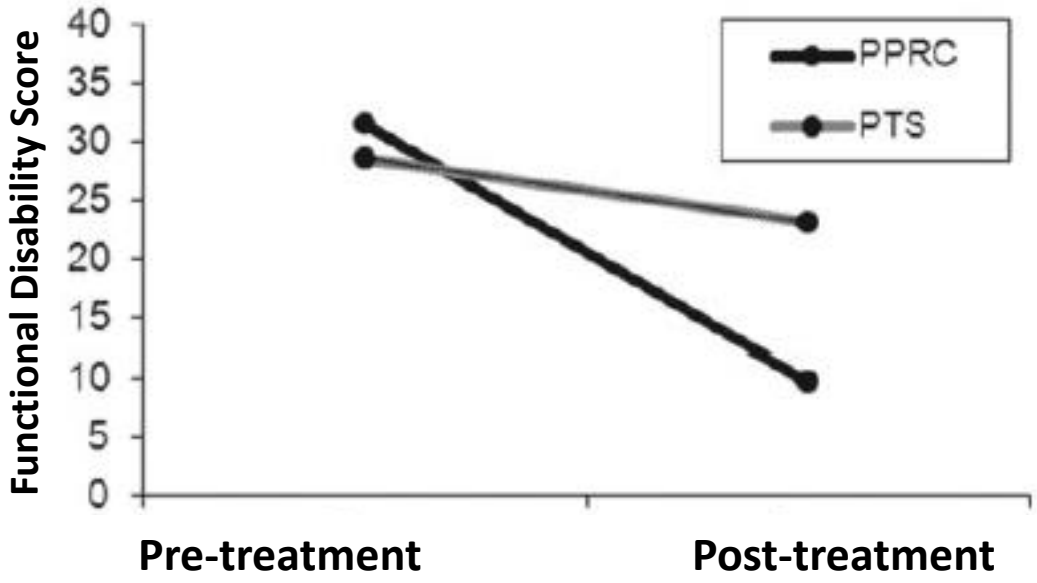
"[VR] incentivizes my exercises"

"[VR] is a great distraction to exercise"

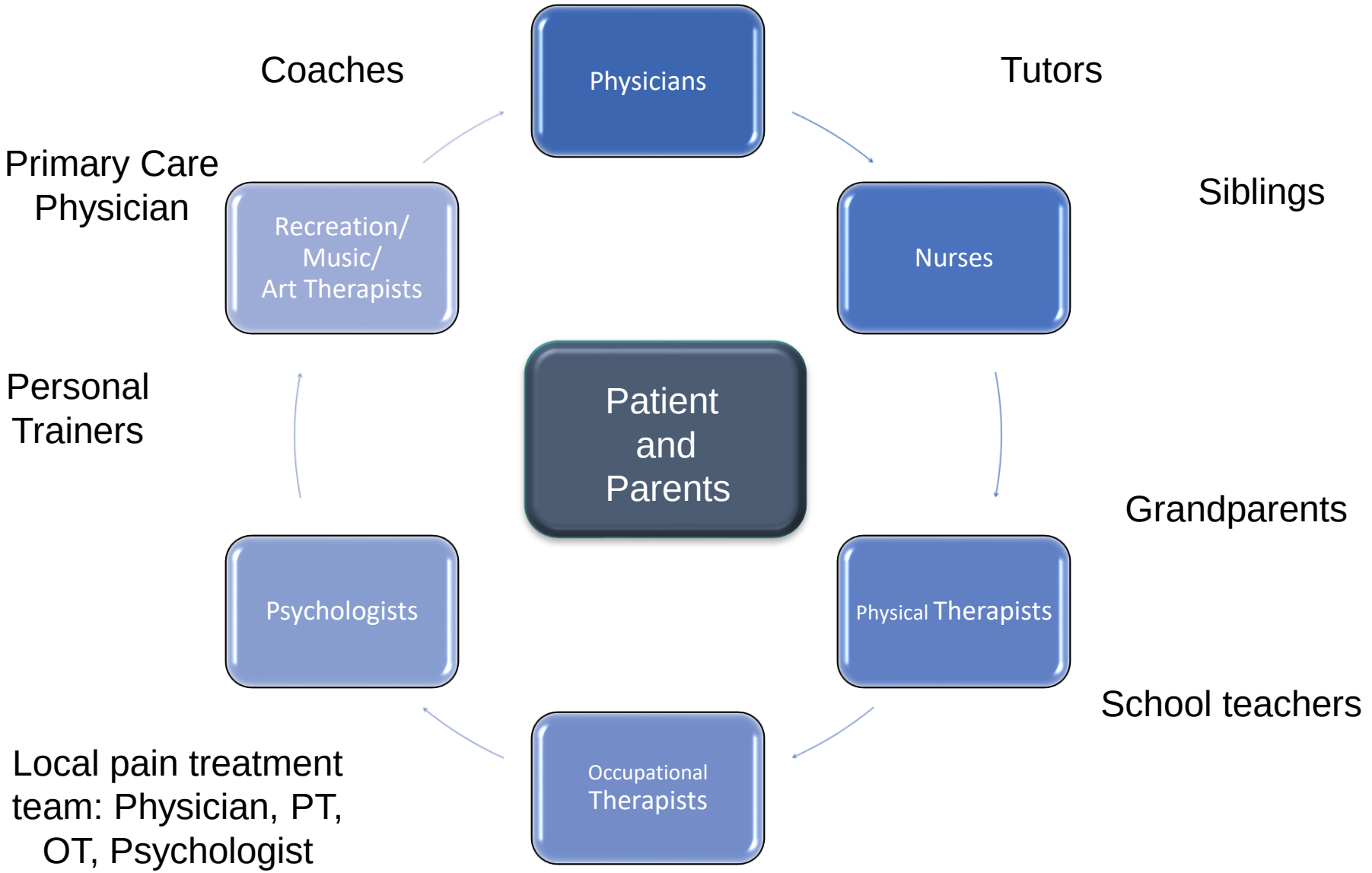
What Does It Take? Comparing Intensive Rehabilitation to Outpatient Treatment for Children With Significant Pain-Related Disability

Laura E. Simons,[1,2] PhD, Christine B. Sieberg,[1,2] PhD, Melissa Pielech,[1,2] MA, Caitlin Conroy,[1,2] PsyD, and Deirdre E. Logan,[1,2] PhD

[1]Division of Pain Medicine, Department of Anesthesiology, Perioperative and Pain Medicine, Boston Children's Hospital and [2]Department of Psychiatry, Harvard Medical School



The intensive interdisciplinary pain treatment team

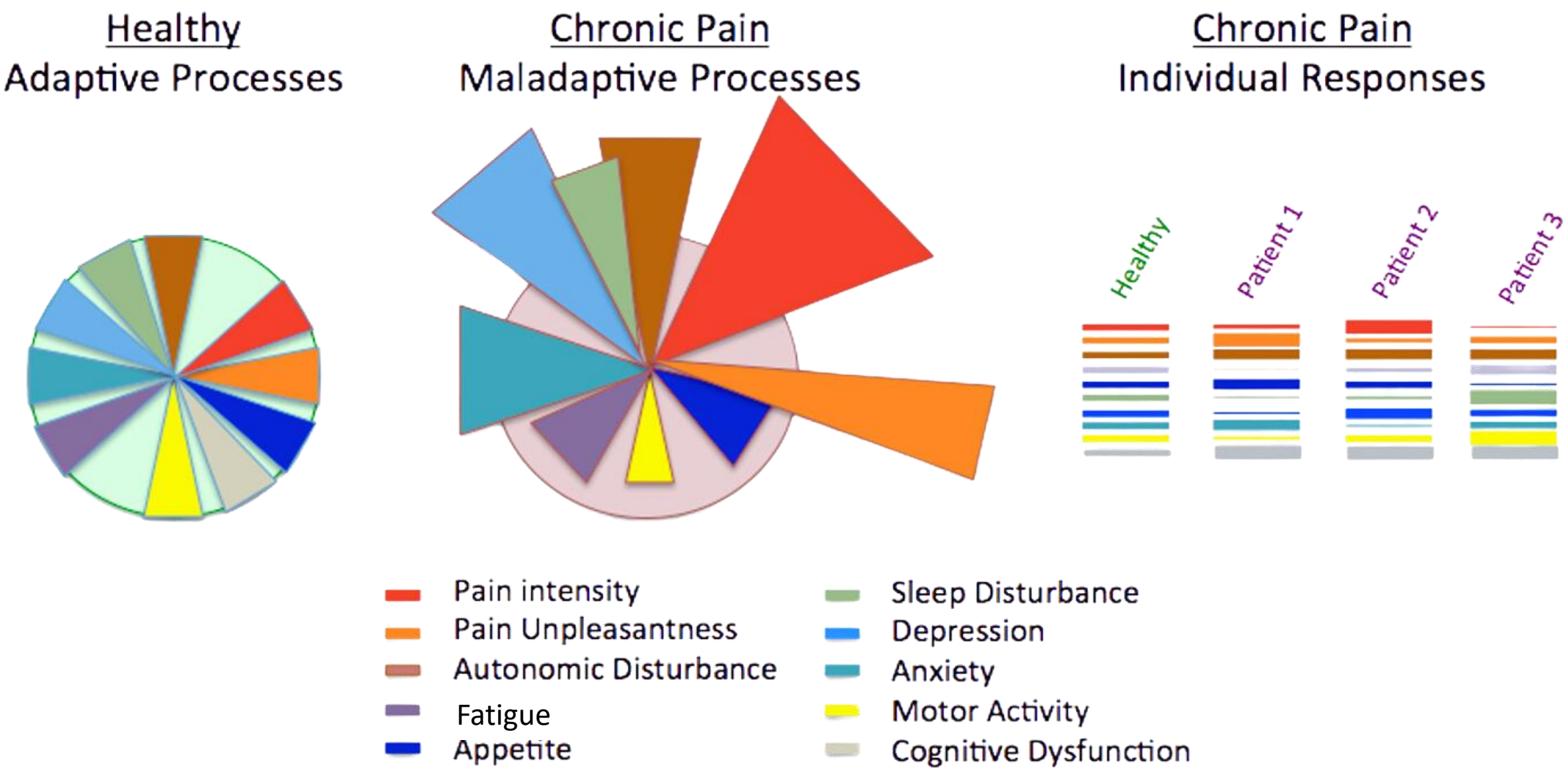


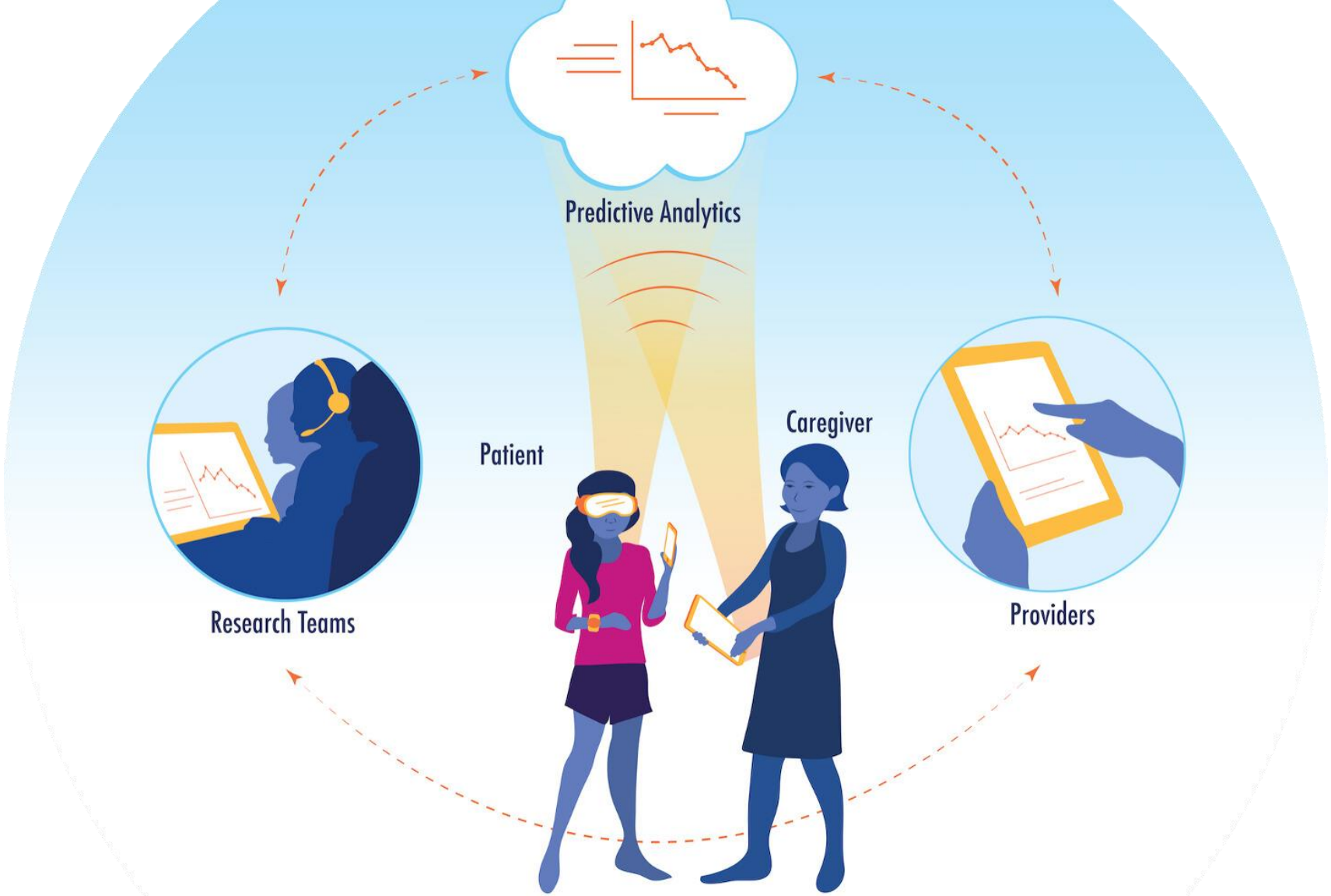
DAILY SCHEDULE	
Time	**Session**
8 – 9A	Indiv OT
9 – 10A	Indiv PT
10 – 11A	Indiv Psych
11 – 12P	Group OT/PT
12 – 2P	Lunch Quiet Time MD visit
2 – 3P	Group Psych
3 – 4P	Family OT/PT/Psych

Even fewer (30) interdisciplinary treatment programs

Where do we go from here?

Applying an Individual Lens for Patient-Centered Pain Care





Leveraging Predictive Analytics for Patient-Centered, Precision Pain Care

Take home points:

- A young person's journey with chronic pain is long and complex.
- Innovative approaches to screening and comprehensive assessment can inform individualized treatment approaches.
- Access to low burden, scalable behavioral health interventions for pain is critical.
- A meaningful subgroup of patients will require intensive interdisciplinary pain treatment and access right now is incredibly limited.
- Current innovative approaches to assessment can enable patient-centered, precision pain care

Biobehavioral Pediatric Pain Lab













Biobehavioral
Pediatric Pain Lab

Stanford Children's Health | Lucile Packard Children's Hospital Stanford

The MAYDAY Fund

NIH National Institutes of Health

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