

Client

- Health insurance companies

Need Statement

- People with hand disabilities and injuries face challenges in attending physical therapy sessions multiple times a week during their period of recovery due to the demands of their lives. This will slow or reverse recovery progress if sessions are insufficient or missed.

Goal Statement

- We aim to address this by providing a device that allows clients to perform their exercises at home, reducing in-person visits. Our goal is to make rehabilitation more convenient, accessible, and efficient, enabling clients to have more control over their recovery

Design Objectives in Words


- We aim to reduce physical therapy visits up to 50%, subsequently reducing insurance costs

Design Objectives as Quantified Table

| Design objective | Unit | Target/Range |
|------------------|------------------|---------------------------|
| Visits | Number of visits | 10%-50% less |
| Device cost | dollars | >\$1440 |
| Accessibility | Minutes | Greater than session time |
| Weight | lbs | <2lbs |


Personas

- End user


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|  Mark, 36 yrs old | Context <ul style="list-style-type: none">• Worked IT desk job for 12 years• Has one kid and two cats• Enjoys spending time with family• Carpal tunnel syndrome caused from typing most of the day on his computer |
| Goals <ul style="list-style-type: none">• Wants to start stretching hands to make it better as the pain is debilitating, and he really values | What does this entail <ul style="list-style-type: none">• He struggles to do the hand exercises prescribed from his doctor as he forgets to |

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| being active with his family and pets | <ul style="list-style-type: none"> The device will help him be consistent |
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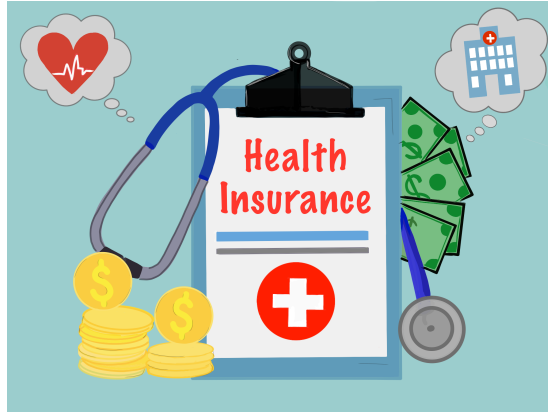
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|  <p>Samantha, 25 yrs old</p> | <p>Context</p> <ul style="list-style-type: none"> Weekend yoga instructor and passionate barista Enjoys hiking, taking care of her plants, and spending time with friends Got into car accident and injured hand <ul style="list-style-type: none"> Lost a lot of strength and mobility because of prolonged cast duration |
| <p>Goals</p> <ul style="list-style-type: none"> Remain consistent to regain hand mobility | <p>What does this entail</p> <ul style="list-style-type: none"> Struggles with progressing and sticking to physical therapy routine due to active/busy schedule Stiff/weak joints, time sensitive to regain strength and mobility Will allow her to progress without losing progress |

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|  <p>Tom, 42 yrs old</p> | <p>Context</p> <ul style="list-style-type: none"> Physical therapist Passionate about helping his clients the best he can He loves eating taco bell, refuses to get it himself, only uses doordash <ul style="list-style-type: none"> Devastated that apple empanadas are discontinued Limited time nuggets :(|
| <p>Goals</p> <ul style="list-style-type: none"> Be able to prescribe exercises and track progress remotely with potentially stubborn clients Retain clients who otherwise would | <p>What does this entail</p> <ul style="list-style-type: none"> Understands that clients have a hard time making it to appointments and not everyone can afford to see him often |

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| cancel therapy altogether | |
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- Clients



Insurance Company

Context

- Mid-size health insurance company
- For profit company
 - Wants to buy product to provide a service at a cheaper price
 - Increase retention rate for provided service

Goals

- To provide affordable healthcare to the average person
- Allow more accessibility to physical therapy exercises

What does this entail

- Replacing physical therapy visits
- Increasing more End Users to have access to in person therapy meetings