Moving Assistive Technology
From Lab -> To User

or

If it was easy,
everyone would be doing it...

Walter Greenleaf, PhD
Computer Technology for Evaluation and Rehabilitation
Cognitive & Physical Therapy
Facilitated by Interactive Media Technology
Integrated Telerehabilitation Program

**Patient**
- Fun Exercise Programs
- Instant Feedback
- Accountability
- Progress Reports
- Ability to communicate with Provider

**Back End**
- Maintains Database
- Monitors Patients
- Issues Alerts
- Prepares Reports
- Outcomes Analysis

**Provider**
- Monitors Progress
- Receives Alerts
- Adjusts Regimen
Computer Assisted TeleRehabilitation

Treatment approaches designed to generate optimal recovery:

- Guarded rehabilitation activities
- Graduated short term milestones and goals
- Real-time visual feedback of rehab progress
- Cognitive distracters (from pain, fear, boredom)
- Daily clinical oversight and therapist-provided feedback
- Collaborative Rehabilitation
Daily evaluation of rehabilitation progress

Feedback loop closed

Quantitative and qualitative assessment

Improved *compliance* with home programs
Mary
You have EMail from the Chat Group

Please repeat this exercise program 1 time every day:
(average time 15 min)

- use the glove with the left index finger and rotate the finger 100 degrees.

- move the index finger up and down in a 80 degree range for 10 times.
Guarded rehabilitation activities
**Patient Benefits**

**Technology-assisted program**
- Improved compliance, leading to:
  - Faster recovery
  - More complete recovery

**Traditional program**
- Typically poor patient compliance:
  - Slower recovery
  - Potential for permanently lost function
Benefits of Dynamic Rehab

Patients:
- Motivated
- Sure what to do
- Get ongoing, specific feedback
- Follow appropriate regimens

Number of Cases

Time off work

$\$
An Electronic Scrapbook for Patients With Progressive Memory Loss, Such As Alzheimer’s Disease
Nature of the Assistive Technologies Market
## Ways to get a product to market

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The Challenge of the Assistive Technology Market

• Few large companies addressing the market

• Difficult to raise investment capital
  Market is viewed as small
  Not many examples of ROI

• Competition from other investment opportunities

These barriers to entry are not insurmountable, but must be factored into your design and business plans.
The Challenge

Getting assistive technology to the user requires a different approach than standard commercialization strategies.

The situation will improve, with the passage of time and the aging of the population.

In the meantime:

Design with the *complete process* in mind; from *concept* to *commercialization*.

Reverse engineer from “the exit”.

The Challenge

Getting assistive technology to the user requires a different approach than standard commercialization strategies.

The situation will improve, with the passage of time and the aging of the population.

One approach is to leverage existing distribution channels.

Direct to consumer may be a viable option for distribution; but how to finance development, validation, manufacturing, regulatory approvals etc…
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http://www.greenleafmed.com