Practical Alternatives for Remote Neurotherapy: How Do We Reach the Home, School, and Office?

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Conventional Wisdom

• “There is no reason for anyone to have a computer in their home”
  – James Olson, CEO, digital equipment corporation (DEC) – 1978

• “Home neurofeedback training will never be practical”
  – Anonymous clinician - 2002
Our Intent - 1

• To facilitate an order of magnitude (or more) increase in the global availability of neurofeedback
• Reduce client costs by an order of magnitude or more
• Create a natural extension of clinical practice
• Overcome geographical, time barriers
• Provide simplicity, confidence, effectiveness for remote training
Our Intent - 2

- Open the doors to homes, schools, businesses.
- Empower clinicians, extend & expand their practices.
- Enlist the support of HMO’s, insurance providers.
- Get to or below the cost of other alternatives.
- Work within the intent of the FDA, etc.
- Increase overall awareness, acceptance of neurofeedback.
Facts - 1

- Neurofeedback machines are prescription devices by federal law.
- Devices may be deployed only by or on the order of a clinical practitioner.
- The supervising clinician is responsible for activities & outcomes.
- “Roll your own” remote neurofeedback is not an answer.
• There is no fundamental reason we cannot get neurofeedback into homes, schools, offices.
• Telemedicine is the future of medicine.
• Teleneurofeedback is the future of neurofeedback.
An Opportunity to Rethink Things

- Old model – clinic based
- New model – clinic and remote based
- New way of approaching clinical practice
- New model for clinical, financial issues
- New opportunities for clinicians and clients
- A clinician can reach >40 clients/week and maintain quality, professionalism
Issues - Clinicians

• “I would never send a neurofeedback system home.”
• “I have no idea how I would control it.”
• “How would I protect myself and my clients?”
• “I don’t have the time for all the extra training, monitoring, reviewing, etc.
• “How would I get paid for all this?”
Issues - Clinicians

• “I sent a system home, and now I don’t know what they are doing with it”
• I’m not sure they are doing what I recommended
• I think they are now (or also) working with clinician (or non-clinician!) Jones
• How do I know they are not sharing protocols with others? Am I responsible?
Issues - Clients

• “I thought my clinician told me to…”
• “Now which one is the blue one?"
• “I don’t know what I’m looking at”
• “It was so complicated, I don’t remember all the details”
• “I think I’ll just try something different”
• “I don’t think I need to go back to Dr. Smith”
Issues - Clients

- “I checked with someone else, and they told me to …”
- I heard that this was a good protocol…
- I read … on the internet so I thought I’d try it out on my son
- Now I want to sell my equipment
Old Model

• Send a clinical instrument home
• Train users to become mini-clinicians
• Surrender control
• Sacrifice confidence, peace of mind
• Lose ability to track progress
• How to follow up, manage changes or completion of training?
Think of It As a Dispenser

• A low-cost vehicle for delivering sessions
• Rental/service vs. Purchase/training
• Simple, safe, efficacious
• Versatile, flexible – like a bottle of pills
• Client can do what they need, with confidence
• Need “use as needed” option for HW/SW
Clinical Practice

• Must be simple, easy to:
  – Preprogram sessions
  – Send sessions to remote location
  – Keep track of progress
  – Ensure compliance, reporting
  – Make changes as necessary
  – Increase client base by an order of magnitude
It’s About Empowerment

- Empower clinicians to enable remote training
- Empower clients to have safe, effective training at their location & within their schedule
- Give everyone what they need when they need it
- Not forcing anyone – clinician has options, makes decisions
Basics

- Simple control & communication methods.
- Integrated with software & procedures.
- Do not depend on “live” internet.
- Can use pc-anywhere, GoToMyPC, etc. If desired – generic PC solution.
- Accommodate a range of methods.
  - Email, floppy disks, ftp, sst, etc.
  - Provide variety of simple tools, procedures.
Details - 1

- Think of a digital clinical folder
- Foundation for remote methods
- Contains settings, protocols, doses
- Contains results, summaries, reports
- Provide simple tools for packaging, transfer, use of folders both at clinic and at remote location
- Easy to send back & forth
Details - 2

• Provide methods to maintain clinical control.
• Provide ways to authorize, control sessions.
• By minutes, by date, whatever.
• Ensure client complies with type and amount of feedback.
• Ensure client reports back to clinician.
• Ensure clinician can easily modify, update parameters.
Summary

• It’s not that difficult.
• Software is the key.
• If we can send insulin home, we can send neurofeedback home.
• We can share a vision, accept common principles.
• It can be good for everyone involved.
• We can move together to the next level.