Increasing Efficiency While Maintaining Patient Outcomes and Satisfaction: One Clinic’s Approach to a New Service Delivery Model

Presbyterian Board of Governors Cochlear Implant Center of Excellence @ GBMC
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Conflict of Interest

• Financial:
  • Senior Cochlear Implant Audiologist at Greater Baltimore Medical Center
  • Received honoraria for presentations from Cochlear and ASHA

• Nonfinancial:
  • Advisor to ASHA’s Audiology 2019 conference
Who are we?

- Original the Presbyterian Eye, Ear and Throat Charity Hospital
- Community based hospital
- One of the largest birthing hospitals in the state
- Added cochlear implants in order to offer the full continuum of care
- Began 19 years ago and completed 7 implants the 1st year
Challenges Implant Centers Face:

- Limited access to booth, real ear equipment, etc.
- Busy clinic schedules – can we see patients in a timely manner with minimal increase in staffing
- Time intensive process
- Poor reimbursement
- Additional technology/accessories require additional counseling
- Compatible hearing aid modifications
- Management of residual hearing and acoustic component

We need to find solutions to create a sustainable program.
Development of Device Counseling Workshop:

- Individual device counseling sessions increased as number of recipients increased – significant non-billable time spent completing
- Once a month group device counseling session
- Review insurance, surgery, vaccinations, timeline for management, realistic expectation, MRI compatibility and device options
- Patients sign contract
- Patients complete cochlear implant order
- Provided written documentation of all material covered
Reduction of non-billable counseling:

- Monthly non-billable device counseling
  - Individual Counseling: 8
  - Group Counseling: 2
Media for Education:

• Increased resource links for candidates and current recipients on our webpage
• Links to manufacturer support
• Private Facebook group
• Device counseling and surgical consent videos to assist in streamlining the process for audiologists and surgeons
• Patient testimonials and CI Connection – link to an advocate
Surgical Volume Increases
Provider and Support Staff:

- Aural rehabilitation therapy – absorbed counseling responsibilities = increased revenue
- Administrative training – telephone troubleshooting, in office easy repairs or accessory for non-billable services
- Use of a CI technician:
  - Device review at activation
  - Equipment review and pairing before initial aural rehabilitation session
  - Troubleshooting – in office, via email or via telephone
  - Complete of RMA and LMN
  - Resource development
  - Preparation of all CI systems prior to activation
  - Lead the Device Counseling Workshop
Cochlear Implant Technician:

• 100% of patients found services helpful
• 100% reported feeling adequately prepared to complete basic tasks following activation training
• 60% of folks felt 1 hour was conducive to learning
• 100% felt a 30 minute review was beneficial before the first AR session
• 30% of recipients requested additional support via email, phone call or office visit conducted by the CI Technician – reducing Audiologist involvement/time
Re-evaluation of Protocol:

✓ Defined necessary assessments at each step of the process
✓ Provided written and online support for patient empowerment
✓ Reviewed patient outcomes and appropriate assessments for each follow-up session
✓ Explored how much time was spent with audiology services and what could be completed by the rehabilitation therapist or CI technician
✓ Reduced protocol over time from 8 visits in the first year to 5 visits while reducing appointment times without impacting patient outcomes or satisfaction!
Clinical Service History:

Service Volumes

- FY2017: 606
- FY2018: 1033
- FY2019: 1193
Exciting Path Before Us:

- **Patient Self-Assessment**
  a) Direct connected assessment completely driven by the recipient
  b) Assess audiogram, loudness perception, speech perception, and phoneme discrimination

- **Remote Service**
  a) Speech as well as audiology services
  b) Self-assessments completed at home
  c) Records sent and reviewed by expert clinician
  d) Determine need for additional mapping
  e) Mapping occurs remotely

- **Use of Artificial Intelligence**
  a) A.I. used as a support tool in conjunction with results of evidence based assessment through direct connection
“This moment made possible by you!”