



BRIDGING THE GAP: FUNDING ISSUES: THE VIEW FROM BRAZIL



CIICA LIVE
CI SERVICES MATTER:
RECOMMENDATIONS FROM
CIICA'S GLOBAL ADULT
CONSULTATION



Prof. Dra Carmen Barreira Nielsen

BRIDGING THE GAP: FUNDING ISSUES: THE VIEW FROM BRAZIL

Optimal use of the CI requires lifelong care of implant-treated patients. A sustainable, standardized and structured care process is the prerequisite for the best possible and lifelong treatment success .

- How can we combine economics and health to make public services more accessible?
- How can we make health financing more effective and sustainable?

Health for all: Transforming economies to deliver what matters, 2023

An annual additional investment of less than US\$ 1.40 per person is needed to scale up ear and hearing care services globally (WHO, 2023)

+ 12.000 CI SURGERIES (2009-2021)



45% municipally
85% general hospitals
45% are nonprofit

18/26 States

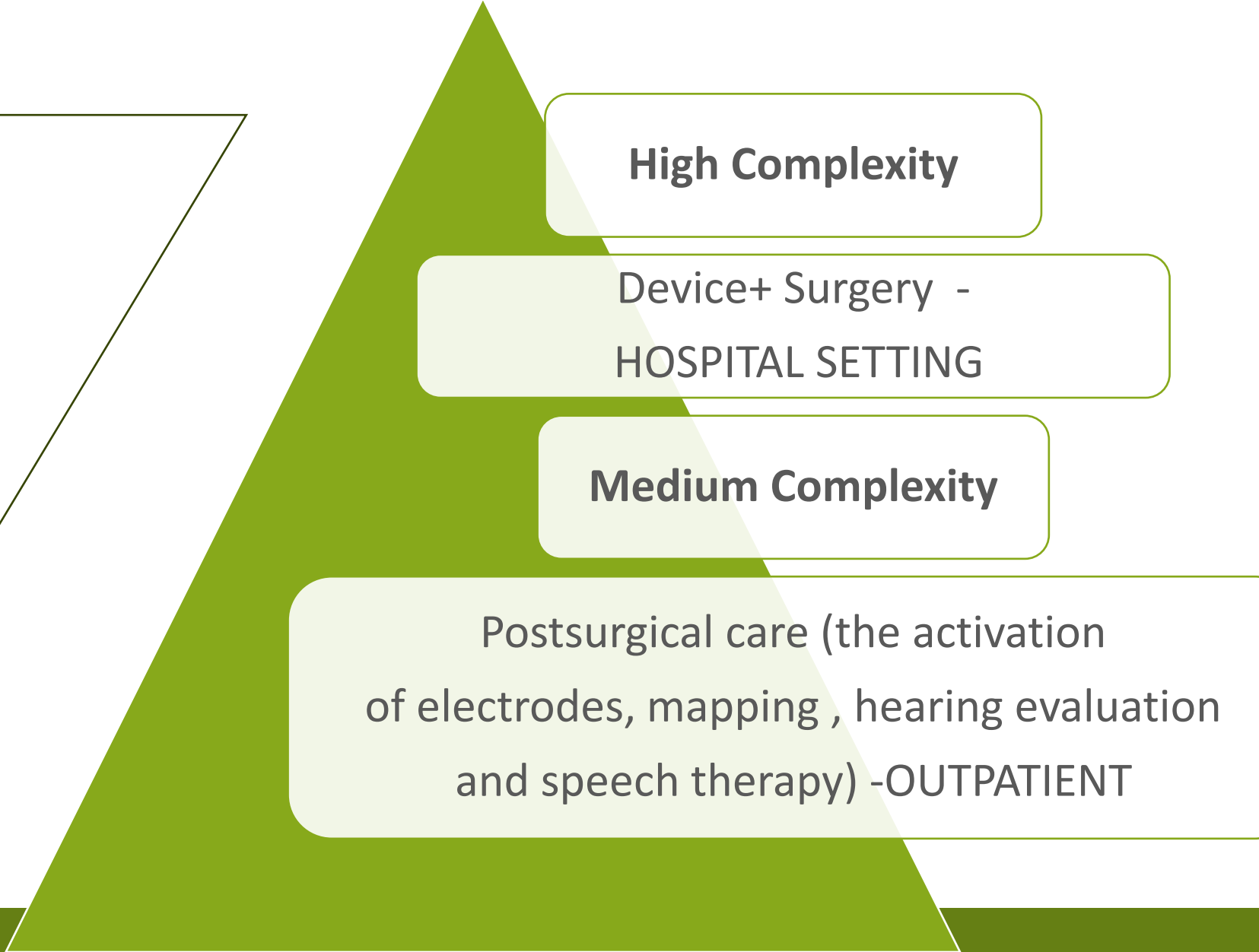
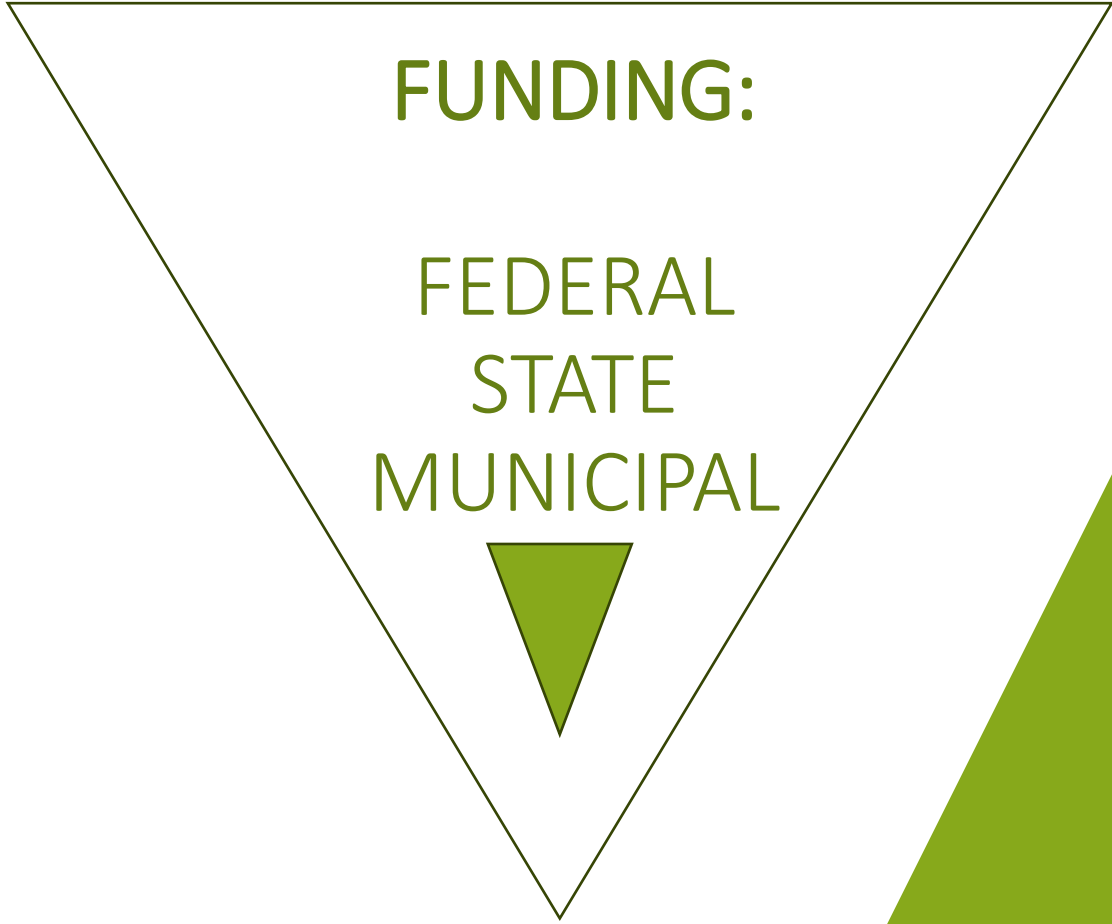


ENT	680
SLP	858
35 services	

BRIDGING THE GAP: FUNDING ISSUES: THE VIEW FROM BRAZIL

- 1977 First CI Surgery in Brazil
- 1990 First CI Surgery funding by PUBLIC HEALTH SYSTEM (SUS) –HRAC / CENTRINHO





CI SERVICES MATTER : CI PROCESSORS UPGRADES / REPLACEMENTS

Ordinance MS 375 of 2019 regulating the exchange and maintenance of processors

- To exchange the external part, the criteria are:

Replacement -must take place for one of the following reasons:

- a) when the speech processor has been used for 7 years or more and is obsolescent and discontinued, duly certified by the companies that sell the CIs in the country;
- b) due to a malfunction certified by the doctor and Audiologist, (...)
- c) in case of loss, theft, duly proven by a police report;

CURRENT CHALLENGES IN THE DELIVERY OF POSTOPERATIVE CI CARE

- **There is an absence of a universal and standardized approach to the delivery of postoperative CI recipient care, follow-up scheduling and assessment tasks can vary between clinics** (Browning *et al.*, 2020; Dunn, 2018; Hemmingsen, Messersmith, 2018)
- **Follow up** – Americas -American Academy of Audiology guidelines recommend CI recipients to undergo close monitoring and regular audiological review with follow-up at initial activation, and 1-week, 1-month, 3-months, 6-months, and 12-months post activation. This is followed by additional visits at 18 or 24 months based on patient needs
- **Follow up** – Several European Guidelines. The lifelong follow-up is used for medical, technical control and advice as well as for checking hearing, speech and language (**not therapy**)
- **Rehabilitation** -Despite evidence suggesting aural rehabilitation training exercises improve outcomes in CI recipients, formal aural rehabilitation training programs not often incorporated as part of the follow-up care (Harris, et.al., 2016; Dornhoffer et al., 2022)

* CI TASK FORCE – Living Guidelines



ADULT FOLLOW UP – REHABILITATION- PUBLIC FUNDING

FITTING SESSIONS

First year of CI	4 follow up / year
Second year of CI	3 follow up /year
Third year of CI	2 follow up /year
After the 3 rd year	Annually

Follow-ups can be anticipated or spaced according to the patient's needs or performance

NUMBER OF REHABILITATION SESSIONS

Speech therapy is mandatory for all patients and can be carried out in the Service itself or in referenced speech therapy services.

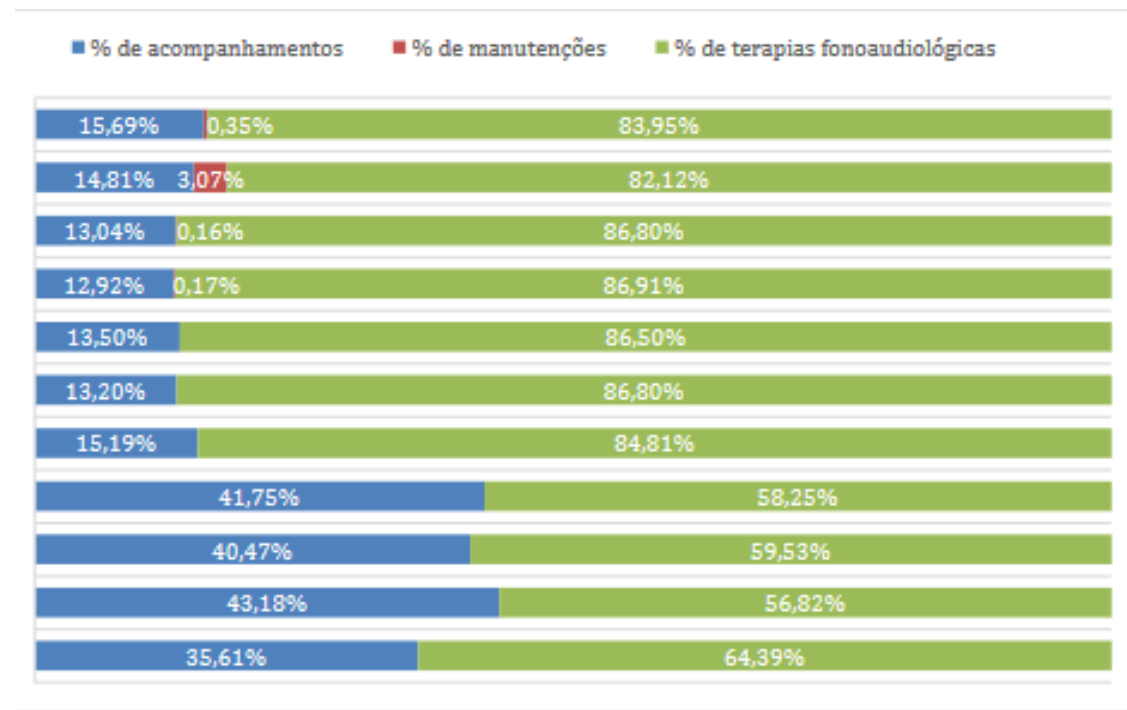
Adults: 45 min therapies, in series of 6 (six) sessions, individual or group.

Assessment and rehabilitation of auditory and language aspects with recording of their evolution.

COMPARATIVE ANALYSIS BETWEEN THE PERCENTAGE OF SURGERIES AND SUS INVESTMENT.



PERCENTAGE DISTRIBUTION OF FOLLOW UP, MAINTENANCE AND THERAPIES



DAHER, 2021

UNRAVELING THE PIECES...

1. Demand will grow due to demographic aging
 2. Technical progress leading to an expanded CI indication and increase acceptance of CI - will raise implantation numbers
 3. More efforts and strategies are needed to finance health care treatments
-
- **future scenarios of CI programs , demand and costs need to be estimated to design the provision of services**
 - **Simplifications and innovations in the treatment process such as innovative remote care, telemedicine and self-fitting programs offer further potential for future cost reductions**

Thum et al., 2022)

REMOTE TECHNOLOGIES TO ENHANCE SERVICE DELIVERY

The advent of digital health for use in hearing healthcare provides:

- significant opportunities to create new models of care;
- allow the personalization of care in a range of outcomes that matter to patients;
- improved access and equity;
- improved efficiency of care.
- increased follow-up rates

(Barreira- Nielsen, 2023; Ferguson et al., 2023;Prekunmar, Hugges, 2023;Buchman et al., 2020)

Implementation of the hybrid teleaudiology model: acceptance, feasibility and satisfaction in a cochlear implant program

Implementação do modelo híbrido da teleaudiologia: aceitação, viabilidade e satisfação em um programa de implante coclear

Carmen Sílvia Carvalho Barreira-Nielsen¹, Lara Sessa Campos²

ABSTRACT

Purpose: This article aims to describe the incorporation of teleaudiology in the routine of a highly regarded, government-funded, cochlear implantation program and evaluate the satisfaction of users and their families with hybrid assistance. **Methods:** Actions were developed that provided the connection between users and specialists, through the hybrid model of teleaudiology, combining remote practices (synchronous/asynchronous) with face-to-face care. To check patient satisfaction with teleaudiology, the Customer Satisfaction Questionnaire (CSQ) was applied. **Results:** 218 remote appointments and 22 other presential attendances were coordinated, between teleconsultations, guidance and counseling; patient coaching and hearing rehabilitation validation, therapy; troubleshooting, cochlear implant first activations and mappings, intra-operative measure, teleconsultations with specialists and delivery of repaired electronic devices. Of the participants, 76 patients responded to the questionnaire and reported being very satisfied with the services provided in general or in large part (88.9%) and with the amount of care they received (72.2%). This study suggested that, at some point during the pandemic, most patients had their needs met using teleaudiology long term care. **Conclusion:** The hybrid approach to audiology care was feasible, accepted and achieved user satisfaction.

Keywords: Cochlear implant; Patient-centered care; Telehealth; Audiology; Blended care

RESUMO

Objetivo: descrever a incorporação da teleaudiologia na rotina de um programa público referência em implante coclear e avaliar a satisfação dos usuários e de suas familiares com a assistência híbrida. **Métodos:** foram desenvolvidas ações que proporcionaram a conexão entre usuários e especialistas, por meio do modelo híbrido da teleaudiologia, combinando práticas remotas (síncronas/ assíncronas) e/ou atendimentos presenciais. Para verificar a satisfação dos pacientes com a teleaudiologia, foi aplicado o Questionário de Satisfação do Cliente. **Resultados:** foram realizados 218 atendimentos remotos e 22 atendimentos presenciais coordenados, entre teleconsultas para orientação e aconselhamento, coaching de pais, terapia para reabilitação auditiva, validação dos resultados, resolução de problemas, ativação e mapeamento, procedimentos intraoperatórios, teleconsultas com especialistas e entrega de peças de manutenção da tecnologia auditiva. Dos participantes, 76 responderam ao questionário, relataram estar muito satisfeitos com os serviços prestados de maneira geral, ou em grande parte (88,9%) e com a quantidade de atendimentos que receberam (72,2%). Este estudo sugere que, em algum momento durante a pandemia, a maioria dos pacientes teve suas necessidades atendidas usando teleaudiologia para cuidados contínuos. **Conclusão:** a abordagem de atendimento híbrida em audiolgia foi viável, aceita e alcançou satisfação dos usuários.

Palavras-chave: Implante coclear; Cuidado centrado no paciente; Teleaudiologia; Atendimento híbrido

TELEAUDIOLOGY FOR COMPREHENSIVE HYBRID CI SERVICE DELIVERY

Challenges and Future Directions

Implementation of hybrid teleaudiology



Figure 1: Asynchronous mode



Figure 2: Synchronous mode



Figure 3: Hybrid mode

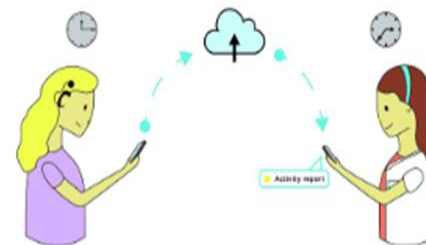


Figure 4: Automatic mode

WHAT WE HAVE LEARNED ...

CI in BRAZIL 30 YEARS

Great advances have been achieved in Brazil - clinical indications and maintenance/ replacement of the external component of the cochlear implant by Ministry of Health.

-However, it is still necessary to strengthen to improving strategies for the implementation of post-surgical follow-ups;

There is still a lack of knowledge among managers and decision-makers about long-term care, including rehabilitation for CI users in special for adults.



OBRIGADA

THANK YOU

MERCI

GRAZIE

GRACIAS

DANKE

CARMEN BARREIRA NIELSEN

CARMENBARREIRA.NIELSEN@HOTMAIL.COM