

Ototoxicity Management from the Oncologist's Perspective: Preliminary Results of a National VA Survey

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INTRODUCTION

- Platinum-based chemotherapeutics cause ototoxicity, resulting in hearing loss, tinnitus, and balance problems.
- Tinnitus and hearing loss are highly prevalent service-connected disabilities for Veterans receiving compensation¹.
- In 2018, over 10,000 Veterans with cancer were treated with a platinum-based chemotherapeutic².
- The current state of ototoxicity management (OtoM) in VA is not well-defined.
- Half of VA audiologists report that Veterans treated with cisplatin are receiving OtoM³.

OBJECTIVE

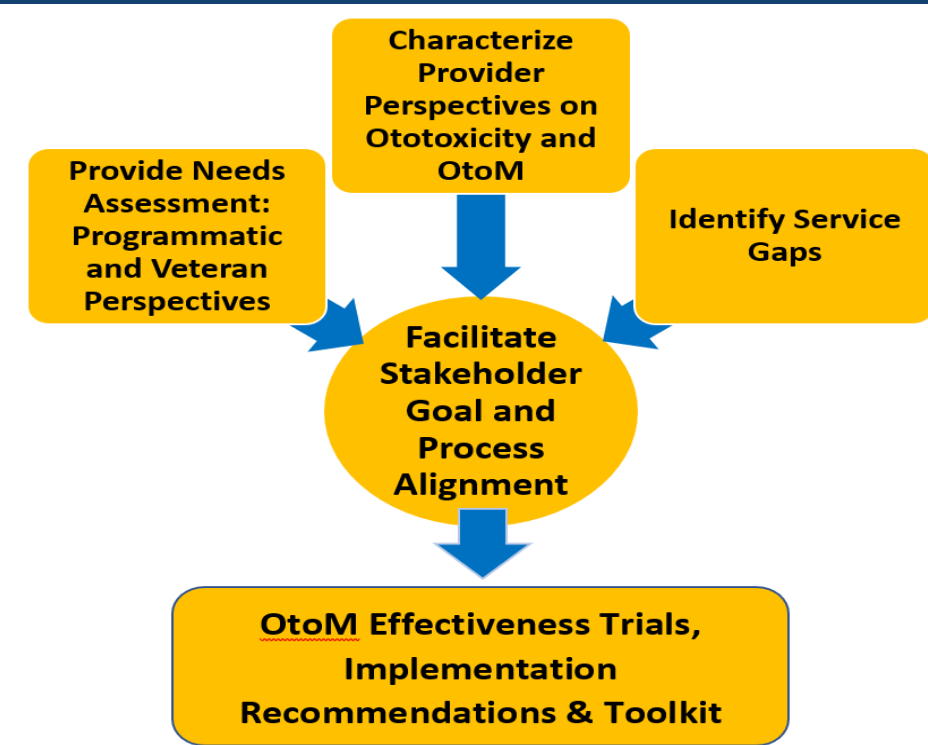


Figure 1. Schematic of purpose of the survey.

METHODS & DATA ANALYSIS

- 26-item anonymous *OtoMIC* survey administered using Qualtrics³.
- Descriptive statistics were used to analyze quantitative results.
- Thematic analysis was used to examine qualitative results.
- Three domains from the Consolidated Framework for Implementation Research (CFIR) were used to develop the survey and guide interpretation of results⁴.

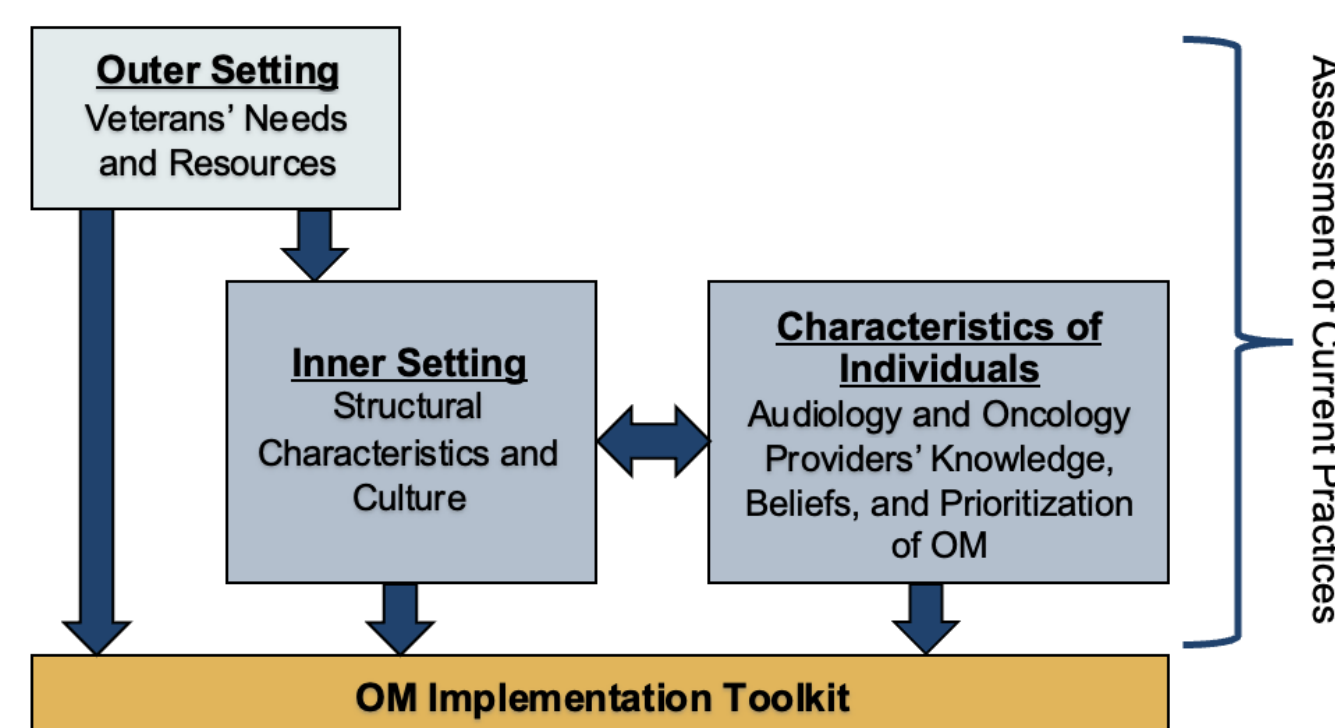


Figure 2. Schematic of Consolidated Framework for Implementation Research (CFIR) constructs and relationship to OtoM in VA.

RESULTS

Respondent Demographics (n=22)

Medical Specialty	Nurse	11 (50%)
	Oncologist	4 (18%)
	Oncology Chief or Lead	4 (18%)
	Other (Pharmacist, Oncology Nurse Practitioner)	3 (14%)

Table 1. The 22 respondents were from 11 of 18 VA integrated service network regions (VISN 3, 4, 6, 9, 12, 15, 19, 20, 21, 22 and 23). The majority were oncology nurses.

Are Veterans receiving OtoM at your site?

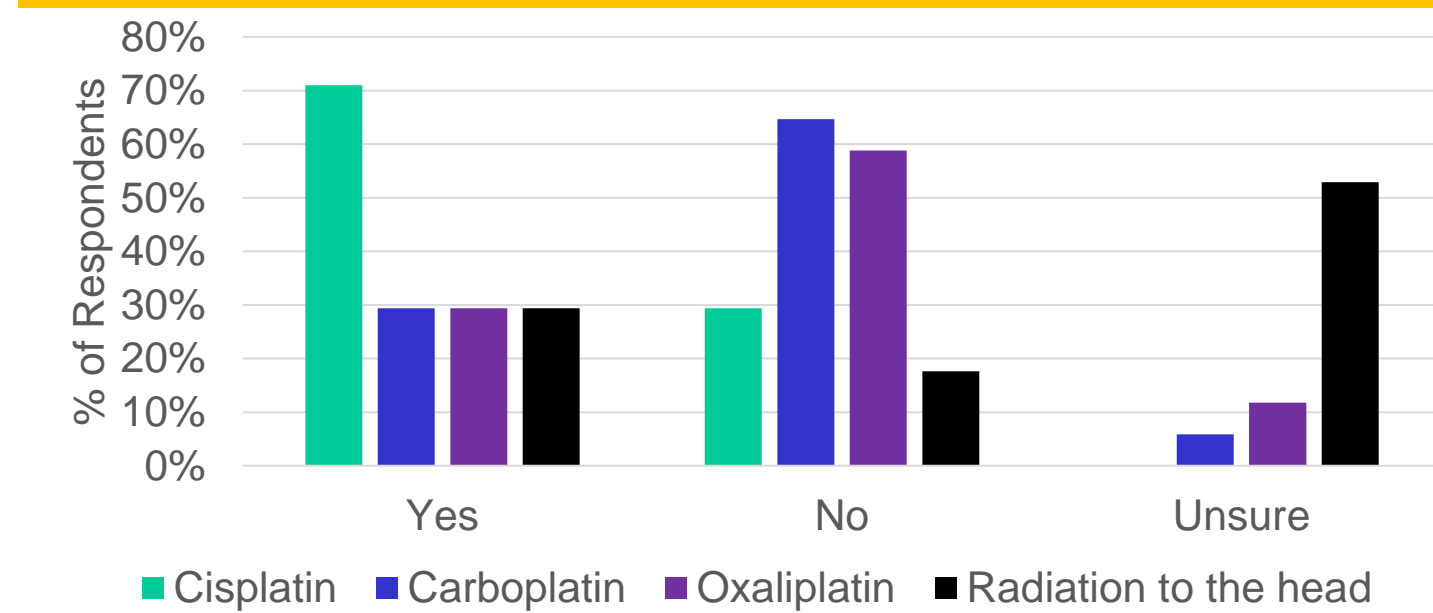


Figure 3. Most respondents reported their patients typically received audiological monitoring for ototoxicity, but this varied by exposure type.

Who is responsible for key aspects of OtoM?

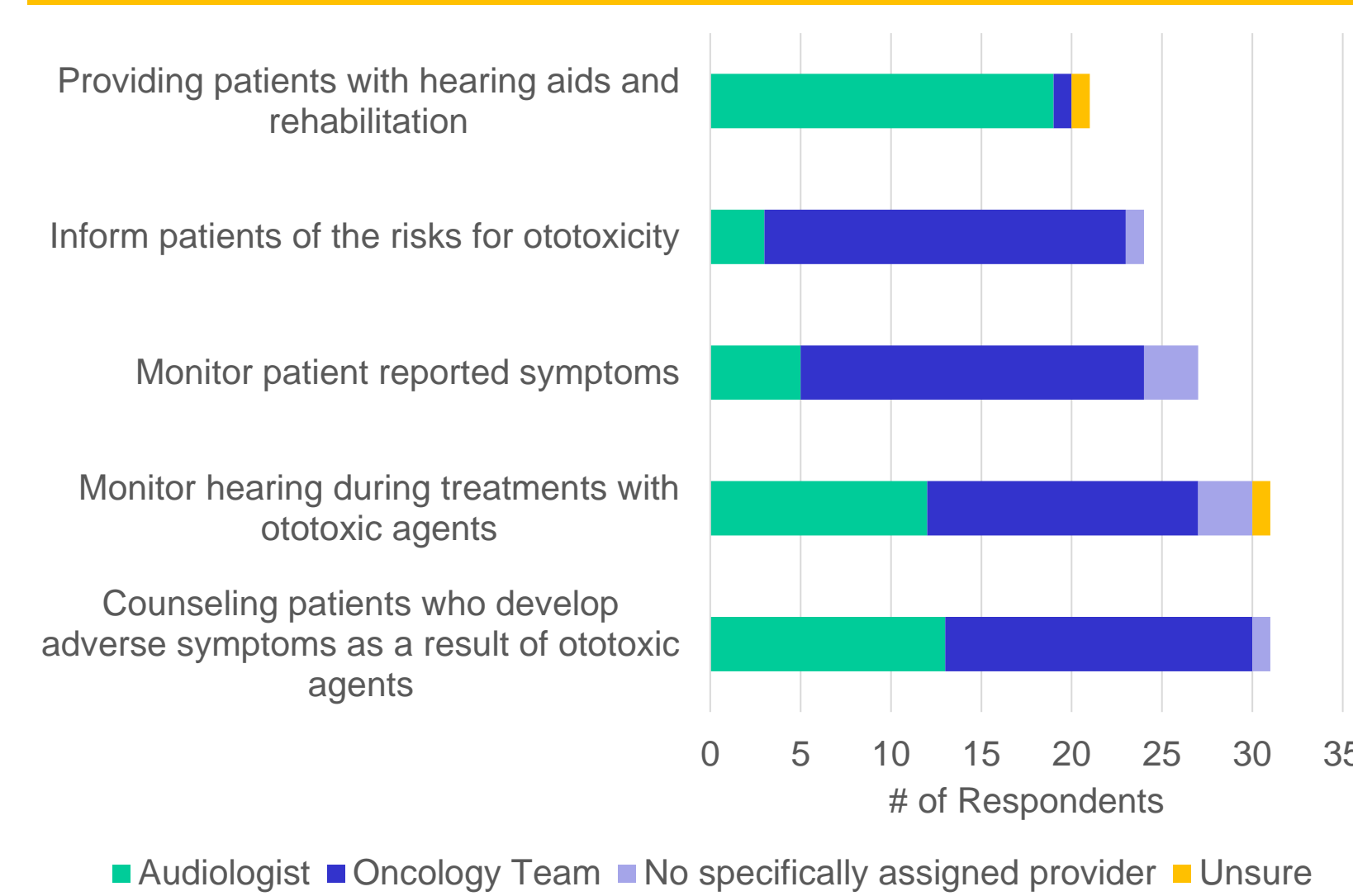


Figure 4. Respondents felt that members of the oncology team had primary responsibility for most aspects of OtoM.

Survey Scenario Questions

A family member of a patient brings up that the patient has had a hard time following conversations in a noisy environment since their last cycle of cisplatin. How would you the provider respond?	Refer to audiology	21 (95%)
	Increase frequency of ototoxic monitoring	16 (73%)
	Consider changing dosage	13 (59%)
A patient reports ringing in their ears before they are supposed to start a new cycle of carboplatin and radiation. How would you the provider respond?	Increase frequency of ototoxicity monitoring	17 (77%)
	Refer to audiology	19 (86%)
	Provide counseling	15 (68%)
The audiologist has confirmed that after receiving cisplatin a patient has had a significant hearing shift compared with their pre-treatment baseline evaluation. This patient will require a hearing aid. The patient is concerned about the persistent ringing and hearing loss they've experienced since their last dose of cisplatin and is worried about progression of the hearing loss with further treatment. The tumor response to the treatment has been good. How would you the provider respond?	Consider changing medication	18 (82%)
	Consider changing dosage	11 (50%)
	Increase frequency of ototoxic monitoring	14 (64%)
	Provide counseling	15 (68%)
	Refer to audiology	15 (68%)

Table 2. Count and sample proportion that selected a given solution to scenario question. **Bold text = solution involves change in treatment or patient education**

VA Administrative Data: Audiology Practice Patterns for VA Oncology Patients Nationally

- According to the VA Cancer Registry, N=30,643* Veterans with cancer received cisplatin, carboplatin or oxaliplatin as first line therapy from Jan 1, 2015 - Dec 31, 2019.
- Audiology service use was tracked for period within one month prior, to one year after, treatment.

*unique patients only, did not include cancer recurrence

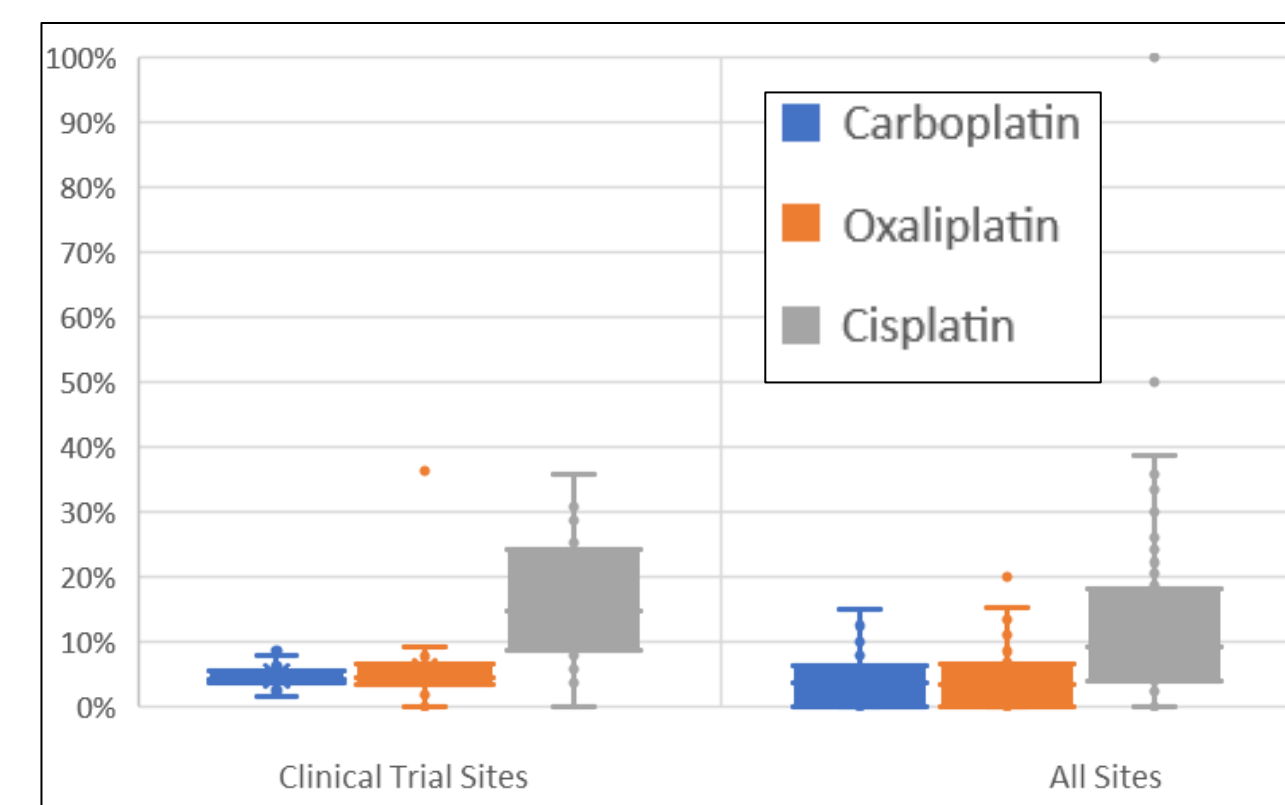


Figure 5. Percentage of cancer patients completing at least one appointment with VA audiology by drug type.

- Across all VAs, ~10% of patients receiving cisplatin accessed audiology services. Service access was slightly higher for cancer clinical trial sites (left).
- Most patients receiving carboplatin or oxaliplatin did not access audiology services.

Key Themes of Barriers to OtoM

Theme	CFIR Domain	Quotations
Interdisciplinary communication and identifying patients	Inner setting (implementation climate)	No ENT in house and it takes weeks to get in to see an ENT provider
		MD doesn't order [hearing testing]
Resources	Inner setting (implementation climate)	Deficit in team knowledge [on ototoxicity] and lack of perceived need [for OtoM]
		Time to start treatment vs. time to get into audiology
		Oncology providers do not have any support/ancillary staff such as nurse navigators
		Limited access to audiologists

DISCUSSION & NEXT STEPS

- Comparing survey results with VA administrative data reveals that OtoM is a major care gap in VA that is underestimated by oncologists.
- Oncologists view themselves as being responsible for key aspects of OtoM and would change treatment based on ototoxic findings in their patients
- Process improvement driven by stakeholder perspectives is needed to address barriers to OtoM.
- OtoM efficacy trials are needed to determine optimal timing and intensity of OtoM.

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