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# Titan Wideband Tympanometry

Initiative Type

Technology

Status

Deliver

Added

01 February 2018

Last updated

06 September 2024

URL

<https://clinicalexcellence.qld.gov.au/improvement-exchange/wideband-tympanometry>

## Summary

The Titan Wideband Tympanometry (WBT440) is a non-invasive diagnostic and screening assessment for middle ear function that can perform several middle ear tests at once, across a wide band of frequencies (250 to 8000 Hz) important for speech. One of these is a new test, Wideband Absorbance (WBA), which tests middle ear function to identify abnormal middle ear function and conductive hearing loss in infants, children and adults. Conductive hearing loss occurs when there is

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a problem conducting sound waves through the outer ear, eardrum (tympanic membrane) and middle ear (ossicles). In comparison, standard measures of middle ear function use only a single frequency of 226 Hz.

#### Key dates

Sep 2014

Jul 2017

#### Implementation sites

Townsville Hospital

#### Partnerships

Healthcare Improvement Unit

## Key Contacts

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## Aim

Provides an opportunity to pilot and evaluate new technologies within 'real world' clinical settings in the Queensland context.

## Benefits

This non-invasive test can perform several middle ear tests, is better in identifying various middle ear pathologies than single frequency (226 Hz) tympanometry and is very useful in differentiating presence or absence of middle ear effusion.

## Background

This technology was funded through the New Technology Funding and Evaluation Program (NTFEP). The NTFEP funds the introduction and evaluation of new technologies that:

- Are safe and effective
- Provide better health outcomes
- Provide value for money
- Provide greater access to care.

The evaluation findings will inform recommendations regarding the future use and/or investment of the technology within Queensland.

## Evaluation and Results

- WBA is better in identifying various middle ear pathologies than single frequency (226 Hz) tympanometry.
- The unique pattern of WBA is very useful in differentiating presence or absence of middle ear effusion (a build-up of fluid in the middle ear) in infants and young children.
- Middle ear testing using the Titan Wideband Tympanometry is safe and non-invasive, and can be performed immediately after surgery.
- WBA improves patient diagnosis when results of other middle ear tests are inconclusive.
- The Titan Wideband Tympanometry significantly reduces testing time of the middle ear.
- WBA is a good adjunct tool for middle ear assessment and provides additional information compared to single frequency tympanometry tests.

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## Resources

[Technology evaluation summary](#)

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