Thoracic Society of Australia and New Zealand position statement on chronic suppurative lung disease and bronchiectasis in children, adolescents and adults: what is new and relevant to Aotearoa New Zealand?

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The landscape of bronchiectasis management has evolved significantly since the Thoracic Society of Australia and New Zealand (TSANZ) Guidelines were last updated in 2015. An updated position paper has been developed in response to emerging evidence and the need for a comprehensive approach to bronchiectasis care. This position paper, available on the *Respirology* journal's open access platform and the TSANZ website, addresses the management of this complex, heterogeneous condition, particularly highlighting the importance of multidisciplinary collaboration, the integration of new evidence and the recognition of specific needs in the care of children and youth. Equity of care and outcomes in Indigenous and Pacific populations is of particular relevance. The position paper brings to light gaps in funding, as some recommended treatments are unavailable in Aotearoa New Zealand.

Introduction

Bronchiectasis is a chronic condition characterised by cough and sputum production, recurrent respiratory infection and bronchial dilatation on computed tomography (CT) scan.[1] Bronchiectasis continues to present significant challenges to healthcare systems and professionals. Children/youth and adults of Māori and Pacific ethnicity are over-represented in Aotearoa New Zealand, have more severe bronchiectasis independent of socio-economic status[2] and have higher hospitalisation rates[3] and respiratory-related mortality.[4] This updated position paper,[5] developed by a multidisciplinary team including physicians, physiotherapists, a respiratory nurse, an Indigenous academic and health consumer representatives, is a comprehensive update to previous recommendations. It is the product of a collaborative approach to improving patient outcomes across diverse healthcare settings.

Methodology

This contemporary position paper updates the 2015 guidelines.[6] Methodology, incorporating a systematic review of updated literature, was undertaken based on the TSANZ recommended process for producing position papers. Adult bronchiectasis guidelines from the European Respiratory Society in 2017[7] and British Thoracic Society in 2019[8] were used as historical references, together with the 2021 European Respiratory guidelines for the management of children and adolescents with bronchiectasis,[9] with which the TSANZ position paper is compatible. A total of 32 recommendations were revisited, with 28 undergoing modifications based on new evidence and expert opinion. Additionally, one new recommendation was introduced. A Delphi process had representation from a wide range of clinicians (including a physician, paediatrician, nurse and physiotherapist from Aotearoa New Zealand), which ensured the guidelines are representative and reflective of current best practices in Aotearoa New Zealand.

Why is the position paper important?

Following guideline-concordant treatment will improve the morbidity and possibly the mortality of our bronchiectasis population[10] within the unique context of Aotearoa New

Zealand. There are financial implications to the health service of using treatments that are inappropriate, outdated or have little evidence base. Furthermore, there are cost implications of not providing evidence-based treatment, both to the health service in terms of dealing with the consequences of poorly controlled chronic disease and for the patients in terms of health outcomes and quality of life. Therefore, appropriate resource allocation to bronchiectasis services is essential, including adequate staffing.

Key updates and recommendations

The updated position paper introduces significant changes and additions, including:

- A refined definition of bronchiectasis and the aims of optimal management, focussing on preserving lung function, enhancing quality of life, minimising exacerbations and preventing complications. Specifically for children and youth, there are further aims of optimising lung growth and, where possible, reversing any structural injury.
- Some detailed recommendations for diagnostic investigations, distinguishing between minimal and extended tests separately for adults and children. Treatable causes such as primary ciliary dyskinesia, allergic bronchopulmonary aspergillosis, non-tuberculous mycobacteria, immunodeficiency, cystic fibrosis and alpha-1 antitrypsin deficiency are emphasised.
- An updated antibiotic selection guideline, with specific emphasis on the eradication of *Pseudomonas* on its first isolation, based on its implications for patient prognosis (exacerbations, hospitalisations and mortality) and quality of life.
- The inclusion of long-term oral macrolides, and nebulised antibiotics (in the context of chronic *Pseudomonas* infections) to decrease bacterial load and airway inflammation and reduce exacerbations.
- An emphasis on treatable traits in the management of comorbidities, both phenotypic and endotypic. This is an important change of approach, also used in other airway and pulmonary diseases, where the heterogeneity of the disease is addressed by looking separately at aetiological, pulmonary, extrapulmonary and environmental or lifestyle factors.
- A multidisciplinary approach of individualised care is emphasised as a way to reduce barriers, improve adherence to treatment and provide culturally responsive healthcare.

Addressing equity and access

The position paper has a strong emphasis on equity, which is particularly relevant in the Aotearoa New Zealand context. Two of the statements address equity issues in Indigenous populations and hard-to-reach populations. The position paper highlights the challenges to and obligations of ensuring Māori have equitable access to healthcare resources, stressing the importance of early diagnosis, individualised management including education and resource access, and community engagement, while acknowledging more flexible and adaptive arrangements are required. This is in line with Te Tiriti o Waitangi obligations. There is a very high incidence of bronchiectasis in the New Zealand Pacific population and engaging with Pacific leaders in the community is important, as well as the provision of cultural support staff and interpreters.

Transitional care

A new statement outlines the importance of transitional care to meet the needs of adolescents with bronchiectasis. This involves engagement of paediatric and adult multidisciplinary team services, clear and documented plans for transfer of care and evidence-based guidelines on transition and bronchiectasis management.

Funding challenges

The position paper recommendations bring to light funding challenges and highlight the gap between Aotearoa New Zealand and Australia. For instance, long-term azithromycin is not funded for adults at present. Nebulised antibiotics are recommended in this position paper and other guidelines, but there is no public funding of required resources. Nebulising equipment and their servicing and monitoring are not provided, at the time of writing, for antibiotics or saline preparations. Nor are hypertonic saline nebules funded for the selected patients with tenacious

secretions who benefit from improved sputum clearance in order to improve their quality of life. The pneumococcal vaccine is also not funded for adults with bronchiectasis outside of immunodeficiency and some specific comorbidities. The health service needs commitment to multidisciplinary clinics and resources for this chronic disease.

Implementing the recommendations

Position papers and guidelines only function if they are implemented, and there is a clear evidence–practice gap across the field of medicine.[11] TSANZ arranged webinars across their membership, including in Aotearoa New Zealand. A webinar was delivered via the Goodfellow Unit in order to reach the primary care community. Physiotherapy and nursing have also delivered to their respective forums. The Australian authors of the position paper have recently published a parallel perspective article in the *Medical Journal of Australia*.[12] New information leaflets, checklists and personal management plans have been published under the joint banner of TSANZ and the Asthma and Respiratory Foundation NZ (https://www.asthmafoundation.org.nz/health-professionals/australia-and-new-zealand-bronchiectasis-guidelines). A clinician- and patient-focussed consensus and quality standard document is planned, similar to the British Thoracic Society,[13] in order to drive improvement.

Future research

Position papers and guidelines are only as good as the evidence from which they draw upon. Many statements in the current position paper still rely on expert experience and opinion. For future clinical studies, it is paramount that the right populations are studied, the right interventions are used and the right end points are measured. The heterogeneity of bronchiectasis has impeded the developments of new therapies, and the proper selection and stratification of people with bronchiectasis for clinical trials is essential for the future. This could be achieved by grouping people with bronchiectasis by shared phenotypes or endotypes. Consistent and standardised definitions of end points (particularly regarding exacerbations) are essential this regard.[14] Minimum important outcome sets (agreed on by patients and clinicians) and patient-reported outcomes need to be incorporated into trials.[15]

Conclusion

The updated TSANZ position paper for bronchiectasis management represents a significant step towards a more effective, equitable and patient-centred approach to care in our region. By incorporating the latest evidence, emphasising multidisciplinary collaboration and addressing the unique needs of children, adolescents and Indigenous populations, this position paper sets the current standard for the management of bronchiectasis in Aotearoa New Zealand. To meet these standards, the gap in funding the basic recommended therapies must be addressed. Future research focussed on the heterogeneity of the condition, person-centred and culturally responsive approaches and interventions, together with consistent outcomes, will be crucial for continuing to refine and improve bronchiectasis care.

COMPETING INTERESTS
Nil.

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