**Electronic cigarettes: A position statement from the Thoracic Society of Australia and New Zealand***

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Appendix S1: Working Party Membership and Conflict of Interest Declarations

Development group

Co-chairs:
Professor Christine McDonald – Previous advisory board member for Pfizer (Champix)
Professor Matthew Peters – Received honoraria from GSK in relation to asthma and COPD management only. GSK manufacture smoking cessation products.
Dr Stuart Jones – No conflicts declared

Members:
Professor Lutz Beckert – No conflicts declared
Professor Billie Bonevski – is a co-investigator on a Pfizer investigator-initiated grant and is a current recipient of funding from the NHMRC and NSW Ministry of Health for smoking cessation research. She has never received tobacco or e-cigarette industry funding.
Mr Jack Bozier – No conflicts declared
Ms Tanya Buchanan – TSANZ Staff Member; No conflicts declared
Associate Professor Kristin Carson-Chahhoud – No conflicts declared
Dr David Chapman – No conflicts declared
Associate Professor Claudia C. Dobler – No conflicts declared
Dr Juliet Foster – No conflicts declared
Dr Paul Hamor – No conflicts declared
Professor Sandra Hodge – TSANZ Board Director; Invited submission to SA Parliamentary Select Committee on E-cigarettes 2017; E-cigarette presentation funded by Asthma Foundation NZ
Associate Professor Peter Holmes – No conflicts declared
Associate Professor Alexander Larcombe – Telethon Kids Institute representative on the ACOSH (Australian Council on Smoking and Health) committee; received grants (NHRMC, AFWA, Health Dept of WA) & consultancy (NMI and ACCC) funding for e-cigarette research
Dr Henry Marshall – No conflicts declared
Dr Gabrielle McCallum – No conflicts declared
Dr Alistair Miller – No conflicts declared
Associate Professor Philip Pattemore – Founding member of Doctors for Healthy Trade; Paediatric Society of NZ spokesperson and advocate in regard to Smokefree Policy
Dr Robert Roseby – Member of a group which systematically reviews the literature on measures to reduce child exposure to tobacco smoke
Dr Hayley See – TSANZ Staff Member; No conflicts declared
Dr Emily Stone – Funded to speak at WCLC 2015, WCLC 2017, WCLC 2019 and WCLC 2020 by the IASLC; received editorial contributions for work from members of the IASLC Tobacco Control Committee
Professor Bruce Thompson – Received honoraria from AZ, GSK and Mundipharma. Director and President of the TSANZ
Dr Miranda Ween – Travel support to present E-cigarette research (Biochemical Society, IJMS, European Respiratory Society meeting, Asthma Australia); Research support for E-cigarette projects (TSANZ/NAC, Royal Adelaide Hospital Research Foundation, Rebecca Cooper Foundation); Invited submission to SA Parliamentary Select Committee on E-cigarettes 2016

Medical Writer:
Anthony James – Medical writer on two papers on varenicline

Appendix S2: Methodology

Baseline Position
The TSANZ noted and accepted the findings of a number of pre-existing and robust papers including the NHMRC, CSIRO and NASEM reports. The NASEM report represents the most detailed review to date and therefore we focussed on research published subsequent to the NASEM review.

Membership of the Working Party and Review Process
To develop this position paper, the TSANZ called for Expressions of Interest from members to form a working party that would operate in small groups, each with a focus on a defined area of interest, to review the literature and contribute to the development of the final report. In addition to TSANZ members we, approached Professor Billie Bonevski to lead the group focused on at risk populations. Professor Bonevski has previously won the TSANZ President’s Award for her work with tobacco cessation in Drug and Alcohol Clinics and she provided an important perspective from beyond respiratory medicine.

All applicants to the working party were required to complete a conflict of interest declaration and all declared conflicts are provided in this document in Appendix S1.

The focus groups addressed the following areas with respect to e-cigarettes:
- smoking cessation;
- health impacts from both active use and passive exposure and including cellular level impacts of e-cigarette use;
- children and young people including whether e-cigarette use had health impacts, the pattern of e-cigarette use over time, whether e-cigarette use led to increased cigarette smoking and the impact and effect of marketing on e-cigarette use in young people;
- safety, effectiveness, acceptability and prevalence of e-cigarettes in the priority populations of:
  - Aboriginal, Torres Strait Islander, Māori and Pasifika people;
• pregnant women;
• people with mental illness;
• alcohol and other drug treatment clients; and
• prisoners (or those recently released).

A literature search for papers that were published after the NASEM report in peer reviewed journals and which addressed each of the focus areas was conducted by a qualified librarian in August 2018. Databases searched included Cochrane Library, Embase, Medline, PsychInfo and Web of Science.

3793 papers identified through the librarian search were reviewed by the focussed working groups. Additionally, and in recognition of the significant body of work being generated in this research area, a small number of significant papers were identified by TSANZ working party members after the search dates and were included as they were considered robust and important research.

In addressing the literature, the focussed working groups identified studies which either extended the findings of the NASEM report or which would modify any of the findings in the NASEM report. The results of the focussed working groups’ reviews were considered by the Chairs in the development of the draft of the Position Paper.

As part of the review process, the draft position paper was presented to TSANZ members at the Annual Scientific Meeting in April 2019 on the Gold Coast. Feedback from this session which was evidence-based and clinically informed was considered in the development of the position paper.

A draft of the paper was circulated to members of the Position Paper Working Party and the Tobacco and Related Substances Special Interest Group for comment and feedback in July 2019. Feedback was considered and incorporated into the subsequent draft before a final round of consultation with Working Party members in October 2019.

External review of the draft paper occurred in November and December 2019 and reviewers’ comments were incorporated into the final draft for sign off by the Working Party and TSANZ Board in February 2020.

Appendix S3: Outbreak of acute lung injury associated with e-cigarette use

In late July 2019, the first cases of acute lung injury, were diagnosed in the US.¹ The Centres of Disease Control and Prevention in the US developed the use of the term E-cigarette or Vaping Associated Lung Injury - abbreviated as EVALI to describe this phenomenon.²

Prior to this outbreak, the first published case report of a similar case was in 2012, and there have been about 20 case reports from a range of countries preceding the current outbreak. One of these case reports was from the Royal Brisbane
Hospital – a 33-year-old man who was a light smoker and had recently commenced e-cigarette use. He developed new CT changes with minimal physiological effect and open biopsy was consistent with respiratory bronchiolitis-interstitial lung disease (RB-ILD). Resolution occurred with cessation of e-cigarette use and reduction in smoking.³

Respiratory failure requiring ventilatory support is common in EVALI. Gastrointestinal symptoms are common, and this association remains unexplained. As of February 2020, a total of 2,807 hospitalised EVALI cases have been reported to CDC and 68 deaths have been confirmed.⁴

At the present time, vitamin E acetate has been strongly linked to the development of EVALI however the evidence is not sufficient to rule out other chemicals of concern in either Tetrahydrocannabinol (THC) or non-THC products. THC use is reported in around 82% of presentations but cannot explain all cases. Where open lung biopsy has been performed early in the course of EVALI, it is most consistent with airway-based chemical pneumonitis without a reported difference in findings in THC-exposed and non-THC exposed cases.⁵ Point-source contamination with a single toxin or infectious agent appears unlikely because of the spread of cases in time and place.

Information on this outbreak is rapidly changing and regular updates are posted on the CDC website – [https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html)

REFERENCES