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Australian urban Indigenous smokers' perspectives on nicotine products and tobacco harm reduction

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Abstract

Introduction and Aims. Indigenous Australians experience a significant gap in life expectancy compared with non-Indigenous Australians. Indigenous communities have high-smoking prevalence and low engagement with cessation therapies. This qualitative research, conducted in an urban Australian Indigenous community, explored smokers' views on smoking, quitting and engagement with current nicotine replacement therapies. Opinions on acceptability of tobacco harm reduction were sought. We explored the acceptability of novel nicotine products, that is, new or unfamiliar products, including non-therapeutic options, such as e-cigarettes. **Design and Methods.** Focus groups and individual interviews with adult Indigenous daily smokers ($n = 27$) were used. Current and novel nicotine products were displayed and demonstrated. Discussions were audio-recorded, transcribed and analysed thematically. **Results.** Participants expressed interest in trying existing and novel nicotine products. Short-to-medium term use of nicotine replacement therapy for quitting was generally acceptable; views on long-term use were mixed. Interest in use of tobacco substitutes depended on their perceived effectiveness, providing a 'kick' and 'relieving stress'. Desirable qualities for tobacco substitutes were identified with gender differences and product preferences noted. The unpleasant taste of existing products is a barrier to both short-term and long-term use. **Discussion.** We found substantial interest in trying some existing and novel nicotine products, mostly for short-term use. A number of attributes were identified that would make nicotine products potentially acceptable as a long-term substitute. **Conclusions.** Some participants were interested in long-term substitution if acceptable products were available. Improvements in current products and access to novel products are needed if tobacco harm reduction is to be acceptable. [Yuke K, Ford P, Foley W, Mutch A, Fitzgerald L, Gartner C. Australian urban Indigenous smokers' perspectives on nicotine products and tobacco harm reduction. *Drug Alcohol Rev* 2017;00:000-000]

Key words: nicotine replacement therapy, e-cigarettes, tobacco harm reduction, qualitative research, Indigenous.

Introduction

Smoking is a leading contributor to disease burden among Indigenous Australians, causing approximately 20% of Indigenous deaths and 17% of the gap in life expectancy between Indigenous and non-Indigenous Australians [1]. While Indigenous smokers are just as interested in cessation as other Australian smokers, they are less likely to attempt to quit or to sustain abstinence for at least 1 month [2]. The social determinants of health, including education, employment, high levels of stress and trauma, cultural practices, and social norms, including the socially embedded nature of smoking, are

associated with the persistence of smoking in Indigenous communities [3–5].

The Australian Government set a target of halving the Indigenous smoking rate from the 2008 rate of 47.7% by 2018 [6]. Population level tobacco control policies, including taxation, plain packaging, advertising and smoke-free areas, have effectively reduced tobacco consumption in the general population [7], but there is limited evidence of effectiveness among Indigenous peoples [8–10]. Available cessation assistance includes counselling delivered by Quitline or a health worker, nicotine replacement therapy (NRT) and prescription medications (Bupropion and Varenicline). Some are free

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or subsidised through the pharmaceutical benefits scheme and the 'close the gap' initiative, such as nicotine patches [11], but most NRTs must be purchased by the client. Some Aboriginal medical services also self-fund non-subsidised NRT [12]. Despite access and affordability, Indigenous Australian smokers are less likely to use cessation aids than other Australian smokers [5,13].

Indigenous smoking rates are declining, but new approaches are needed to close the health gap. One approach that has not been used in Australia, but is gaining attention elsewhere, is tobacco harm reduction (THR) [14,15], defined as 'decreasing the burden of death and disease, without completely eliminating nicotine and tobacco use' [16]. An example of THR is the uptake of a non-smoked tobacco product (snus) among Swedish men that was associated with decreased smoking and tobacco-related disease [16,17]. Few smokers outside Nordic countries appear interested in using snus [18], but new non-therapeutic nicotine products, such as e-cigarettes appear to have widespread appeal [15]. THR may be a potentially useful approach for heavily dependent smokers, including those from disadvantaged populations [16] who use cigarettes to address high levels of daily stress [19]. Therefore, THR may have relevance to Indigenous smokers to supplement abstinence-focussed approaches. However, it is unknown if Indigenous smokers are interested in THR options, including long-term substitution with nicotine products, and which, if any, nicotine products are acceptable to this population.

Methods

Seven focus groups and three individual interviews ($n = 27$) were conducted between October 2014 and March 2015 at clinic and community venues in Inala, a Brisbane suburb with an Indigenous population of 6.6% compared with 2.5% nationally [20]. Inala is one of Brisbane's most disadvantaged suburbs [21]. We followed the National Health and Medical Research Council guidelines for ethical Indigenous research. Consultation was held and support given by the Inala Community Jury for Aboriginal and Torres Strait Islander Health Research, which was established to encourage community participation in the Southern Queensland Centre of Excellence in Aboriginal and Torres Strait Islander Primary Health Care's (CoE) research agenda to ensure health research undertaken in the community is ethically sound, culturally appropriate and locally supported using a safe, meaningful, equitable and transparent process [22]. The CoE provides clinical services (e.g. general practitioner, visiting medical specialist and allied health), community health services (e.g. health promotion and education) and also conducts

research. Ethics approval was granted by the Metro South Human Research Ethics Committee and The University of Queensland Behavioural and Social Sciences Ethical Review Committee.

Participants

Participant inclusion criteria were as follows: Currently smoking daily; aged 16 or over; identify as Aboriginal and/or Torres Strait Islander; sufficient English fluency and capacity to understand the participant information, consent process and to be able to participate in a focus group or individual interview; and an existing client of the CoE. Studies of these clients have found smoking rates of between 55% and 67% [23–25]. We recruited smokers from the CoE smoking cessation service list, flyers distributed in the CoE clinic and personal approach by CoE staff to clinic or CoE community event attendees. Participation was open to everyone who met the inclusion criteria, with emphasis on gaining equal numbers of male and female participants. Verbal and written explanations of the study were provided, and participants signed consent forms. Participants were compensated for their time with a \$40 gift voucher and were offered an NRT product of their choice (from current over-the-counter products). Those interested in smoking cessation were given information about available services.

Data collection

Interviews (focus group and individual) ran for up to 70 min facilitated by up to three researchers, including one who is Indigenous and is the CoE's tobacco treatment specialist (KY). The other co-facilitators were non-Indigenous university-based public health researchers (CG and PF). Three individual interviews were held for participants who could not attend a focus group. Separate gender groups were established to acknowledge gender roles embedded throughout urban Aboriginal society where discussion of particular issues may be less appropriate in mixed gender groups. Focus groups provided the opportunity for in-depth exploration of the topic through interactions between participants. This is relevant to nicotine product use, which may be influenced by perceived social acceptability and desirability of such use [3].

The same semi-structured interview schedule was used in the focus groups and individual interviews (Data S1). The initial questions centred on smoking, including positive and negative aspects, followed by a discussion of quit attempts, knowledge and perceptions of available supports, and knowledge of and experience with nicotine products. Current NRTs (patch, gum, lozenge, dissolvable oral strip, mouth spray and inhalator) and

novel products (metered dose inhaler, 'cigalike' e-cigarette, refillable tank-style vapouriser, e-pen and snus) were demonstrated to prompt discussion and ensure common understanding of products. All interviews investigated the acceptability of using nicotine products as short-term quitting aids (i.e. a standard treatment course of 8–12 weeks) or as long-term cigarette substitutes (i.e. using it for an unspecified time with no definitive end-date). A short survey collected demographics, smoking history, dependence on smoking (time to first cigarette and number of cigarettes per day to calculate the heaviness of smoking index) and interest in trying each product. This was measured on a three-point scale of the following: very likely to try, maybe would try and would never try.

Data analysis

All interviews were digitally recorded and professionally transcribed verbatim. Following the method described by Braun and Clarke [26], the initial phase of coding included listening to the recordings and reading the transcripts to gain an overview of the data. Key phrases and sections were identified and grouped, based on patterns identified by the coders, combining both deductive and inductive approaches. These were categorised into themes reflecting topics covered in the interview schedule: what is good and bad about smoking, quitting experiences, views on long-term substitution and views on each demonstrated product. Transcripts were coded separately by KY and CG.

Table 1. Participants characteristics

	N (%)
<i>Gender</i>	
Male	17 (63%)
Female	10 (37%)
<i>Age</i>	
<26	10 (37%)
26–45	12 (44%)
>45	4 (5%)
<i>Education</i>	
Year 10 or less	18 (67%)
Year 12	6 (22%)
Post-secondary	3 (11%)
<i>Heaviness of smoking index</i>	
Low	6 (22%)
Medium	14 (52%)
High	6 (22%)
<i>Ever used NRT</i>	
Yes	16 (59%)
No	11 (41%)

NRT, nicotine replacement therapy.

Two experienced qualitative researchers not involved in the data collection (AM and LF) reviewed the transcripts and the draft manuscript. Results were discussed by all authors who provided further input into coding and categorisation of data to enhance rigour and inter-rater triangulation [27]. The quantitative data were analysed descriptively (counts and percentages calculated) in IBM SPSS V23. IBM Corp, Armonk, NY, USA.

Results

Participants reflected a cross-section of the community with a range of ages, education levels and both men and women represented. Most participants (74%) scored medium to high on the heaviness of smoking index [28] (Table 1). The size of the focus groups ranged from two to seven participants (Table 2).

Smoking and quitting experiences

Discussions about smoking and quitting included the following: the entrenched nature of smoking in daily life; use for stress relief; and quitting challenges. Smoking and quitting were strongly linked to the social context of participants' lives as they described the dominance of smoking across families, generations and community. A participant noted 'brought up with it' [Group 1, male participant number 1 (G1, M1)]. Smoking was also linked to social connections.

... like being around it just, makes you, if they are smoking, I will smoke You know being around the other mob who are smoking so you think, I'll have a smoke too. [G6, M3]

Many participants, particularly in female focus groups, identified traumatic experiences and multiple chronic life stressors, including caring for immediate and extended

Table 2. Participants in focus group (G) and individual interviews (I)

Group/interview	Gender	N
G1	Male	2
G2	Female	7
G3	Male	2
I4	Male	1
I5	Female	1
G6	Male	4
G7	Male	4
G8	Male	3
I9	Male	1
G10	Female	2

family, living on a tight budget, and having to go without when finances ran out. Smoking was seen as providing relief and creating a sense of calm in response to these challenges.

... it's that calm, it's like a medicine. [G2, F7]

For some participants, particularly men, the addictiveness of smoking was cited as the key reason they smoked. One expressed this as:

I reckon it's just an addiction. [G6, M1]

Experience with nicotine products and smoking cessation medications

Most participants knew about nicotine patches; however, fewer were familiar with the other nicotine products. Sixteen participants (59%) had previously used NRT (Table 1), with nicotine patches (37%) the most commonly used, then gum (26%), inhalator (26%), mouth spray (22%), lozenge (7%) and dissolvable oral strips (7%). Some had experienced NRT while in smoke-free health-care facilities. Others had used NRT subsidised through the 'close the gap' program for a quit attempt.

Attributes of nicotine products affecting their acceptability

Some reported positive experiences with NRT, including controlling cigarette cravings, but most reported negative experiences, particularly concerning taste: 'horrible' [gum, mouth spray; G7, M2], 'disgusting' [mouth spray; I5, F1], 'yuck' [lozenge; G7, M3], 'like chewing rubber' [gum; G6, M2].

The inhaler [inhalator] was the only thing, that tasted like shit, and sort of worked for about half an hour, and then you'd think, "Oh, I don't want that shit taste, I'm going to have a cigarette." [G2, F1]

Some products, particularly patches, were seen as ineffective for craving relief: 'I'd have two on, and I'd have a White Ox [brand of loose tobacco]'. [G2, F1]. Side effects were also reported: 'I had really bad nightmares'. [G2, F6]

Those whose previous experience with existing smoking cessation medications had proved disappointing expressed scepticism about other potential substitutes.

You're still on strong smokes and then you give them that, and that is weak. [G6, M1]

Needing to learn new routines associated with some products was viewed as a barrier to uptake.

Facilitator: *So do you think that [metered dose inhaler] would be useful for people quitting smoking?*

Respondent: *Yeah I reckon. I reckon it would but I reckon people would get annoyed with just the routine of taking it out and putting it in, and then letting it lay up and then waiting and* [I9, M1]

The snus was rejected by many. The method of use and appearance was generally unacceptable, described as 'feral' by one participant [G2, F3]. More broadly, it was viewed as disconnected from the experience and sensation of smoking.

For me, smoking is actually blowing out the smoke. [G1, M2]

Social acceptance of nicotine products

Community and family attitudes towards the appearance and visibility of the product were important considerations around using current or novel products. Using alternatives to tobacco could be seen as stepping outside the community norm of smoking. Teasing or being criticised was feared if the product did not look acceptable.

'No you'd feel stupid with it. [e-cigarette]' [G2, F8]

'Oh could you just imagine sitting around with a group of our mob (laughs) you'd never live it down.' [G2, F6]

'No no oh no!' [G2, F1]

This attitude may have caused women to prefer a more discreet product that did not produce a visible mist, such as the inhalator:

That thing [inhalator], you can hold it like that [hidden in hand] and nobody knows that you're actually doing something. [G2, F1]

One participant disliked the inhalator's appearance:

It looks like a med [brand of tampon] too. [I5, F1]

Another participant suggested the inhalator could be made more socially acceptable to Indigenous people by adding artwork.

If you really want, you know, Indigenous people to give it a shot ... paint it black, yellow, red, paint it the colours of the flag and put some artwork on it or something. [G1, M2]

The current laws in Queensland that prohibit vaping in smoke-free areas were a potential barrier to use of e-cigarettes and other vaporiser devices.

We'd still be separated like when we go outside to have a normal cigarette. [G1, F2]

Concerns about risk to children

Both male and female participants raised concerns about the potential attractiveness of e-cigarettes and other vaporiser devices to children as a 'gateway' to smoking tobacco.

Facilitator 2: *And do you think there could be any problems with using this product?*

Respondent 1: *Well if the kids found out about it you know they'd, they might have a go at it and then might start with the real smokes. [G1, M1]*

Facilitator 2: *Yeah, so you think that might be attractive to children?*

Respondent 1: *Yeah, children. See you smoking hey, yeah [G1, M1]*

Other social influences

Advice from health practitioners and personal testimonial from community members about nicotine products appeared highly influential to trying a product. Furthermore, assistance from a medical practitioner was commonly cited as an available cessation support. One participant was reluctant to try any nicotine products without medical practitioner endorsement.

I prefer to go through my doctor before I try anything, get the doctor's consent. [G10, F2]

Lay knowledge and experience was also highly valued.

So, I think you hear other people that it's been, it's worked for, other people start going well, I might give it a shot. So I think, yeah, you get a couple of people to say, yeah, advocate for it and say, yeah, it's great, it works, it helped me, then I think, yeah, that's how you sort of promote it. [G1, M2]

Willingness to try products

In the quantitative survey, most participants indicated willingness to try a nicotine product (Table 3). Eleven (65%) of the men and nine (90%) of the women indicated they would be very likely to try at least one current NRT product if given the opportunity. If novel products (metered dose inhaler, cigalike, tank vaporiser and snus) are included, then all but one participant indicated that they would be very likely to try a nicotine product.

Long-term substitution

We defined long-term substitution as using nicotine products in a similar way to cigarettes, for an unspecified time with no definitive end-date. Participants viewed the taste of NRT as a barrier to long-term substitution.

Table 3. Likelihood of trying each product if given the opportunity

Product	Very likely to try, n (%)	Maybe would try, n (%)	Would never try, n (%)
<i>Men (n = 17)</i>			
Cigalike e-cigarette	14 (82)	3 (18)	0 (0)
Metered dose inhaler	5 (29)	10 (59)	1 (6)
Inhalator	8 (47)	6 (35)	2 (12)
Tank vaporiser	7 (41)	5 (29)	4 (24)
Dissolvable oral strip	2 (12)	8 (47)	6 (35)
Lozenge	2 (12)	7 (41)	6 (35)
Patch	1 (6)	8 (47)	6 (35)
Mouth spray	1 (6)	8 (47)	7 (41)
Gum	2 (12)	4 (24)	10 (59)
Snus	1 (6)	3 (18)	11 (65)
<i>Women (n = 10)</i>			
Inhalator	8 (80)	1 (10)	1 (10)
Mouth spray	5 (50)	3 (30)	2 (20)
Dissolvable oral strip	4 (40)	3 (30)	2 (20)
Patch	1 (10)	6 (60)	3 (30)
Metered dose inhaler	4 (40)	2 (20)	4 (40)
Lozenge	1 (10)	5 (50)	3 (30)
Tank vaporiser	1 (10)	4 (40)	5 (50)
Gum	0 (0)	4 (40)	5 (50)
Cigalike e-cigarette	1 (10)	2 (20)	7 (70)
Snus	1 (10)	2 (20)	7 (70)

I don't think any of these particularly taste really good that you'd want to continue, I think if you just use it for its purpose.... [G1, M2]

Those not interested in long-term substitution either indicated no current interest in quitting smoking because of current life circumstances or it conflicted with their desire to achieve abstinence.

Respondent: Are you saying do that for the rest of your life instead of real smokes? [G2, F7]

Facilitator: Well, you could. Yeah, so would that be appealing ... ?

Respondent: If I want to give up, I don't want to keep using anything. [G2, F7]

Respondent: No, no, me neither. [G2, F5]

For many, short-term use of a nicotine product (i.e. for the recommended treatment timeframes) was acceptable, but indefinite use was not, because this still involved being addicted.

Facilitator: Do you think that would be useful as a long-term replacement for cigarettes?

Respondent: I don't. [G2, F1]

Respondent: It's just another addiction. [G2, F5]

Attributes of acceptable substitute nicotine products

To identify the attributes of an acceptable cigarette substitute, we coded the transcripts into factors participants associated with reasons for smoking and quitting. We then coded the discussions about the nicotine products for attributes that would encourage use of the products and mapped these against smoking

or quitting factors. The remaining product attributes were then coded into whether divergent views were expressed about the desirability of the attribute or not (Figure 1).

Many factors that were identified in the discussions as reasons for smoking could potentially be addressed by switching to a less-harmful nicotine product, such as addressing addiction to nicotine, providing a nicotine 'kick' and a tool for 'stress relief'. In addition to effective nicotine delivery, an acceptable cigarette substitute would need to be viewed by the community as 'normal', easy to use, taste pleasant and gain the endorsement of people within the community. There were divergent views on how closely an acceptable substitute product mimicked smoking, such as the appearance of the product and whether it produced a visible vapour. Similarly, many of the reasons to quit smoking could also potentially be addressed by switching to an alternative less-harmful nicotine product, such as providing a health benefit, avoiding social exclusion (due to having to go outside to smoke), saving money and recommendations from medical practitioners, if the substitute was one that could be used anywhere, was less expensive than cigarettes and approved as a medicine. However, desire for freedom from addiction, which was a quit motivation for some participants, conflicted with the concept of long-term substitution.

Discussion

Discussions with smokers in this urban Indigenous community, located in an area of high disadvantage, revealed four main themes: (i) the barriers to quitting smoking (e.g. use for stress relief, addiction and the entrenched nature of smoking within families) and motivators to quit (e.g. cost, social exclusion due to

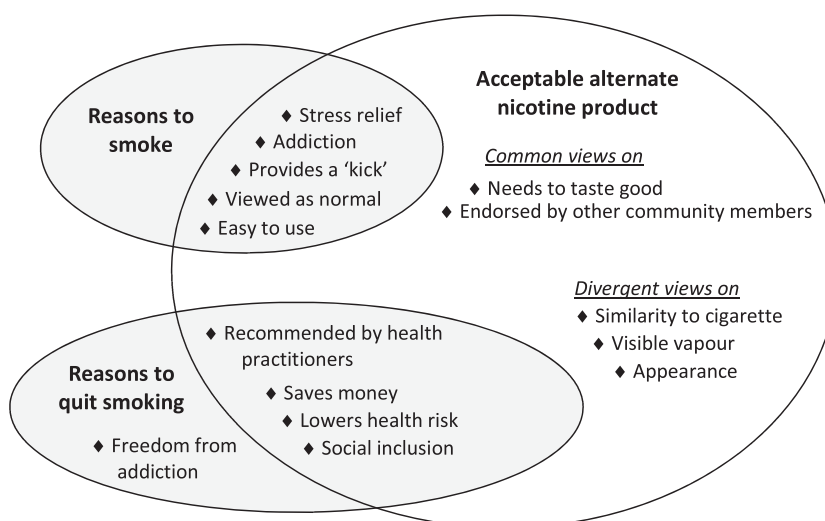


Figure 1. Attributes that make a cigarette substitute acceptable or not acceptable.

indoor smoking bans, and for health improvement); (ii) participants' experiences with and views on different nicotine products, including existing NRT products and novel products, such as e-cigarettes; (iii) product attributes (e.g. flavour, appearance and nicotine delivery); and (iv) social influences (e.g. community acceptance) and how these address the drivers of smoking and motivations to quit will determine whether a particular nicotine product is likely to be an acceptable, either as a short-term cessation aid or a long-term cigarette substitute. There were generally common views about the desirability of some attributes (e.g. pleasant flavour), but divergent views were evident on the desirability of others (e.g. visible vapour).

Smoking for 'stress relief' was evident as a reason for smoking and consistent with other research identifying significant degrees of trauma and chronic life stress that many Indigenous people face in daily life. For example, most (83%) Indigenous daily smokers in a national survey agreed that smoking calmed them down when stressed or upset [4]. This presents a substantial barrier to quitting. Finding alternative ways to deal with stress to prevent relapse was identified as important among Indigenous ex-smokers in a previous study in Inala [3]. Some participants saw potential value in swapping to a less harmful nicotine product, if it provided the same stress relief as cigarettes do. Much of the 'stress relief' attributed to smoking is largely relief of nicotine withdrawal symptoms and smokers frequently conflate these two [29]. Increasing smokers' understanding that quitting smoking can reduce feelings of stress, depression and anxiety in the long run may assist in addressing this barrier to quitting [30].

The concept of long-term substitution of cigarettes with less-harmful nicotine products was new to participants and some expressed interest in this strategy. Discussion of long-term substitution did not appear to reduce interest in achieving abstinence among those aspiring to quit. Consistent with other research [3,31,32], our discussions found that many valued freedom from addiction and more appeared interested in using nicotine products for a limited time for this goal than for long-term substitution. Most of our participants had accessed NRT at low or no cost through government subsidisation or during a stay in a health-care facility. Consistent with other research, cost does not appear to be a barrier to short-term use [13]. However, cost becomes an important consideration for use beyond recommended treatment timeframes and for unsubsidised and unapproved products, like e-cigarettes.

Participants discussed laws covering smoking in public places and use of e-cigarettes. Current Queensland laws apply the same restrictions on sale and public use of vaping products as on smoked tobacco products.

Participants indicated that people would probably continue to smoke if novel nicotine products carried the same restrictions. This may explain preferences towards some of the therapeutic products that are not subject to similar restrictions on public use.

In addition to the perceived ineffectiveness of some products, the unpleasant taste of existing NRTs is a major factor limiting usefulness as both short-term cessation aids and long-term substitutes. This appears to be a major barrier to greater uptake of the inhalator. Approved NRTs, such as the inhalator, have some advantages over e-cigarettes, including high-quality assurance in manufacturing, an established safety profile and legal status in Australia, where there are few legal options for accessing e-cigarettes containing nicotine [33]. However, the conservative design of NRTs, consistent with their role as a medicine [34], limited their appeal to participants and their perceived usefulness both as a short-term cessation aid and for long-term substitution. Researchers have concerns about the safety of inhaling flavourings used in e-liquids into the lung [35]. However, unlike e-cigarette aerosol, the inhalator's vapour is not drawn deeply into the lung, reducing this potential risk. Novel nicotine products, like vaping devices, are available in a wide range of flavours, and this was viewed as a favourable attribute; therefore, enhancement of the flavours of NRTs may make them more consumer-friendly.

Apart from the flavour, the inhalator was widely viewed as an appealing and useful short-term cessation aid. Some participants indicated it could be an acceptable long-term cigarette substitute. Favourable attributes were as follows: being discreet, useable indoors, which avoids separation from others, and mimics the hand-to-mouth action of smoking. While others have described the inhalator's appearance as 'tampon like' [36], only one participant in our study used this description. Another participant suggested improvements of the inhalator appearance by adding artwork or recolouring it may increase its appeal.

E-cigarettes are gaining popularity, with 20% of Australian smokers having tried them and 7% currently using them [37]. In the UK, prevalence of e-cigarette use now exceeds that of NRTs [14]. Like other disadvantaged smokers in Australia [38], some participants had experimented with e-cigarettes. In our study, the novel products, including e-cigarettes, received a mixed response. There was most interest in trying inhaled forms of nicotine, including existing products (inhalator) and particularly novel products (e-cigarette, metered dose inhaler and tank-style vaporiser) among men who valued inhaling and exhaling visible 'smoke' as part of the smoking experience. Fewer women were interested in using the e-cigarette or the tank-style vaporiser. This was similar to research with

disadvantaged groups in the UK, where women indicated a reluctance to use e-cigarettes in public [32].

The lack of interest in snus among this sample may reflect the low prevalence of non-smoked tobacco use in urban areas. However, in some rural and remote areas, chewing tobacco was a traditional practice among some Indigenous peoples and is still prevalent today [39]. Future research could explore whether the practice of chewing tobacco in rural and remote regions of Australia inhibits smoking by providing an alternative delivery method and whether low-nitrosamine tobacco products, such as snus, would be an acceptable substitute in these communities.

While there is limited evidence on the effectiveness of NRT among Indigenous Australians, a small trial of free nicotine patches found that of the 40 smokers who chose the patches, 10% had quit smoking at 6 months compared with 1% of the 71 who chose the brief intervention only [40]. It was noted in that trial that no participants completed the full recommended course of patches. Previous research among a national sample of Indigenous Australians found that less than 10% of those who had used NRT had used it for at least 2 months with around half continuing for a week or less [12]. Early discontinuation suggests few Indigenous smokers are willing to use existing products for extended periods. Reasons may include views about the risk of using 'medicines', and reducing risk by using as little as possible, concerns about transferring addiction to NRT, side effects, unpleasant taste, unsatisfying experience or, alternatively, feeling the product has performed its job and is no longer required. Smokers should be encouraged to use nicotine products for the full recommended course of 12 weeks. However, use beyond 12 weeks may be beneficial for those who are unable to sustain abstinence after discontinuation of treatment. This is likely to require improvements in taste, appearance and nicotine delivery in available products. Products also need to be presented to people as a realistic, attractive and lower-risk alternative to cigarettes [34]. Our study suggests that for some smokers in this population (particularly men), access to nicotine-containing e-cigarettes could increase the number of urban Australian Indigenous smokers interested in switching to a nicotine product. This has implications for Australia and other countries with highly restrictive laws concerning nicotine [33].

Other factors influence acceptability of particular nicotine products. Potential impact on children was an important consideration raised by some participants. For these participants, NRTs, such as the inhalator, had greater acceptability than e-cigarettes, which were seen as potentially attractive to children.

Some participants preferred to quit without assistance. Similar findings have been reported in other studies with

both Indigenous people and general population smokers [3,12,31]. While there is good evidence from randomised controlled trials that pharmaceutical cessation aids, particularly when combined with behavioural support, can improve the likelihood of success of a quit attempt [41], personal preferences and values, including feelings of personal achievement from quitting cold turkey should be acknowledged [31]. Nevertheless, we found 74% of participants indicated they would be very likely to try an NRT given the opportunity; a further 18.5% indicated they 'maybe' would try one. This level of interest is higher than found in a national survey of Indigenous smokers, in which only 54% of the 1124 dependent smokers indicated they were interested in using NRT in the future [12]. In our study, few participants were familiar with the full range of NRTs available, so seeing new products may have increased interest.

Strengths and limitations

This study was the first to obtain the views of urban Indigenous smokers, a priority population experiencing disproportionately high levels of tobacco-related harms, on THR and the acceptability of both NRTs and novel nicotine products. Our sample was of modest size; however, it captured a broad range of views from participants of different ages, genders and smoking and quitting experience. We believe data saturation was reached as the same themes recurred, and collecting more data was unlikely to produce new themes. The lead researcher is an Indigenous woman with links into the community, which provided an Indigenous perspective for interviews and analysis. She is also the CoE's tobacco treatment specialist. As participants were recruited from the CoE, this may have influenced the results. For example, the importance of health practitioners endorsing nicotine products emerged as a theme; however, this may only be important to people in regular contact with a health service, and some participants may have emphasised this as a form of social desirability bias, especially for the focus groups held at the CoE's premises. Some may have felt it would be inappropriate to admit to not wanting to quit smoking. Similarly, participants may have indicated interest in the NRTs because of the health service context. Conversely, familiarity with the researcher may have produced higher levels of comfort and disclosure than may otherwise have occurred. Indeed, many participants were comfortable expressing negative views about some of the products discussed (e.g. 'shit taste', 'I did not like it', 'looks like a med'). As with other qualitative research, our findings cannot necessarily be generalised to the wider Indigenous population and further quantitative research in multiple communities is needed to determine representativeness.

Conclusions

Participants faced substantial barriers to quitting, including high levels of chronic stress and traumatic experiences. We found substantial interest in trying nicotine products, particularly for short-term use, with some participants interested in long-term substitution if an acceptable product was available. NRTs and some novel nicotine products could potentially fulfil the role that cigarettes currently occupy; however, improvements in current NRTs (e.g. flavours) and access to novel products, such as e-cigarettes, may be needed to make longer-term use attractive.

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Supporting Information

Additional Supporting Information may be found online in the supporting information tab for this article.

Data S1. Supporting info item