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action on smoking and health

Evidence into practice:
Smokeless tobacco products

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Introduction

Smokeless tobacco (ST) products are consumed by up to 351 million individuals worldwide. More than two thirds of global consumption is based in South and South East Asia.[1] Within the UK, ST products are mainly consumed by ethnic minority groups, predominantly South Asians of Bangladeshi, Indian and Pakistani origin.

For the purposes of regulation in the UK all ST products are grouped within "niche" tobacco products, a term that also covers combustible tobacco products such as "blunts" and shisha.

This briefing is meant to support local authorities developing their approach to ST products. It should be used alongside PHE's CLeaR Deep Dive on Niche Tobacco Products. This briefing covers:

- Classification and composition of products
- Level of use in the UK
- Health risks associated with use
- Evidence-based approach to quitting
- Regulatory framework and activity

This briefing does not cover novel nicotine products such as non-medicinal nicotine pouches (e.g. Nordic Spirit, Zin, etc).

Classification and constituents

"Smokeless Tobacco" (ST) constitutes a wide range of tobacco containing products that are non-combustible but may be chewed, inhaled or placed in the mouth. These include tobacco with or without characterising flavours and sweeteners (eg. *Mishri* and *Qiwam*), with alkaline modifiers (eg. *Khaini, Naswar* and *Gul*) to increase nicotine absorption and addictiveness and tobacco with areca nut and slaked lime (eg. *Gutkha, Zarda, Mawa*).[2] Supari or areca nut (also called betel nut) is used as an ingredient in several smokeless tobacco products and is by itself a recognised stimulant and carcinogen.[3]

Whilst ST products such as Swedish snus (currently prohibited in the UK) are manufactured from pasteurised and air-cured tobacco, South Asian ST products are largely produced by a fermentation process and may contain *Nicotiana rustica*, a tobacco species containing higher levels of nicotine and tobacco specific nitrosamines (TSNAs). As a result, they often have varying pH levels, TSNAs and heavy metals.[4 5] Characterising flavours are also added which increase the attractiveness and palatability of ST products. The most commonly-found flavours include menthol, eugenol and camphor.

The **Tobacco and Related Products Regulations** (TRPR) (2016)[6] currently provide the main statutory instrument for all tobacco products in England. The TRPR classify ST products as follows:

a. Tobacco products for chewing, produced by fermentation and liquification of tobacco. This category includes *Paan masala*, *Gutka* and tobacco-containing betel quid (*tumbaku-paan*).

b. Nasal tobacco (Snuff), a semi-moist tobacco product consumed via the nose. This includes Snus and *Naswar*, which may be consumed orally.

c. Tobacco intended for oral use, but not to be inhaled or chewed. This is sold in sachets in powder or particulate form. This type of ST is currently banned for sale under the TRPR.

Figure 1: Commonly used ST products of South Asian origin

(a) Tobacco with characterising flavours and sweeteners

Mishri

Qiwam

(b) Tobacco with alkaline modifiers

Khaini

Naswar

Gul

(c) Tobacco with arecanut and slaked lime

Gutka

Zarda

Mawa

Health risks of use

Global evidence on ST use suggests strong associations with oral and pharyngeal cancers, ischaemic heart disease, stroke and adverse perinatal outcomes.[7] [8] [9] As with combustible tobacco, ST use has also been linked to a range of oral problems that include tooth staining and wear, periodontal disease, bad breath (halitosis) and tooth loss.[10]

There is little research which considers risks from individual ST products compared to the category as a whole. However, evidence does suggest that South Asian ST products vary considerably with respect to pH and TSNA levels. South Asian ST products generally have a higher free nicotine content, making them more addictive, as well as more dangerous compared to many other ST products such as snus.[11]

In England, there is a lack of direct evidence identifying the negative health impacts of ST use. Data extracted from cancer registries however, does suggest a significantly higher risk of oral and pharyngeal cancers among South Asians ethnic groups, as compared to the general population.[12]

Whilst ST is non-combustible and does not expose non-users to tobacco smoke, ST consumers may spit out the chewed product. Spitting may increase risks for others of contracting tuberculosis and on its own is anti-social and unhygienic behaviour.

Level of use in the UK

There has been limited national surveillance of the magnitude, patterns, determinants and consequences of ST consumption in the UK. NICE has highlighted the need for more data collection on ST use and its related health problems in local communities.[13]

The available national data, shows that in 2004 self-reported ST use among Indian and Pakistani men (4% and 2%, respectively) and women (approximately 1%) remained comparable to 1999 estimates.[14] A significant decline was observed in Bangladeshi men and women from 19% and 26%, respectively, in 1999 to 9% and 19% in 2004.[14] On the contrary, cotinine adjusted prevalence estimates of any tobacco use were higher than self-reported estimates, especially among Bangladeshi men (60% adjusted vs 44% self-reported), Bangladeshi women (35% adjusted vs 17% self-reported) and Pakistani women (14% adjusted vs 7% self-reported). The adjusted estimates, especially in women which were twice as high as self-reported estimates, point towards the possibility of higher ST use than that observed through self-report.

Local surveys of ST use in South Asian communities have been conducted in various settings within England. A wide variation in prevalence estimates (2%- 57%) has been observed, particularly in Bangladeshi communities.[15] The variation in prevalence estimates may be due to a lack of uniformity in defining ST products by investigators.

The most recent survey work undertaken by ASH in 2019, included a boosted 500 strong South Asian sample alongside a larger GB population level survey conducted by YouGov.[26] This found overall rates of current use somewhat lower than other surveys, particularly among women. The survey found that 9% of men and 7% of women from South Asian backgrounds are current users with 24% of men and 18% of women reporting they have ever used ST. While the overall rates for men appear relatively consistent with 1999 and 2004 surveys there is a big difference in the rates among women in the ASH survey.

This may be because the ASH survey is an online panel survey that will under-sample people who cannot read English. Women who were born overseas may be less likely to be able to read English and more likely

to use ST products – however further research is needed to better understand the pattern of use in parts of the population with lower levels of English literacy.

The ASH survey work found that there is significant variation by ethnicity in the use of ST products. In a survey of GB population only 1% of White populations reported current use while 9% of people from South Asian backgrounds reported current use in the survey of 500 people of SA background.

There is also a difference in the use of smokeless tobacco among wider family of different ethnic groups. Only 4% of people from White backgrounds reported use among wider family members in the GB survey compared to 13% of people from South Asian background in the booster survey. This indicates the higher levels of cultural norms around ST use in this population.

Current use of smokeless tobacco is also much more common among smokers than non-smokers. Among the South Asian population smokers were nearly four times as likely to be current users of smokeless tobacco than non-smokers.

The ASH survey asked people about the smokeless tobacco products they use and found a wide variety that were popular. Out of 41 South Asian respondents who currently use ST:

- 12 use *Supari*
- 11 use *Qiwam*
- 10 use *Zarda*
- 9 use *Naswar*
- 8 use *Mawa*
- 8 use *Betel quid (Paan)*
- 4 use Swedish *Snus*
- 3 use *Gutkha*
- 2 use Creamy Snuff

Supari (also known as areca nut or betel-nut) is used as an ingredient in several ST products such as gutka or Mawa.[3] However, this does not classify as a standalone smokeless tobacco product. The high self-reported use of supari among respondents could reflect that either participants are not clear on what is meant by ST, and are incorrectly reporting supari under ST, or that they are reporting supari as an ingredient of other product(s) they consume.

An audit of retail practices carried out in 2008-09 in boroughs with the highest percentage of South Asian residents identified ST products in a range of outlets which included supermarkets, newsagents, music and bookstores.[16] A variety of ST products including made-to-order products (*paan* with tobacco) and pre-packaged products (*paan masala* with tobacco, *Zarda, Gutka*, and others including *Naswar, Mawa, Qiwam*, creamy snuff etc.) were available in these locations, with the most commonly available being *Zarda, Gutka, Khaini* and *Naswar*.

Evidence-based approaches to quitting

A Cochrane review of 34 randomised controlled trials identified a range of interventions being adopted for ST cessation.[17] The interventions included behavioural support, varenicline (Champix) and Nicotine Replacement Therapy (NRT) products. The researchers concluded that varenicline, nicotine lozenges and behavioural interventions may help ST users to quit, neither nicotine patches nor nicotine gum were seen to increase

levels of abstinence.[17] The trials were carried with users of US and Swedish products. No trial involved South Asian ST products, which differ markedly in their composition and addictiveness.

The NICE guidance recommends comissioning of tailored cessation services in areas of identified need, with their planning and implementation involving local organisations which work in consultation with local communities.[13] In addition, local healthcare and dental teams, as well as community based health professionals (community pharmacists, midwives and health visitors) should be able to provide Very Brief Advice and behavioural support to aid quit attempts using brief interventions for ST cessation, followed by referral to specialist tobacco cessation services.

Three UK reports indicate the potential of providing cessation support to ST users.[18 19 20] A feasibility study with 130 female Bangladeshi ST users compared the four week outcomes of brief advice (BA) alone compared to BA combined with NRT. Participants were matched and randomly allocated to either intervention. It reported that 22% of participants receiving BA and NRT achieved cotinine validated abstinence, 5% more than those receiving BA alone (17%).[18] Two further papers report the outcomes of providing community outreach cessation services to South Asian ST users using prospective cohort study designs. The first, with 419 ST alone using Bangladeshi women, reported 58% non-validated continuous abstinence after four weeks.[19] The second, with 239 men and women ST alone users of South Asian origin recruited from East London, Leicester and Bradford, reported 63% non-validated continuous abstinence at four months.[20] In both studies short term ST quit rates were comparable with smokers attending stop-smoking services, with participants making a successful quit attempt more likely to be those receiving NRT and behavioural support, rather than behavioural support alone.

UK regulatory framework

The current TRPR requirements for ST are fewer than those for combustible tobacco products, which adversely affects the regulation of ST products.[6] Firstly, the regulations currently only require one minimal text warning ('This tobacco product damages your health and is addictive') to be placed on ST products. Pictorial warnings and plain packaging are not required. Secondly, there are no requirements for placement of fiscal markings. Thirdly, there is no minimum purchase requirement, meaning that ST products can be bought as individual items. Lastly, while there is a ban on cigarettes and hand rolling tobacco with characterising flavours, this does not extend to ST products.[6]

Despite having less stringent requirements, less than 50% of ST products are observed to comply with existing regulations.[16] There is also a considerable variation in the degree of compliance between ST products. *Naswar* products may be the least compliant, and are often sold in unlabelled plastic pouches containing no relevant product information. Other ST products may be sold in a variety of packaging designs that are comparable to confectionery products. They also may contain messages that promote the use of tobacco through misleading claims of the products' taste or experience.[21] All tobacco producers and suppliers are required to provide a products' ingredients listing to Public Health England, however, no South Asian ST products are currently listed.[22]

Figure 2: *Naswar* products with minimal information on packaging

Figure 3: Chewing tobacco products are available in a variety of packaging designs

A range of further regulatory actions are possible to curtail the advertising, promotion and sponsorship of combustible tobacco. This includes bans on electronic or print media advertising and point of sale displays as well as a plain packaging requirement.

Whilst there is no current evidence to indicate formal advertising of ST products, it has been found that ST products are currently promoted in shops alongside a wide variety of other goods within areas having a high concentration of South Asians. A survey of retail outlets found that in 38% of them ST items were openly displayed. (Figure 4)

Figure 4: Smokeless Tobacco products can often be displayed openly at point of sale

Under current legislation, manufacturers and importers of tobacco products are required to comply with the excise duty requirements for ST products. Despite this, ST products available in the UK are substantially cheaper than cigarettes. The average unit price of smokeless tobacco products in the UK is around £1.82,

however this may vary depending on the type of product and the unit size, for e.g. a 12.5g container of *zarda* may be available for £1.50 whereas smaller sachet products such as *gutka* are available for as little as £0.30. While most of the products available in the UK are South Asian in origin, knowledge of their supply chain is currently limited.[16]

Lessons for practice

DEVELOPING A LOCAL STRATEGY

Public Health England have developed a CLeaR 'deep dive' on niche tobacco products[23] (15) which is a good starting point for considering how to develop an appropriate and evidence-based response to addressing smokeless tobacco. This is design for local authorities to use but can involve input from other services and partner organisations.

The domains within the tool covers include:

1. Systems Leadership and Planning
    - Vision and Leadership
    - Partnerships
    - Planning and Commissioning
2. Communications
    - Communications – partners
    - Communications – populations
3. Regulatory Activity
    - Compliance Goals
    - Enforcement
    - Working with Retailers
4. Targeted Quit Support
    - Cessation Services
    - Brief Interventions
    - Working with Communities
5. Measuring Improvement
    - Intelligence and Data
    - Demonstrating Improvement

ENGAGEMENT WITH THE COMMUNITY IS A NECESSARY FIRST STEP

Smokeless tobacco use is concentrated in specific communities in the UK and can play a cultural role in people's lives. Use is likely to be highest among people who have recently migrated to the UK and common among people with low levels of written or verbal English literacy. Understanding the local community, the role of smokeless tobacco within it and reaching the community via trusted partners will be an important first step.

Newcastle City Council: understanding and engaging with the community

Newcastle City Council undertook insights work with their South Asian community to determine the level of need and type of support that would be appropriate. They identified gaps in knowledge around the harms from 'niche' tobacco products and a strong link between cultural context and people's tobacco use. As a result of this work the following recommendations for action were made:

- To disseminate their 'niche tobacco fact sheet' to faith and community leaders and other key agencies that work directly with BAME communities.
- To do some targeted work with linked key professionals (i.e. 0-19 service. Oral health promotion) to increase knowledge and awareness of the health risks of smoking/chewing tobacco (to be linked to the fact sheet for professionals) particularly with families due to 90% of participants reporting that they started smoking/chewing tobacco when they were under the age of 16.
- To develop a second, simpler version of the niche tobacco fact sheet for the public (specifically South Asian communities) and to get it translated into the main languages.
- To work with the commissioned Stop Smoking Service (CGL) to develop stronger links with BAME community leaders/religious/faith leaders to promote and deliver smoking cessation sessions in mosques.
- To recruit, develop and train up 'peer health champion' volunteers from the South Asian community to disseminate key messages about the dangers and risks associated with smoking/chewing niche products.

EMBEDDED APPROACHES FOR CESSATION SUPPORT

For most areas a dedicated approach to smokeless tobacco cessation would not be appropriate given the size of the local need. However, there are many ways to embed the right type of support within existing services. It is particularly notable that those who use smokeless tobacco are also highly likely to be smokers too. Therefore, including questions about all tobacco use for people accessing quit support is an important first step.

Professionals who are delivering brief advice, particularly those most likely to come into contact with people from South Asian background should also be equipped with the knowledge and confidence to raise the issue of harms from smokeless tobacco and the benefits of quitting.

Tower Hamlets: cessation support for smokeless tobacco use

Quit Right Tower Hamlets provide key targeted support to clients from different community groups. Smokeless tobacco is supported by recognising issues such as having a same gender Adviser available, accommodating other cultural sensitivities and determining how dependent a person is through key questions:

1. Do you chew within 5 min, 30 min or within an hour of waking?
2. Do you chew more than 10 paan quids per day?
3. Do you swallow the juice while you are chewing?

Nicotine Replacement Therapy (NRT) and Champix is provided so individuals can increase their chances of giving up smokeless tobacco

ENFORCEMENT STRATEGIES AS PART OF THE MIX

One of the key challenges in addressing the use of smokeless tobacco is that existing regulations are widely flouted and enforcement has been inconsistent over time. Many retailers who are breaching existing legislation may not realise they are doing so.

In the 2018/19 Tobacco Control Survey, 22% of local authorities providing data reported seizing illicit ST. In total, 2,331 visits were made by 41 councils to assess tobacco product compliance with the TRPR, with non-compliant products found in 18% of visits.[24]

Examples of enforcement activity on ST go beyond enforcement of tobacco regulations. Paan spitting additionally leads to environmental damage, as it leaves behind an unsightly residue that is expensive to remove. To counter Paan spitting, the London Boroughs of Brent and Hillingdon and Leicester City Council have imposed a ban on spitting paan outdoors, with penalties ranging from £80 to £150. There is currently no information to suggest similar bans being in place in other parts of England. Localities can make use of the PHE Deep Dive on Niche Tobacco products to support development of local approaches to addressing the health harms from ST.

The limited examples of enforcement action on ST illustrates the need for this to be a focus for education and enforcement activity moving forwards.

COMMUNICATIONS NEEDED TO ADDRESS GAPS IN KNOWLEDGE

Raising the knowledge and awareness of ST related harms through efforts at the community levels can address demand for ST products. Such approaches need to be appropriate in terms of content, the language they are in and who delivers the message. Improving awareness of the health harms from ST products is an important part of the mix in addressing use. For example, an evaluation of a CRUK funded information campaign carried out in one Bangladeshi community in London was compared with a similar, geographically separate community. The results reported a significant increase in oral cancer related knowledge in the community receiving the awareness messages as compared with the comparison community.[25]

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26. The same questions were asked of two different samples:
(A) The main YouGov population survey, which covers Great Britain and is not representative within ethnicities. Total sample size was 12393 adults, fieldwork was undertaken beteween 12th February – 10th March 2019. The survey was carried out online. The figures have been weighted and are representative of all GB adults (aged 18+).
(B) A separate sample of South Asian adults. Total sample size was 500 adults. Fieldwork was undertaken between 14th February to 9th March. The survey was carried out online. The figures have been weighted and the South Asian sample is representative of Indian, Pakistani and Bangladeshi ethnicities (aged 18+).
South Asian figures are taken from the South Asian sample. All other figures are taken from the main GB sample.

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