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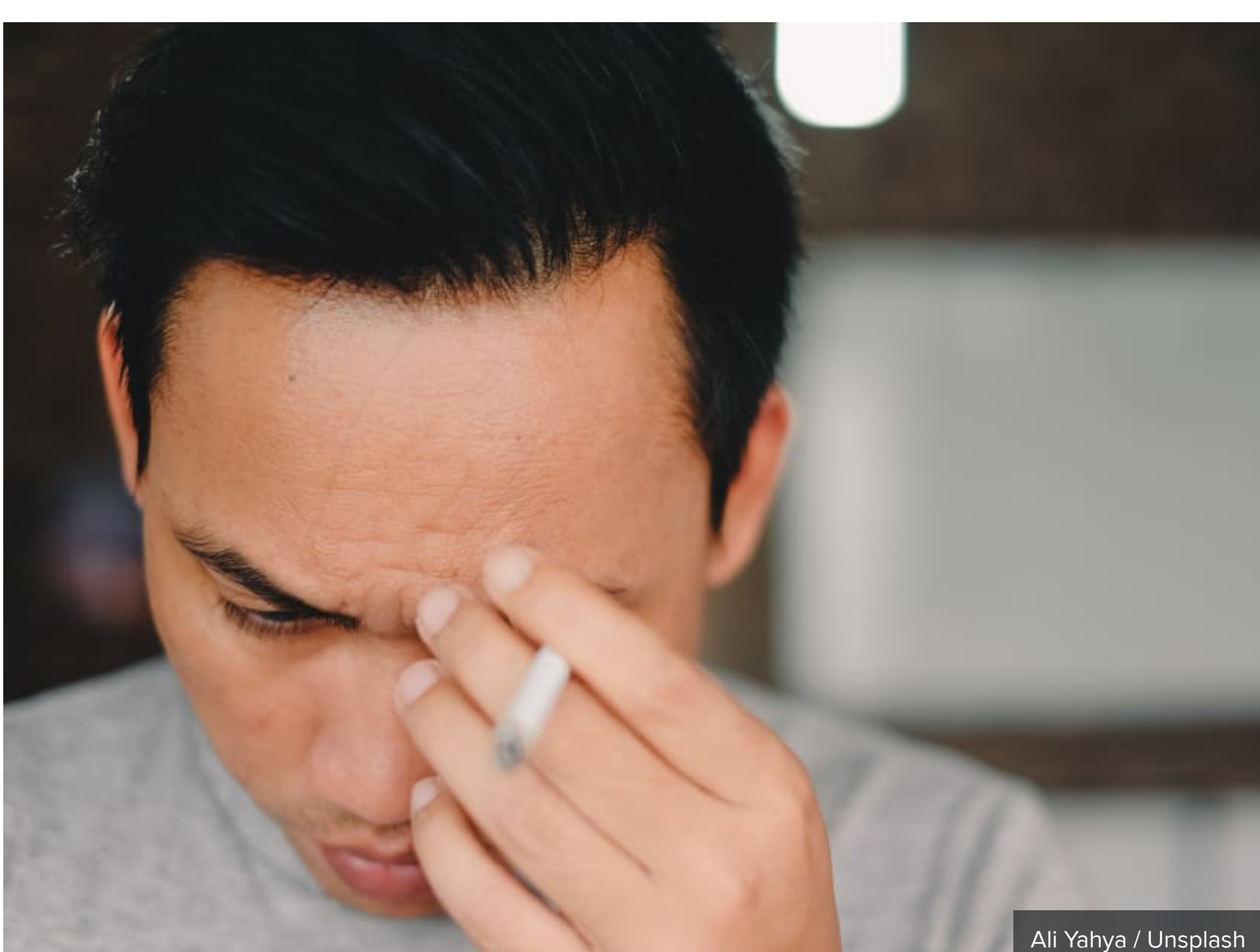
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## Time for smoking reduction strategies to get more personal



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The authors say the government should consider delivering 'personalised' strategies through digital means, such as mobile-based applications.

The government recently announced its goal to cut the smoking rate from the current 12 per cent to below 10 per cent by 2020.

Singapore has seen a significant decrease in the smoking rate from around 18 per cent in the 1990s, but the rate has been quite stagnant for more than a decade, fluctuating between 12 and 14 per cent.

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With only two and a half years left to 2020, the target of cutting the extra 2 per cent off the current smoking rate seems far too optimistic.

Senior Parliamentary Secretary for Health and Home Affairs Amrin Amin has agreed that the target is "somewhat of a stretch" but is achievable if "comprehensive, targeted measures" work in tandem.

These include raising awareness about the dangers of smoking and the expansion of more smoke-free places.

A multi-pronged approach is needed to drive down the smoking rate in the long term.

Many control measures had already been in place over the years but the reduction rate has gradually plateaued despite increasingly strict controls.

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While the decline in smoking from the 1990s to the early 2000s was the product of the government's targeted efforts, other factors played a role as well, such as the increases in overall quality of life and levels of education, and the consequent increase in public health literacy that accompanied Singapore's growing status as a first world nation.

With the stabilising of that infrastructure now, it is unsurprising to see that smoking-cessation measures are nowhere near their initial impact.

So what needs to be done?

If we want to maximise efficiency, the key is "personalised interventions".

This term is more often heard in the field of medicine but works equally well for areas that involve interventions in complex matters, such as changing human behaviour.

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In our context, it means stratifying the population into different target groups and identifying the best sequence of measures for each group.

The government has made an effort to target more specific strategies to specific populations.

For example, it launched the Fresh Air for Women campaign in 2004 for young women smokers and customised educational programmes for the Malay community.

We think the government should step up their game in this area. This approach may be achieved by means of mobile-based applications, as will be discussed later.

One example type of target audience is what we call the 'senior' smokers – long-term smokers who never attempted abstinence, tried quitting but failed, or faced a smoking relapse.

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An interview with a random smoker will likely tell us that he is aware of the harm caused by tobacco, has tried in vain to quit, or thinks he can quit whenever he wants.

This is probably the largest proportion of people persistently constituting the 12-14 per cent smoking rate we see every year.

The government's awareness campaign may have deterred people from picking up the habit but is unlikely to help current smokers to quit.

These smokers would require even more personalised smoking cessation interventions to help them kick their habit. In other words, we need to use different strategies for different subgroups within the general population of smokers.

A recently published study led by Duke-NUS Medical School looked into the effectiveness of a web-based smoking cessation programme on the quitting process, based on data from a randomised trial.

The study found that a highly-individualised story-based behavioural therapy is better for the smokers with low education because they can better associate with the fictitious characters in the story, while smokers with higher education fared better with a less-tailored, generic story-based therapy.

Many studies have already broken down and identified the best strategies for different combinations of psychosocial components affecting smoking habit.

These results should therefore serve as a guideline to implement the most effective control measures for the most appropriate target groups.

The government should consider delivering these 'personalised' strategies through digital means, such as mobile-based applications.

Users can be classified into different subgroups based on their inputs regarding personal information, personality, smoking status and preferences, and personalised content will then be "smartly" presented to them.

This idea is nothing new, given the present multitude of apps in app stores claiming to help improve lifestyle habits.

Nonetheless, we cannot deny the penetration and intrinsic impact of mobile-based applications in people's everyday lives.

When used well, such technology allows us to automatically deliver the most relevant content to each user across the nation – and even at the most appropriate times.

Lastly, we would like to emphasise that it may be too narrow to use the daily smoking rate as the only measure of success.

While the Singapore Health Facts definition for the prevalence of smoking as 'smoking a cigarette at least once a day' is a tangible metric, we should expand our horizon to include other, more dynamic, behavioural outcomes that are perhaps more important for assessing self-sustainable long-term health and the direction of tobacco control in the country.

This means tracking indicators such as the level of resilience to smoking, the number of attempts to quit, and the chance of relapse.

In doing so, we can better refine efforts if we are unable to reach the hard 10 per cent smoking prevalence target in 2020.

Similarly, we should not be too eager to celebrate if the target is reached, unless we can confirm the same success in the other aforementioned indicators.

### ABOUT THE AUTHORS:

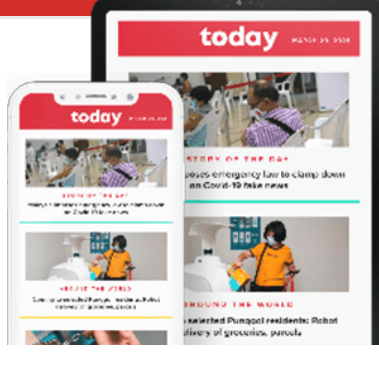
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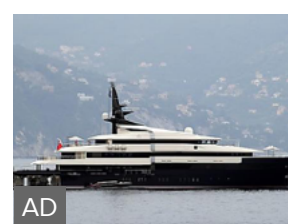
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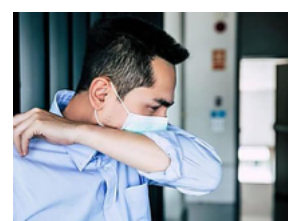
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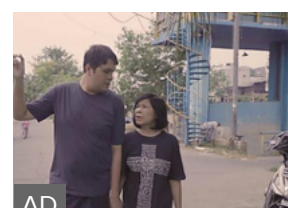
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