executive insight
HEALTHCARE CONSULTANTS

# Towards a smoker segmentation tool

## Analysis of predictors for risk of harm, readiness to quit and optimal methods to quit smoking

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# Executive summary

Although most people who smoke cigarettes want to quit (Benowitz et al, 2010), stopping smoking is notoriously difficult. There are a huge number of individual factors – including smoking history and behaviors, biological, psychological, socioeconomic and demographic factors – that drive the potential risk of harm to smokers, their smoking dependence, and willingness to quit. There are also a wide range of options available to quitters to assist them, including medication, counselling and substitutes.

The objective of the research was to examine if this highly heterogeneous population can be segmented in a meaningful way, based on rigorous scientific data. If so, can we improve the success of a smokers quit attempt by providing smokers with interventions tailored to their individual needs? And can this in turn pave the way for a potential smoker segmentation tool, which could provide practical, tailored assistance to smokers on their quitting journey?

**Key results**

Data extracted from a literature review were analyzed to identify predictors that predict one of the following:

- Risk of harm
- Likelihood to continue smoking
- Most successful means to quit

These data were verified with expert advisors. The data revealed that there is potential value in segmenting smokers into meaningful clusters, particularly around their risk of harm (or 'benefits of quitting') and their likelihood to continue smoking (or 'readiness to quit').

The key predictors of risks of harm – such as comorbidities including chronic obstructive pulmonary disease (COPD), coronary heart disease (CHD), diabetes and psychiatric disorders – and other "windows of opportunity", such as pregnancy and disease diagnosis – may provide the basis for compelling, targeted narratives around the benefit of quitting.

The research revealed several predictors for likelihood to continue smoking / readiness to quit, which are well supported by the literature and could be utilized in a smoker segmentation tool. These include smoking dependence, family members' smoking status and co-factors such as alcohol and marijuana use.

Although there were some specific predictors in the literature for most successful means to quit, it was agreed with the expert advisors that the full range of options should be available to smokers, so that they can find which methods, or which combination of methods, works best for them.

**Towards a smoker segmentation tool**

The expert advisors agreed that the most value for a smoker segmentation tool resides in evaluating 'readiness to quit', but that this could also be extended to 'readiness to take action'. Smokers may not always be ready to quit, but may be ready to take action in some way, for example to reduce, or to switch to an alternative.

There are multiple predictors for readiness to quit or take action, which could form the basis of the tool. We recommend that further research is undertaken into the potential design and implementation of such a segmentation tool.