Widespread smell testing has limited application as a screening tool for COVID-19

Having been the first to highlight that the prevalence of sudden-onset loss of sense of smell (anosmia) is a highly prevalent symptom of COVID-19 infection\textsuperscript{1,2}, and having campaigned to achieve official recognition of the importance of anosmia as a marker of infection, we were delighted when Public Health England changed their case definition of COVID-19 on 18 May and finally included loss of smell and taste among the officially recognised symptoms.

The widespread recognition of the importance of sudden smell loss has grown, but with this recognition have come calls from some quarters to introduce smell tests as a screening tool in certain settings, for example at airports and shopping centres, with the intention of denying access to those identified as having lost their sense of smell (\textit{Telegraph}, 30 May and \textit{Lancet}, 4 June\textsuperscript{3}). We would urge caution in adopting any such measure. Although the sudden onset of smell loss has a high likelihood of predicting a positive test for COVID-19 while the prevalence of the disease remains high, population estimates suggest that nearly 20\% of adults suffer from a pre-existing diminished sense of smell, a figure that rises to 80\% in patients over the age of 75\textsuperscript{4}. This closely reflects the 21.7\% reporting loss of sense of smell in patients who tested negative for COVID-19 in the COVID Symptom Study\textsuperscript{5}. More significantly, for patients who have developed anosmia as a result of COVID-19 infection, chemosensory loss persists for 8 weeks in approximately 10\% of cases (data submitted for publication from three independent studies), but this does not reflect how infectious they are to others and whether they have viral clearance. Self-reported recovery rates of five days, reported by Menni et al\textsuperscript{3}, will likely not be matched by the results of psychophysical smell tests at airports and shopping centres. Studies using psychophysical testing for olfactory dysfunction in COVID-19 infection have shown that self-reported anosmia underestimates the prevalence of olfactory loss at baseline\textsuperscript{6}. Patients are not always accurate in assessing their own olfactory function and this may mean they overestimate the extent of their recovery, self-reporting full recovery but having persistent deficits, such as parosmia or hyposmia, when objectively tested.

Certainly, asking patients to self-report recent-onset loss of sense of smell is a very useful screening question that may be applied in healthcare settings, and it is likely that even patients with pre-existing hyposmia (a reduced sense of smell) would still notice sudden and complete loss. However, contrary to media reports, there are no widely available, validated and reliable smell tests that are quick and easy to complete – such that might be considered equivalent to a temperature check for use as a screening tool on a wide scale – so it is unlikely we will see people being asked to scratch and sniff to gain entry to their local cinema. However, even if currently available tests can be adapted to facilitate mass-screening, they would not be able to account for pre-existing olfactory loss. Current speculation regarding the use of smell tests has already caused considerable distress among patients suffering with longstanding anosmia due to a variety of different conditions. The suggestion that such tests could be used in ‘other settings’, potentially to allow or deny access to airports, retail parks or equivalent, to approximately one fifth of the population on this basis risks introducing a form of discrimination that would go beyond the potential public health benefits of reducing transmission.
The best advice that can be given at the current time is that all people who develop new-onset loss of sense of smell must self-isolate and seek confirmatory testing. We should not impose punitive measures on patients who have lived and struggled without a sense of smell for many years. We encourage caution in how this new finding is incorporated into policy and would suggest that clinicians and researchers working in this field be called upon first to ensure that such policies are fit for purpose.

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1 Loss of sense of smell as marker of COVID-19 infection.  
2 ENT UK statement on the failure to recognise lost sense of smell or taste as symptoms of COVID-19 infection.  