The stage-of-change model in smoking cessation in respiratory patients: does it need to be revisited?

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Smoking cessation is the first and most important intervention in the prevention and treatment of respiratory diseases. However, there are many obstacles to reaching this goal that may affect both the diagnosis and treatment of smokers. Smoking is an addiction [1, 2], although it differs from that to illicit drugs; education and training are necessary to the treatment of smokers, as to that of any other disease. However, current students of medicine rarely find smoking cessation included in their curricula, and past students did not find it at all [3].

For this reason, physicians were not so ready to quiz their patients about their smoking (as it was regarded as a behaviour rather than a disease) in the (recent) past, but, over the last few years, things have changed and the majority of health professionals have now realised the importance of their intervention in their patients’ smoking.

The current guidelines (e.g. [4]) state that the motivation to quit is the prerequisite for starting a smoking cessation attempt. Indeed, smoking cessation starts with identification of smokers among patients, continues with the analysis of the smoker’s character and the prescription of adequate treatment, and finally ends (or continues the cycle) with follow-up. However, after having ascertained the current smoking status of a patient, and having recommended cessation, the very critical point follows, consisting of determination of their willingness to quit; if the patient is not motivated, the intervention should be delayed.

This model has two important implications for physicians. It implies that quitting smoking is a sequential process, and, consequently, the physician’s task is to help the patient to move through it without leaps, and must wait to treat the smoker until they are motivated.

The present chapter deals with the issue of motivation and analyses the problems arising from the current suggested approach when coping with a smoker suffering from a respiratory disease.

What is motivation?

Generally speaking, to be motivated means to be activated to take an action. Motivation explains not only what someone decides to do but also the strength of their decision.
The motivation to quit is the intention to start a quit attempt not generically in the future but immediately or on a definite, close enough, date. It is defined by a positive answer to the question (asked by the physician) “are you willing to try to quit now?”

If the patient answers “yes” to this question, guidelines suggest that treatment is started immediately (directly, if the physician is fit to the task, or following referral of the patient to a clinic if not).

If the patient answers “no”, then an intervention is suggested to increase motivation in the future, in order to maximise the probability that an attempt is started in the future.

These suggestions come from the transtheoretical model of J.O. Prochaska and C.C. DiClemente [5]. According to this model, the process of quitting smoking should be included into a cycle of changes. This cycle comprises four different stages. During the first stage, pre-contemplation, the behaviour is perfectly satisfying to the patient and they feel no need to change. During the second stage, contemplation, the need for a change is sensed, but not so strongly as to promote action and no plan is made for the near future. During the third stage, preparation, the patient has decided to try to change their habit/behaviour and is prepared to start the attempt in the immediate future; in this stage, they can fix a date for the beginning of such an attempt. During the fourth stage, action, the patient starts their attempt.

Even if there is no standard means of measuring motivation, it is suggested that the patient be tested with some questions that can indicate what their feelings are about smoking (for instance, in Italy, the most usual way is to present the patient with a wheel divided into four parts (the four stages) and ask them where they consider themselves to be), and then to set a date for starting quitting and helping the patient with behavioural and pharmacological interventions. Treatment should be refrained from if the patient is in the contemplation or pre-contemplation stage.

For others, a motivational interview is suggested (defined as a “client-centred, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence” in [6]), but this is a time-consuming tool, to be used by skilled psychologists.

If a physician thinks that a motivational interview might be of use, then they can address the patient in a formal psychological consultation. However, it is the present authors’ opinion that it is more important to give an idea of how to approach a smoker with a respiratory problem to a chest physician than to create amateur psychologists.

To this end, for chest physicians the suggestion of treating only motivated people seems not to be the best solution for patients suffering from a respiratory disease, for which smoking is often the underlying cause and always the most important factor in worsening.

In such cases, is there room for other different approaches?

**Approaching the smoker**

In respiratory medicine, it is rare that a patient who has presented with a respiratory complaint and is a current smoker immediately answers “yes” to the question regarding whether they want to attempt quitting immediately. If patients are evaluated according to the stage-of-change model, most of them are categorised as far from motivated. In a series of chronic obstructive pulmonary disease patients attending the present authors’ clinic, only 8.9% of patients were in the preparation stage, whereas 60.7% were in the contemplation stage and 29.4% in the pre-contemplation stage [7].

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If guidelines are followed, this means that only one out of ten patients will attempt to quit; the other nine will be treated, at best, with a certain delay. In other words, the physician again risks doing nothing for their smoker patient; some years ago the physician did nothing because they were not educated on the subject, and today because their patient is not motivated.

However, if the prospect of doing nothing is unfavourable, the next step could be to address the following questions. Is the transtheoretical model useful in smoking cessation, at least in a chest clinic? Is it the only guide available for treating smoker patients? How can a chest physician best approach a smoker?

In smoking cessation, the model of J.O. Prochaska and C.C. DiClemente has been much questioned, especially in recent years. The definition of the stages is somehow generic and cannot be measured, meaning that the staging itself can often be viewed as arbitrary [8]. Furthermore, it seems to predict the attempt but not its success (cessation), the latter being better predicted by nicotine dependence and self-efficacy [9].

In two highly intriguing papers, LARABIE [10] and WEST and SOHAL [11] found that, in their sample of smokers, more than a half and slightly less than a half, respectively, of attempts to stop were made without previous planning. Furthermore, in the latter study, the unplanned quit attempts were more successful than the planned ones.

If the transtheoretical model is not a good guide, an alternative model is proposed in the latter paper, based on catastrophe theory. According to this theory, a system can accumulate a certain grade of tension such that an event, although small, can trigger a sudden and large (catastrophic) change. Referring to behaviour, the past history of the patient can be the basis for a sort of motivational tension such that a trigger, even occasional, can lead to change.

This alternative model is much more appealing for chest physicians, not only because it seems to fit better with the observed situations but also because it maximises their role in smoking cessation; if an occasional event can give a patient the decisive boost, then the consultation or hospitalisation might be that event.

Conversely, the decision to start an attempt to quit smoking can be delayed or hindered by fear of failure, which can be crippling if some (or many) unsuccessful attempts have been made in the past. Thus, in discussing how the doctor can push the patient, it is necessary to consider how the patient will use the boost received. For this consideration, the concept of self-efficacy, elaborated by BANDURA [12], can be useful. According to this concept, how people behave can be predicted by the beliefs they hold about their capabilities; self-esteem and, above all, self-efficacy perception can lead the physician to forecast what their patients will do with the knowledge and skills that they have. This kind of approach leads the doctor to bypass simple observation of their patient’s motivation to consider the reasons behind it, so creating the conditions for an active intervention rather than passive observation.

Self-efficacy is used widely in medicine in order to understand and modify health behaviour, for instance in considering physical activity in older people [13] or predicting the level of physical activity in youngsters [14]. Self-efficacy can also be increased to change addictive behaviour [15], but, to the chest physician, it is important to learn to recognise this characteristic in their smokers in order to make the best use of the relationship started with the consultation for a chest disease. Indeed, some hints can be obtained from the simple history of the patient as it is routinely collected for clinical purposes.

In practice, the suggestion to the chest physician is to disregard the transtheoretical model of the stages of change and base their own intervention on usual medical practice (every disease is to be treated) and on the two theories, catastrophe theory and self-efficacy theory.
From this perspective, what is the best approach? How far can a physician go in pushing their nonmotivated patient to a quit attempt? First of all, the limits of a physician’s intervention should be known. If they decide to wait for a better disposition of the patient, the risk (or effect) is to waste precious time and give the patient the idea that smoking is, after all, not so important to the doctor. If they decide to intervene at all costs, the risk is to elicit a totally negative attitude from the patient.

As pointed out in another chapter of the present Monograph, the problem is that studies are lacking on smoking cessation among respiratory patients, and most of the scientific literature on smoking cessation comes from the preventive experience, in which healthy smokers who want to quit are assisted.

From these studies, it is known that the probabilities that an attempt will be carried out and will be successful are higher the higher the motivation to quit is (but, as seen above, some authors are questioning this). Failure is frustrating for either patients or physicians, and, if an attempt fails, years will pass before another attempt is started. From less-recent studies, it is known that an attempt was made at a mean of every 3.5 yrs in the USA [16]. It is possible that, as time goes by and attitudes towards smoking change, the number of quit attempts each smoker puts into practice will also increase. In 2005, for instance, an attempt was reported at a mean of every year in the UK [17]. Even if, as is probably the case, every country requires its own data, it is possible to have as a working hypothesis that an attempt is made spontaneously once a year.

A healthy smoker loses 3 months of life expectancy for every year that they continue smoking, and so \( \geq 1 \) yr of delay means much in terms of disease and suffering. However, with every puff of smoking, a respiratory patient loses not only years of life expectancy but also breath and quality of life.

Conversely, there are also risks in forcing a patient into a quit attempt not supported by motivation. The risks are: 1) the direction of the physician is not followed, thus generating senses of guilt and a fall in self-esteem or disruption of the patient–doctor relationship; or 2) the direction is complied with and the quit attempt is started and failed, thus generating further frustration, and a greater fall in self-esteem and self-efficacy. Therefore, an accurate balance is necessary in order to weigh up the pros and cons of a directive approach, and the risks of drop-outs and even distrust towards the physician should always be borne in mind.

That a patient cannot be obliged to undergo a medical treatment is obvious; however, a chest physician never gives up (or does not start) a treatment (i.e. drugs for tuberculosis or surgical intervention for lung cancer) simply because their patient is initially unwilling to comply with medical advice. Instead, further interviews are carried out, to listen to the patient’s beliefs and to convince them.

The approach to the smoker respiratory patient has surely been hampered by the fact that smoking is perceived neither by the patient nor by the majority of doctors as representing so great a danger as tuberculosis or cancer. However, it can be facilitated by the fact that an illness, especially if an acute respiratory one (or an acute exacerbation of a chronic respiratory condition), can be the best push to quit, since the patient usually decides to, or is obliged to, stop, or significantly reduce, their smoking due to their respiratory condition.

Therefore, before dropping this therapeutic option, every attempt should be made to discuss with the patient the reasons in favour of the physician’s suggestions, the patient’s fears and opinions, and the outcomes which can be expected from the intervention, bearing in mind that, difficult as it can be, treating respiratory patients for cessation is not impossible.

In considering the interview with a respiratory patient who is a smoker, the most important point for the physician to remember is that the patient probably feels depressed and guilty for their situation. The patient knows that they ought to stop but
their smoking is absolutely necessary to them. They have certainly already been told to quit lots of times, and, since they have not succeeded, are experiencing low self-esteem and very low confidence.

The physician, when facing these feelings, usually reacts by reinforcing their advice to stop, by emphasising the reasons why quitting is advisable; however, in this way, which is just a repetition of a long-lasting story, the patient can react negatively. On the contrary, the physician should understand the feelings of the patient and let them realise that the physician’s aim is to help rather than to judge.

At the same time, if the patient has been told to quit, they have surely never been treated for smoking cessation with behavioural and/or pharmacological treatment; they have usually tried on their own. Smoking cessation, however prescribed, is to be delivered as part of the general treatment of the respiratory patient [18]. From this perspective, the best approach, in such cases, seems to be not to use the stage-of-change model to decide whether or not to start therapy, but rather as a prognostic tool, similarly to what can be done in asthma, in which certain types of patient (young and careless, for instance) have a poor prognosis as regards compliance to therapy and completely successful disease control.

The operational suggestion, detailed more in another chapter of the present Monograph, is to treat the patient with harm (or risk) reduction. This means that, if the patient does not want to start an immediate attempt, the doctor can negotiate a reduction in the number of cigarettes smoked per day (usually proposed by the patient themself), with the final goal of cessation, or, if impossible, lifelong sustained reduction.

In summary, the chest physician has to approach the respiratory patient suffering from smoking no differently than a patient with any other disease, i.e. obtaining diagnosis and staging, prescribing evidence-based treatments and monitoring the results, doing everything in a sensible way, which takes into account the personality and past history of the patient. The most important message is that smoking should not be considered as different from any other chronic disease that the physician faces in everyday practice.

References