THE ROLE OF INFORMATION ON PACKAGES IN TOBACCO CONTROL

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The challenges of reducing tobacco use in a society in which its use is widespread should not be underestimated. It requires an integrated, comprehensive approach that adopts a range of strategies[1,2]. This paper considers the role of consumer information on packaging as a strategy to discourage smoking and/or encourage quitting. In it I want to do three things: conceptually position pack information in terms of the roles it might play; briefly review the evidence for it making those contributions; and then sketch out what our optimal package information system might look like.

Left to their own accord, tobacco companies have almost universally failed to provide any warning material in or on packs (or pretty much anywhere else for that matter). The only exceptions we can think of was a cigarette called 'Death' that was briefly sold some years ago, which did have a warning, and the recent move by Philip Morris to introduce warning inserts into packs in some countries. This latter development seems to be part of a new strategy by Philip Morris to appear socially responsible. It should be applauded, but we need constant vigilance, as it may be a thin veneer to cover themselves against future litigation rather than a genuine attempt to serve the public interest.

The task of warning the public has largely been left to health authorities. Authorities have mandated two broad kinds of information: warnings about the harm and information designed to provide levels of certain chemicals or classes of chemicals in the smoke. In some countries, including Australia, contact details to obtain further information (eg a telephone hotline number or website) have also been provided. As far as we know, there has been no formal evaluation of the use of information sources. Informally, it seems to vary with the quality of the service provided and the degree of promotion. There also appears to be a novelty onset effect of a peak in use when a source of information is newly introduced.

Contents information has had some scrutiny. Australian research shows that the introduction of information about tar, nicotine and carbon monoxide (CO) marginally increased smokers' knowledge, however, recall of the levels of these constituents is poor[3]. This poor recall maybe a blessing in disguise as the information on levels of the constituents is misleading if it is taken to be an indicator of likely exposures – which would seem to be the only sensible reason for having it on the pack. The numbers on the pack are based on testing cigarettes using the ISO standard procedure of taking 35ml puffs over two seconds until the cigarette is burned to a predetermined butt length. The Australian numbers are for tar, nicotine and CO. They are reported in bands with the upper limit rounded down, for example, the tar band "not more than 8mg of tar", means between 5.0 and 8.9mg and "not more than 12mg of tar", means between 9.0 and 12.9mg. The main problem with the measures is that most smokers do not puff like the machine; they puff harder, especially for so-called 'light' cigarettes they also occlude ventilation holes in the filter, something the machine does not[4]. International studies[5] have demonstrated that the amount of nicotine smokers take in, as

evidenced by the nicotine metabolite cotinine in their saliva, only bears a very weak relationship with the ISO tar level of the brand they smoke. Tar and other smoke constituent information on packs is currently misleading. It is gratifying that the Australian Government is acting to remove this information.

The main function of government-mandated information has been to provide health warnings. In Australia, there have been three sets of health warnings, with a fourth soon to be introduced. The first, from 1973 to 1987, simply read "Warning – Smoking is a health hazard" and was on the bottom of the front and back in colours chosen by the tobacco companies. The second, from 1987 to 1995, included four rotating warnings. They took up 15% of the front and back and again were placed at the bottom of the pack, using colours chosen by the tobacco companies. Research evaluating these warnings[6] showed that the warnings were often designed to be inconspicuous, a function of both designing the warnings into the pack and their position at the bottom of the pack. The third set of warnings, from 1995 to the present, has six rotating warnings covering 25% of the front and 33% of the back, with black text on a white background, both positioned at the top of the pack. The Australian Government has decided to introduce stronger warnings, which will include graphic pictures from the start of 2006. They will take up 30% of the front and 90% of the back, rather than the 50% of both front and back favoured by health groups. Tobacco companies have lobbied strongly against all previous warning systems[7,8] and have been able to have them watered down and/or delayed. The current debate is no different, although only two of the three main companies appear to be opposed; Philip Morris say they accept them. The companies wanted less of the front taken up by warnings and campaigned successfully for 30% of the front. We conducted some simple research, which showed that when smokers put their pack down, they nearly always (95%) were placed front up. Smokers also have the front towards them when taking out a cigarette and cigarette displays in shops rarely, if ever, have the back of cigarette packs displayed. Clearly the front is more important than the back as a place to have warnings.

The impact of health warnings has been studied in more detail than other aspects of packaging information and there is now enough research evidence to draw some clear conclusions. I want to briefly introduce the conceptual models on which current thinking on warning labels is based and then summarise what we know about what works and with whom.

Pack warnings need to be thought of as only one of a range of strategies for better informing smokers and potential smokers about the health risks associated with smoking. They have a number of strengths, but also considerable limitations. Among their key strengths are that they are potentially available to be seen and read by smokers when they are purchasing, or contemplating purchase and when they are about to smoke a cigarette. These are key points in smoking behaviour. On the other hand, there are limits on what can be provided in the limited space available on packs, limits to the extent to which new information can be added and, governed by the jurisdictional base, limits on the kind of information that can be included.

Because of their proximity to tobacco use, health warnings can potentially play a role in inhibiting impulses by potential new

users to try or persist in trying cigarettes. They can also act as a stimulus to existing smokers, reminding them of reasons why they should quit, including bringing to mind emotional concerns about the harms of use.

The relatively circumscribed warning material on a cigarette pack could play the role of providing information that was complete and which bears no necessary relationships with other information and/or it could be used as a summary of and reminder about more comprehensive messages. Arguably, in a country like Australia, where generic information about the harms of smoking has been around for decades, the prompting role is likely to be paramount. However, the potential to use warnings to inform about specific conditions that are less understood is still considerable.

To have any impact, health warnings, need to be noticed*. For a long-term smoker, this may not happen frequently. The habit of removing a cigarette from a pack is so over-learned that it often happens without the smoker looking at (or noticing) the pack. Neophyte smokers on the other hand are much more likely to look and being naturally curious about any new product, are much more likely to attend to whatever is there – both warning and tobacco company-controlled information and imagery. The other groups who may be most affected are smokers open to quitting, where it may prompt them towards action and smokers who have recently quit but who are wavering, where sight of the warnings might inoculate them against relapse, if only for a few crucial seconds. A more comprehensive review of mechanisms by which warnings might have effects can be found in a review by Strahan et al[9].

Hill[10] found that knowledge of the second wave of warnings was high shortly after their implementation and CBRC[6] reported that the levels found then were close to maximum levels for recall of the warnings. This suggests that warnings have a strong initial impact. Borland and Hill[3] found that the introduction of the current Australian warnings led to increased understanding, including increased recall of the warnings information. As part of the same evaluation, Borland[11] found that reactions to the old (1987-1995) warnings, in particular forgoing a cigarette after noticing the warning, predicted subsequent cessation activity. That study also showed that the introduction of the strengthened warnings increased this forgoing of cigarettes, suggesting that the new warnings may have led to increased quitting activity.

This study was the first longitudinal study to show behavioural effects of health warnings on tobacco products. More recently Hammond et al[12] studied the introduction of large graphic warnings in Canada and found similar results to those of Borland[11], but extended them to show that the effects on subsequent behaviour applied to the graphic warnings. Smokers who noticed and/or reacted to the warnings (then in place for several months) were more likely to have engaged in quitting activity three months later. Fong et al[13], as part of the International Tobacco Control Policy Evaluation Survey, has extended this further to demonstrate similar effects for warnings in four countries (USA, Canada, Australia and UK) where the size and prominence of warnings varies greatly. Fong et al[13] also found marked increases in awareness of labels in the UK following a shift from 15% at the bottom in industry chosen colours to 33% black on white. They also found that while the warnings increased in salience, levels of them leading

to thoughts of quitting were still below levels for the larger graphic Canadian warnings.

The other important findings are that there appear to be no major adverse consequences[3,14] and there is some evidence for warnings losing some, but not all, of their impact over time. For example, Trotter[15] found a decline of reporting butting out cigarettes prematurely two years after the levels reported by Borland[11], albeit in a differently constituted sample. There is also evidence for positive effects on adolescents. Fong[16] has shown that the Canadian warnings are noticed more than the weak US ones by all adolescents and that the stronger warnings significantly increased adolescent smokers' intentions to quit as compared to the controls.

There is also a large amount of unpublished work. In sum, it indicates that the larger and more prominent the warnings the better and that graphic warnings almost certainly add extra benefit, but this may need to be qualified as graphic pictures that are not direct displays of damage may be relatively ineffective. Warnings do increase smokers' thoughts about quitting, they generate some immediate reactions, like forgoing a cigarette or prematurely butting one out and these things are associated with increased subsequent cessation. They also appear to play a positive role in helping recent quitters to stay quit and may inhibit uptake, but this last proposition remains poorly supported by data. All of these effects are modest, but as the warnings are of minimal cost to health authorities, they almost certainly represent cost-effective strategies for reducing tobacco use, as well as fulfilling important requirements to ensure consumers are well informed.

While warnings have positive effects, there are good theoretical grounds for believing that they could be improved even further. They probably lose some of their potency over time, are not timely and are poorly linked to other tobacco control activity. David Hill[17] has been arguing for a more dynamic system. This would require capacity to rapidly change warnings as new knowledge of health risks emerges. It would also be designed so that imagery used in campaigns could be rapidly placed on packs, thus enhancing the capacity of the pack warning to evoke an entire story from a single image. The system should promote the Quitline number and website (planned for the packs) in other media. There could be tie-ins between pack and point of sale warning and consumer information. An ideal system should also have capacity to more quickly provide better contents information if and when suitable measures are developed. Further, the system should be able to be responsive to ongoing research or deficits in smokers' knowledge and understanding and be able to use the pack as a part of attempts to rectify those deficits. Such a system would require dedicated legislation, but anything less is unacceptable for products as addictive and deadly as smoking. We have made considerable progress in improving the information we provide to smokers, but still have a considerable way to go to achieve all that is both practical and necessary.

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*   *This may not be strictly correct. By taking up space that could have been used to stimulate increased smoking, the mere presence of warnings could have an effect. Any such effects are ignored in this analysis.*

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