Title: Plain packaging: Legislative differences in Australia, France, the United Kingdom, New Zealand and Norway, and options for strengthening regulations

Authors: Crawford Moodie¹, Janet Hoek², Janne Scheffels³, Karine Gallopel-Morvan⁴, Kylie Lindorff⁵

Affiliations:
¹ Centre for Tobacco Control Research, Institute for Social Marketing, School of Health Sciences and Sport, University of Stirling, Scotland
² Departments of Public Health and Marketing, University of Otago, Wellington and Dunedin, New Zealand
³ Norwegian Institute of Public Health, Oslo, Norway
⁴ EHESP School of Public Health, Rennes, France
⁵ Cancer Council Victoria, Melbourne, Australia

Corresponding author: Crawford Moodie, Centre for Tobacco Control Research, Institute for Social Marketing, School of Health Sciences and Sport, University of Stirling, Stirlingshire FK9 4LA, Scotland. Email: c.s.moodie@stir.ac.uk, Tel: 0044 (0)1786 466456

ABSTRACT

Introduction By July 2018, five countries (Australia, France, United Kingdom, New Zealand, Norway) had fully implemented plain (standardised) packaging.

Methods Using government documents, we reviewed the key legislative differences between these five countries to identify best practice measures and potential lacuna. We then discuss how governments planning to introduce plain packaging could strengthen their legislation.

Results Differences between countries include the terminology used (either ‘plain’, ‘standardised’, or ‘plain and standardised’), products covered, and transition times (ranging from two to twelve months). Myriad differences exist with respect to the packaging, including the dimensions (explicitly stated for height, width and depth vs minimum dimensions for the health warnings only), structure (straight-edged flip-top packs vs straight, rounded and bevelled-edged flip-top packs and shoulder boxes) and size (minimum number of cigarettes and weight of tobacco vs fixed amounts), and warning content (e.g. inclusion of a stop-smoking web address and/or quitline displayed on warnings on one or both principal display areas). Future options that merit further analysis include banning colour descriptors in brand and variant names, allowing pack inserts promoting cessation, and permitting cigarettes that are designed to be dissuasive.

Conclusions Plain packaging legislation and regulations are divergent. Countries moving towards plain packaging should consider incorporating the strengths of existing policies and review opportunities for extending these. While plain packaging represents a milestone in tobacco control policy, future legislation need not simply reflect the past but could set new benchmarks to maximise the potential benefits of this policy.

INTRODUCTION
In December 2012, Australia became the first country to fully implement plain tobacco packaging, with France (January 2017), the United Kingdom (UK) (May 2017), New Zealand (June 2018), and Norway (July 2018) having followed suit, and Ireland (September 2018) on course to do so this year. To date, the uptake trajectory of plain packaging, six years after it was implemented in Australia, parallels that of pictorial health warnings. Should this trend continue, by 2029 over 100 jurisdictions will have introduced plain packaging. Given a possible domino effect, it would be prudent for countries developing plain packaging regulations to learn from the early adopters of this policy.

This paper outlines the key legislative differences between the first five countries (Australia, France, UK, New Zealand, Norway) to fully implement plain (or standardised) packaging. Using public documents from each country, including statutes, regulations, regulatory impact statements and consultation documents, we consider the terminology used and legislative aims, tobacco products covered, transition period, and the appearance of the pack exterior and interior. With respect to pack appearance, we consider the cellophane, pack dimensions, pack quantity, opening style, edge type, brand variant name, health warnings, internal packaging, and also the cigarettes. We aim to provide policy makers in countries considering or moving towards plain packaging with a clear understanding of what other countries have done in order to help inform their own regulations. We also consider avenues for strengthening future legislation.

**Terminology**

The term ‘plain packaging’ is often misunderstood, given that plain packs have large pictorial warnings on the main display areas and additional text warnings on one or more of the secondary display areas. However, ‘plain’ refers to the removal of all branding from packs, aside from the brand name which, like other elements of the pack, must be standardised – hence it is also referred to as standardised packaging. The interchangeable use of ‘plain’ and ‘standardised’, which we will use throughout, is therefore appropriate, albeit a single term may be more convenient for some regulators. Of the countries examined in this paper, Australia refers to the policy as plain packaging, and the UK, Norway and New Zealand as standardised packaging. However, as we explain, naming the policy standardised (rather than plain) packaging does not necessarily reflect greater standardisation. France is the only country to refer to the policy as ‘plain and standardised’ packaging.

**Aims**

In all five countries standardised packaging aims to: discourage initiation, encourage quitting, help former tobacco users avoid relapse, and reduce exposure to second-hand smoke. Each country provided evidence that standardised packaging would reduce the appeal of tobacco products and tobacco use, increase the salience and effectiveness of the on-pack warnings, and reduce misperceptions created by pack designs about the harms of tobacco use. In the UK and France, standardised packaging is also intended to have a positive effect on smoking-related attitudes, beliefs, intentions and behaviours, and in New Zealand it is intended to reduce the wider social and cultural acceptance and approval of smoking and tobacco products. In all five countries the legislation also aims to give effect to their obligations as Parties to the Framework Convention on Tobacco Control.

**Products covered within legislation**

In Australia and New Zealand plain packaging is required for all tobacco products, whereas in the UK and France the law applies only to cigarettes and rolling tobacco, and not other tobacco products (e.g. cigars, shisha). In Norway standardised packaging is required for
cigarettes, rolling tobacco and also snus, which is not permitted for sale within the other four countries. Snus is included in the Norwegian legislation because of concerns that its omission could increase its appeal to, and popularity among, young people.  

Transition period
The transition (or sell-through) period is the time taken from a policy coming into force to when it becomes mandatory. Whereas the transition period for plain packaging was two months in Australia, it was almost three months (12 weeks) in New Zealand, approximately seven and a half months in France, and twelve months in the UK and Norway. In all five countries, tobacco companies are permitted to use the transition period to sell fully-branded tobacco products, but unlike in Australia, New Zealand, the UK and France, where any packs produced after the start of the transition period were required to come in plain packs, in Norway packs produced after the start of the transition period could be fully-branded.  

The UK and Norway set an extended sell-through period to allow tobacco companies and retailers ‘sufficient’ time to transition from fully-branded to standardised packs. Two studies from the UK show how retailers and tobacco companies exploited this extended sell-through period. First, an observational study used monthly Electronic Point of Sale data from 500 small retailers to monitor the 20 top-selling cigarette and rolling tobacco brand variants. It was found that no product monitored was sold in standardised packs in the first five months of the sell-through period, and it was not until month eleven that more products were sold in standardised packs than in fully-branded packs. Consistent with this finding, no standardised packs appeared on the market in Norway until the ninth month of the sell-through period. By contrast, in Australia, where tobacco companies had only two months to transition to plain packs, they started to appear in shops near the start of the transition period, and in New Zealand standardised packs for some cigarette and rolling tobacco brands were on sale from the first day of the 12 week transition period. Second, a study that tracked pack and product developments before and shortly after standardised packaging was implemented in the UK found that tobacco companies used the first three months of the transition period to continue promoting their products. For example, they introduced limited-edition packs for six different cigarette brands, limited-edition tins for two rolling tobacco brands, and an innovative re-sealable foil for all Marlboro cigarette variants. This would not be possible in Norway because, unlike in the other countries, any modification to the packaging during the transition period, such as a change to the pack design or brand or variant name, would result in the product being regarded as ‘new’ and thus required to appear in standardised packaging from the time of that change.  

Pack dimensions
With respect to pack dimensions (height, width and depth), Australia and New Zealand specify minimum and maximum sizes. For instance, New Zealand legislation states that a pack of cigarettes must be rectangular in shape, no less than 85 mm and no more than 98 mm high, no less than 55 mm and no more than 72 mm wide, and no less than 20 mm and no more than 30 mm deep. The UK and France instead set a minimum size for the health warnings, based upon the Tobacco Products Directive (TPD), which all countries within the European Union were required to incorporate into their national legislation; the UK did so with the ‘Tobacco and Related Products Regulations’ while France did so via ‘Ordonnance n° 2016-623 du 19 mai 2016 portant transposition de la directive 2014/40/UE sur la fabrication, la présentation et la vente des produits du tabac et des produits connexes’. In the UK and France, the pictorial warnings on the main display areas of cigarette packs must be no less than 44mm high and 52mm wide. In addition, two text warnings must cover at
least 50% of the secondary display areas and be at least 20mm wide. Norway is not within the EU but part of the European Free Trade Association (EFTA) countries in the European Economic Area which submit to EU regulations. Norway will also incorporate the TPD into their national legislation when it is fully implemented in the EFTA countries in the European Economic Area, which will likely be in 2019.

Slim packs for various brands in the UK (e.g. Alluvé, Silk Cut, Vogue) and France (e.g. Vogue) appear non-compliant because the width of the secondary surfaces of these packs (12mm) is less than the minimum required (20mm),12 see Figure 1. Yet because the warnings are ‘at least 20mm wide’ when these packs are laid flat, this design may not breach the regulations. However, as the text warnings must cover at least 50% of the secondary display areas, it would be impossible for them to be less than 22mm wide when the pack is laid flat given the minimum size of the pictorial warnings on the pack front (44mm high), in which case there would be no need to specify a minimum width of 20mm. Regulators in the UK and France clearly intended to ban slimmer pack formats as they have long targeted women using appeals of glamour, stylishness, elegance, thinness and independence.18,19 Australia and New Zealand will not have similar problems given their regulations explicitly required the minimum depth of cigarette packs (rather than width of the warning on the side of the pack) to be ‘no less than 20mm’.

**Figure 1:** Slim pack in UK that appears non-compliant with the legislation

---

**Pack structure**

Australia and New Zealand require cigarettes to be sold in straight-edged flip-top packs. The UK and France require cuboid shaped cigarette packs, but permit these to have rounded or bevelled-edges (see Figure 2), and allow flip-top packs or shoulder boxes. While plain packaging aims to reduce the appeal of tobacco products, tobacco industry research has found that rounded and bevelled-edged packs are perceived as stylish, elegant and classy, while smokers find bevelled-edged packs more convenient and aesthetically pleasing than traditional straight-edged packs.20 Studies in Australia and Turkey have also found that straight-edged plain packs were perceived as less appealing and of lower quality than
bevelled-edged plain packs. In Norway, the legislation stipulates cuboid shaped cigarette packs and allows flip-top packs or shoulder boxes. It does not specifically mention edge type; instead all pack surfaces should be ‘flat and even’.23

Figure 2: Bevelled-edged plain pack from the UK

Shoulder boxes, while not a common cigarette pack style in the UK, France and Norway, are nevertheless permitted. While research on shoulder boxes is lacking, tobacco industry journals associate this pack format with luxury.24 Importantly, when shoulder boxes, which have been used for ‘Virginia Slims No 602’ in France, are opened, the pictorial warning on the pack front may not be visible. This undermines one of the core aims of plain packaging, which is to increase warning salience (Figure 3).

Figure 3: Shoulder box from France, with the pictorial warnings not visible when fully opened

Pack size (number of cigarettes, pack weight)
Each country specifies a minimum pack content of 20 cigarettes, though Australia, the UK, France and Norway allow tobacco companies to use larger pack sizes and thus differentiate their products and communicate value for money. For example, in the UK, cigarette packs containing 23 and 24 cigarettes (e.g. Pall Mall Double Capsule XL 23 pack and Rothmans XL 24 pack) have been brought to market post-standardised packaging. New Zealand preempted this strategy by specifying that packs contain either 20 or 25 cigarettes. Requiring a fixed pack size prevents ‘giveaway’ cigarettes, a strategy used in Australia post-plain packaging where, for example, the Horizon brand’s recommended retail price for a 20 stick pack was identical to that of a 21 stick pack.

The UK, France, Norway and New Zealand also specify a minimum weight for rolling tobacco pouches (30 grams). Australia did not specify a lower limit and tobacco companies have responded by introducing packs containing as little as 10 grams. New Zealand, in contrast, allows only 30 gram or 50 gram pouches. Should governments wish to permit only a single pack size (or weight), there is a precedent in Russia. While the Russian government has not committed to plain packaging, although it has been proposed, only packs with 20 cigarettes are permitted. Packs containing fewer than 20 cigarettes are banned on the grounds they are more affordable, while packs containing more than 20 cigarettes are banned as these are considered to offer better value for money.

**Brand and variant name**

All countries specify conditions that the display of brand and variant names on packs must meet; these include the font size, style and typeface, and text colour and allowable characters (alphabetic, numeric or ampersand). Brand and variant names cannot take up more than one line each, must be positioned in the centre of the surface area on which they appear, and may appear only once on permitted surface areas.

No country prohibits the use of colour descriptors within the brand or variant name. In Australia, tobacco companies have increasingly included a colour within the variant name to connote strength, with a similar pattern in the UK. Given plain packaging aims to reduce misperceptions about harm created by pack designs, and as colour descriptors have been found to influence harm perceptions, future legislation could consider banning the use of colour descriptors within brand or variant names. Regulators could incorporate this requirement within the ‘conditions’ that must be met in relation to brand and variant name, e.g. ‘that brand name does not contain a colour descriptor’ and ‘that the variant name does not include a colour descriptor’.

Tobacco companies have also responded to plain packaging by using more evocative names for existing brand variants, e.g. in the UK, variant names for the John Player Special brand were changed from ‘Silver’, ‘Menthol’ and ‘Black’ to ‘Silver Stream’, ‘Green Edge’ and ‘Legendary Black’ respectively. Australia saw the same strategy used with new brand variants such as ‘New York Blend’ and ‘Silver Fine Scent’, while ‘Master Blend Blue’ and ‘Rum & Wine’ emerged in New Zealand and ‘Black Alaska’ in France.

Given brand and variant names present unique appeals that attempt to recreate the connotations formerly communicated through marketing, regulators may wish to consider extending existing regulations. One option would be to disallow variant names, on the grounds that these can foster misperceptions of harm and therefore run counter to the purpose of plain packaging. Another option proposed in Turkey, a country planning to implement plain packaging, would ban the use of brand variant names completely and replace these with numbers - each brand variant on the market at the time of the legislation would be assigned a number, which would be done alphabetically, e.g. Anadolu Gold would be ‘1’, Anadulo Red.
would be ‘2’, etc, with this information communicated to consumers via product lists in-store.22

Cellophane wrapper
While none of the five countries allow price-marks on packaging, tobacco companies in the UK hired an external agency to place price-mark stickers on the cellophane wrapper of millions of plain packs post-production - a practice known as ‘stickering’.35 While UK regulations require that there is nothing attached to the wrapper, with similar provisions in Norway, France, New Zealand and Australia, tobacco companies claim this practice does not breach the regulations as it is not part of the manufacturing process.35 Countries could prevent similar practices by clearly stipulating that tobacco companies are not allowed to include onserts or affix anything to the pack or cellophane wrapper during or post-production, whether directly or via third parties.

The cellophane wrapper of plain packs in each country has a long lasting shine (see Figure 4 for an example from France), achieved by using a specific printing technique.36 While all countries require the cellophane wrapper to be transparent and not coloured, marked, textured or embossed, in Australia and New Zealand the legislation also states that it must not be ‘embellished in any way’. No legislation to date specifically mentions ‘sheen’, and it is not clear whether this attribute is deemed an embellishment.

Figure 4: Sheen on cellophane on rolling tobacco pack in France

Warnings
The same warnings are used on plain packs for cigarettes and rolling tobacco in the UK and France as a result of the TPD, and are to be used in Norway when the TPD is fully implemented. The warnings in the UK and France, and to be used in Norway, are less visually striking than those used in Australia and New Zealand as the headline warning text is neither capitalised nor centred, and does not always occupy the available space; Figure 5 shows differences in the warnings between the UK and Australia. While UK regulations state that ‘A health warning must cover the entire area that is reserved for it’16 it does not specify that ‘the warning statement must cover the whole of the flip-top portion’, as it does in Australia.37

Warnings on standardised packs for cigarettes and rolling tobacco in countries covered by the TPD do however feature cessation resource information (stop-smoking web
address and/or quitline) on both principal display areas, rather than only on the pack reverse, as in Australia and New Zealand. Research has found higher awareness of cessation resource information on warnings in Canada (where this information is displayed on the pack front and reverse) than in Australia and Mexico (where it is displayed only on the pack reverse).³⁸ In terms of what cessation resource information is used on packs, Australia, France and New Zealand require warnings to display a quitline and stop-smoking web address, whereas the UK requires, and Norway will require, only a stop-smoking web address. These requirements contrast with the guidelines for Article 14 of the Framework Convention on Tobacco Control, which recommends the inclusion of a quitline on tobacco packaging.³⁹

**Figure 5:** Plain packs from UK (top) and Australia (bottom)

Display of the Quitline information on Australian packs is superimposed on the warning image, arguably limiting the visual salience of both. New Zealand reformatted this information to increase the visual impact of the Quitline, and also includes a separate affirming message (You *can* quit smoking),⁴⁰ see Figure 6.

**Figure 6:** Warning design in New Zealand
There are differences between the countries in terms of the number of warnings in each set, the number of warning sets, and the rotational period. In Australia, a first set of seven health warnings had to be displayed on packs for the eight months after plain packaging was fully implemented, followed by either the first or second sets of warnings for the subsequent four months, then the second set of seven warnings for the next eight months, the first or second sets of warnings for the subsequent four months, and so on. In New Zealand, there are two sets of seven warnings. After an initial 14 month period the warnings will be rotated every 16 months. The warnings used in the UK and France (and to be used in Norway) are most likely to reduce wear-out as there are three sets of 14 warnings, which are to be rotated every 12 months.

**Internal packaging**

The regulations specify that the internal packaging must be white (Australia, New Zealand) or white or drab brown (UK, France, Norway). As the pack exterior is drab brown to reduce appeal, the pack interior could also be dissuasively coloured. This approach could also apply to the foil lining, which is considered part of the brand experience and a decorative enhancement that can increase appeal, heighten brand identity, and increase purchase intentions.

Pack inserts are not permitted in any of the five countries. In New Zealand, for example, the legislation states that ‘A tobacco package must not contain any inserts’, and in Norway that ‘No insert or additional material may be attached to or included with the packaging of a unit packet or container packet of cigarettes’. While the regulations aim to prevent tobacco companies from including promotional inserts in packs, they may inadvertently impede use of health-promoting inserts, such as those used in Canada since 2012 to provide cessation tips and highlight the benefits of quitting (see Figure 7).

**Figure 7:** Inserts used in Canada since 2012

Countries considering implementing plain packaging could anticipate future use of inserts by including a rider, such as: ‘unless otherwise specified by Government (e.g. to educate consumers about the benefits of quitting or to promote self-efficacy to quit)’. Such a provision merits consideration given that longitudinal research in Canada found that smokers who read the inserts a ‘few times or more’ in the previous month were more likely to have made a quit attempt at the subsequent wave compared to smokers who had not read the inserts. More frequent reading of inserts was also associated with greater self-efficacy to
quit, increased quit attempts, and sustained quitting at follow-up.\textsuperscript{44} Research in the UK and Turkey exploring smokers’ perceptions of the inserts used in Canada found that these were viewed as having the potential to encourage quitting among some smokers, particularly younger people and those wanting to quit.\textsuperscript{22,45}

**Cigarettes**

All five countries specify that cigarettes must have a white or imitation cork filter with white cigarette paper, and that the cigarette paper cannot contain any markings other than the brand variant name (UK, Norway, France) or an alphanumeric code (Australia, New Zealand), with the font size, type and position of the brand variant name or code specified. By mandating the appearance of cigarettes, plain packaging creates a canvas on which a health message could be placed,\textsuperscript{46} see Figure 8. Countries considering introducing plain packaging could include a provision that enabled future on-stick warnings, should they later elect to require these: ‘A cigarette may have health warning text printed on it if subsequently specified by government’. Another option would be to standardise the colour of cigarettes, with research suggesting that green coloured cigarettes have a dissuasive effect.\textsuperscript{37,48}

Only New Zealand specifies cigarette stick dimensions (between 7mm and 9mm in diameter and no longer than 95mm), thus preventing slim cigarettes,\textsuperscript{14} which have been found to increase appeal and be used as an indicator of reduced harm.\textsuperscript{49} Only France banned flavoured cigarettes (including capsule cigarettes),\textsuperscript{6} although flavoured cigarettes will also be banned in the UK and Norway by 2020 as a result of the TPD.

**Figure 8:** Cigarette displaying a health warning

**Conclusion**

Standardised packaging legislation and regulations are divergent. Governments intending to implement standardised packaging should carefully review the key legislative differences we identified and consider specifying: 1) A shorter sell-through period, as in Australia and New Zealand, given that tobacco companies used the extended (12 month) sell-through period granted in the UK and Norway to continue to promote their products, 2) Pack dimensions which prevent the slimmer pack formats found in the UK and France, 3) Fixed pack sizes for cigarettes and weights for rolling tobacco, as in New Zealand, to prevent tobacco companies from using pack size/weight to differentiate their brands or communicate value for money – a single fixed pack size for cigarettes and for rolling tobacco would be most effective, 4) Only straight-edged flip-top packs for cigarettes, as in Australia and New Zealand, which are more consistent with the aims of plain packaging given that rounded and bevelled-edged cigarette packs are intended to increase appeal, and shoulder boxes reduce health warning salience, 5) That the pack interior, including inner foil, be drab brown, 6) That the main warning text is capitalised, centred and occupies all of the available space, as in Australia and New Zealand, to ensure the most effective display of this information, 7) A greater number of warnings in each set, a greater number of warning sets, and frequent rotation, as in the UK, France and Norway, 8) A stop-smoking web address and quitline to feature on both sides of the pack, as in France, and 9) Cigarette dimensions which prevent the slimmer cigarettes found in Australia, the UK, France and Norway.
It may be prescient for governments planning to introduce standardised packaging to also consider opportunities for strengthening their legislation. For example, limiting/eliminating the impact of brand and variant name, as both can appeal to, and mislead, consumers. Based on market developments in Australia and the UK a ban on the use of colour descriptors within brand and variant names would halt existing practices, which potentially mislead consumers about product harm. Requiring pack inserts encouraging smokers to quit, similar to those used in Canada, or foreshadowing their future use, would reflect the health communication literature, which suggests the use of fear-based warnings (as typically required on the pack exterior) alongside messages aimed at building quitting self-efficacy. Finally, standardising cigarette dimensions, and also allowing for on-stick warnings or dissuasively coloured sticks, would help reduce the appeal of cigarettes and further support the aims of standardised packaging.

What this paper adds

► By July 2018, five countries (Australia, France, UK, New Zealand, Norway) had fully implemented plain tobacco packaging. We explored the legislative differences between these countries.

► Non-packaging differences included the terminology used, tobacco products covered and transition times.

► Differences with respect to the packaging included the pack dimensions, structure and size, and display of the health warnings.

► Existing legislation could be strengthened by banning or more strictly controlling variant name, and allowing for health promoting pack inserts and dissuasive cigarettes.

Author contributions CM drafted the article. JH, JS, KGM and KL edited and provided feedback on the article. All authors approved the final draft.
Funding Cancer Research UK funds CM.
Competing interests None declared.
Provenance and peer review Not commissioned; externally peer reviewed.
Acknowledgements We would like to thank Emmanuelle Béguinot, Director of the Comité National Contre le Tabagisme in France (Paris), for her help with this paper.
REFERENCES
3 Code de la santé publique - Article L3511-6-1. Loi n° 2016-41 du 26 janvier 2016 - art. 27 (V) (law n°2016-41 of the 26th January 2016- article 27 (V)); 2016. www.legifrance.gouv.fr/affichCodeArticle.do;jsessionid=8E242FE72C06D9CFB02696FD0B1A063B.plgfr26s_1?cidTexte=LEGITEXT000006072665&idArticle=LEGIARTI000031917996&dateTexte=20180420&categorieLien=cid#LEGIARTI000031917996 (accessed 5 May 2018)
14 New Zealand Government. Smoke-free Environments Regulations 2017, Section 26 Rotation of required messages on tobacco packages containing tobacco products other than cigars; 2017.


Mucan B, Moodie C. Young adult smokers’ perceptions of plain packs, numbered packs and pack inserts in Turkey: A focus group study. Tob Control, forthcoming.


Connolly GN, Alpert HR. Has the tobacco industry evaded the FDA’s ban on ‘Light’cigarette descriptors? Tob Control 2014;23:140-5.
45 Moodie C. Adult smokers’ perceptions of cigarette pack inserts promoting cessation: A focus group study. *Tob Control* 2018;27:72-7.