#### **APPENDIX F**

## Literature Review on the Impact of Plain Packaging on Children

# Janet Chung-Hall University of Waterloo

**November 30, 2018** 

Prepared for the Bill and Melinda Gates Foundation



### Acknowledgements

This report was prepared for the Bill and Melinda Gates Foundation by a team of collaborators at the University of Waterloo: Dr. Janet Chung-Hall (lead author), Lorraine Craig (editing and review), and Dr. Geoffrey T. Fong (editing and review).

#### Literature Review: Impact of Plain Packaging on Children

#### **Summary**

- 1. Tobacco advertising and promotion increases susceptibility to smoking and encourages smoking uptake among young people.
- 2. Tobacco product packaging is a key marketing tool that has become increasingly important as other forms of tobacco advertising, promotion, and sponsorship have been banned.
- 3. Tobacco product packaging is designed to appeal to young people, a target audience that is critical for the survival of the tobacco industry.
- 4. Plain packaging is likely to have the greatest impact on young people, who are not only at risk for smoking initiation but also highly responsive to tobacco product packaging and branding.
- 5. There is less research on the potential impact of plain packaging on youth than adults, with virtually no studies from LMICs, where youth exposure to tobacco marketing is especially high.
- 6. Research studies that use a wide range of methodologies provide strong evidence that plain packaging will reduce the attractiveness, appeal, and positive brand imagery of cigarettes; increase the noticeability of health warnings on cigarette packs; and reduce misperceptions of product strength and relative harm among youth. However, nearly all of these studies have been conducted in high-income countries.
- 7. Consistent with existing pre-implementation studies, available current evidence on the impact of plain packaging in Australia shows that plain packaging reduces the appeal of cigarette packs and brands, increases awareness of new pictorial health warnings, promotes quitting, discourages smoking initiation, and reduces misperceptions of product harm among youth.
- 8. Preliminary evidence suggests that plain packaging has led to a marked decline in youth smoking rates in France.

#### Background

Research has consistently demonstrated that exposure to tobacco advertising and promotion increases adolescents' susceptibility to smoking and likelihood of smoking initiation [1–3]. As a growing number of countries have implemented stronger regulations on tobacco advertising and promotion, the industry has increasingly turned to the use of packaging to market their products, with a strong focus on targeting youth. Product packaging has long been a critical marketing strategy used by the tobacco industry to communicate product characteristics and establish brand values to target groups of consumers [4]. Tobacco industry documents provide clear evidence of the importance of tobacco product packaging design for attracting new smokers — especially young people who place a high value on innovative and distinctive package design, and positive brand imagery [5–10].

Guidelines for the implementation of FCTC Articles 11 and 13 recommend that Parties consider plain packaging for tobacco products in order to eliminate advertising or promotion that make products attractive. Plain or standardized packaging of tobacco products prohibits the use of logos, colors, brand images, and promotional information inside the package or attached to the package or on individual tobacco products (e.g., on a cigarette); requires brand and product names to be displayed in a standard colour and font style; and requires the use of standard shape, size, and materials for packaging. Only the brand name, product and/or manufacturer's

name, contact details, quantity of product, may appear on packaging, in a standard font style and size, along with other government mandated information such as health warnings and tax stamps.

Laws that mandate plain packaging for tobacco products aim to improve public health, and are an essential component of tobacco control strategies to reduce smoking rates by:

- Reducing the appeal of tobacco products to consumers;
- Eliminating the effects of tobacco packaging as a form of advertising and promotion;
- Increasing the noticeability and effectiveness of health warnings; and
- Reducing the ability of the tobacco product packaging to mislead consumers about the harmful effects of using tobacco products.

Plain packaging may be especially important in LMICs, where the lack of strict regulations for tobacco marketing means that young people are likely to be exposed to many different forms of tobacco advertising, promotion, and sponsorship. For example, GYTS data from 20 LMICs show high overall exposure to pro-tobacco advertising in movies (78% to 98%), television (49% to 92%), print media (30% to 90%), and outdoor community events (31% to 79%) among adolescents aged 13 to 15 years [11]. Research in more than 23 countries has found widespread tobacco advertising and promotion in close proximity to primary and secondary schools, with poor enforcement of the few policies that have been put in place to protect children in LMICs, such as Peru, India, Indonesia, Uganda, and Pakistan [12].

Australia was the first country to implement plain packaging in December 2012. As of June 2018, similar legislation has been fully implemented in France, the United Kingdom, and New Zealand; and implemented at the manufacturer level in Norway, Ireland, and Hungary. Legislation for plain packaging has also been adopted in Canada, Georgia, Romania, Slovenia, and Thailand; and is being considered by at least 12 other countries [13]. In addition, the European Union's 2014 Tobacco Products Directive (effective May 2015) states that all 28 member states have the option to implement plain packaging [14].

Plain packaging is likely to have the greatest impact on young people, who are not only at risk for smoking initiation but also highly responsive to tobacco product packaging and branding. A 2013 study asked 33 tobacco control experts to provide their estimate on the likely impact of plain packaging on smoking rates. There was strong consensus among all experts that plain packaging would lead to a decline in smoking prevalence, with an estimated three percentage point decline for children and one percentage point decline for adults, 2 years after its introduction [15]. Systematic literature reviews conducted prior to the implementation of plain packaging in the UK [16] and Ireland [17] concluded that plain packaging is likely to be effective in reducing smoking initiation among youth. However, there is currently little research on the potential impact of plain packaging on youth, with virtually no data from LMICs.

#### Scientific evidence for the effectiveness of plain packaging

Over the last two decades, a growing body of scientific studies has assessed the likely impact that plain packaging would have on the behaviors, attitudes, and perceptions of smokers. Using a wide range of methodologies, including experimental studies, naturalistic studies, survey research, and eye tracking studies, research provides very strong evidence to support the benefits of plain packaging. The most consistent finding is that plain packaging is effective in reducing the attractiveness, appeal, and positive brand imagery of tobacco products; increasing

the noticeability of health warnings; and reducing misperceptions about product harm among both adults and youth [9,16–18]. A 2017 systematic review of 51 studies under the Cochrane Collaboration on the effects of plain packaging on tobacco use uptake, cessation, and reduction also concluded that plain packaging reduces product appeal. Additionally, results showed that plain packaging may decrease smoking prevalence by reducing smoking uptake among non-smokers, and decreasing use among current smokers [19]. A 2018 review of scientific evidence for the effectiveness of plain packaging on intentions to quit smoking, quitting rates, smoking uptake, and attitudes towards smoking concluded that available evidence suggests that plain packaging increases intention to quit, and increases negative attitudes towards smoking and smoking uptake [20].

#### Plain packaging reduces the appeal of tobacco products among young people

There is clear evidence from a number of HICs that plain packaging of cigarettes reduces pack and product appeal among youth. Plain cigarette packs are often perceived by young people as less attractive, of lower quality, and socially undesirable.

- A study of young adult women (aged 18 to 35 years) in Scotland found that plain packs were unappealing because of their color, the undesirable image the pack conveyed, and the negative reactions from others [21].
- Young females (aged 16 to 19 years) in the UK rated plain cigarette packs as the least appealing and worst tasting than three other versions of branded packs [22].
- An online survey of young females (aged 18 to 19 years) in the US found that plain
  cigarette packs were significantly less appealing than female-oriented branded packs.
  For example, ratings on brand appeal decreased from 69% among young females who
  viewed the standard Capri pink pack to 21% among those who viewed the plain Capri
  pack [23].
- In Canada, female smokers and non-smokers (aged 16 to 24 years) significantly preferred to try branded packs than plain packs [24].
- A study conducted in Ireland found that secondary school students (aged 16 to 17 years)
  perceived plain cigarette packs with all brand identifiers removed (including font, color,
  embossing) as less attractive, less healthy, and smoked by less popular people than
  plain packs that retained branded fonts and colors [25].
- A study conducted in Australia found that when cigarette packs were progressively stripped of their color, imagery, and branded fonts, adolescents (aged 14 to 17 years) consistently rated the packs as less appealing, with further reductions in pack appeal when the size of the pictorial health warnings on the most plain pack was increased from 30% to 80%. Adolescents also perceived typical smokers of the pack less favorably, and had more negative expectations of cigarette taste as brand elements were removed from cigarette packs [26].
- A survey in France found that plain cigarette packs were more likely to be rated by young smokers and non-smokers (aged 15 to 25 years) as less appealing than branded cigarette packs [27].
- In the UK, plain flip-top cigarette packs were rated negatively by the majority of young smokers and non-smokers (aged 10 to 17 years) 91% rated these packs as unattractive, 51% as cheap, 87% as uncool, and 88% as a pack they would not like to be seen with [28].

- Plain cigarette packs were significantly more likely to receive negative ratings than branded packs, and less likely to receive a positive appraisal score from non-smoking youth (aged 11 to 16 years) in the UK [29].
- A study in Norway found that adolescents (aged 15 to 22 years) generally associated more positive user characteristics with a branded cigarette pack than a plain version of the pack, especially for females [30].
- A study from Canada showed that the removal of branding on cigarette packs significantly reduced high school students' perceptions of desirable brand images [31].

#### Plain packaging elicits negative feelings about the cigarette pack and smoking in youth

Naturalistic and experimental studies show that young adults are more likely to perceive that cigarettes from branded packs taste better than those from plain packs.

- A study conducted in Scotland found that approximately one-third of young adult smokers (aged 18 to 35 years) reported that their usual brand of cigarettes did not taste as good when they came from plain packs [32].
- Plain packs were consistently rated by young female smokers and non-smokers (aged 18 to 19 years) in the US as worse tasting than branded packs [23].
- A UK study found that smokers (average age ~21 years) who used Australian plain cigarette packs for 24 hours had significantly more negative ratings of their experience of using the pack as well as pack attributes than those who smoked cigarettes from UK branded cigarette packs [33].
- Young female smokers and non-smokers (aged 16 to 24 years) in Canada perceived branded cigarette packs as significantly "better tasting" than plain packs [24].

#### Plain packaging may reduce cigarette cravings among adolescent smokers

 Plain packaging significantly reduced cigarette cravings among adolescent smokers from US, Spain, and France (but had no effect on smokers' thoughts about quitting) [34].

#### Adolescents are more likely to notice health warnings on plain packaging

- A New Zealand study found that adolescents (average age of 13 years) were significantly more likely to recall health warnings on plain cigarette packs than branded packs: 74% for all plain packs vs. 64% for all branded packs; 82% for New Zealand plain packs vs. 79% New Zealand branded packs; and 65% US plain packs vs. 45% US branded packs [35].
- An eye tracking study conducted with adolescents (aged 14 to 19 years) in the UK found that compared to branded packs, plain packs increased the amount of time that experimenters and weekly smokers spent looking at health warnings than branding [36].
- Plain cigarette packs were more likely to be rated by young smokers and non-smokers (aged 15 to 25 years) in France to increase noticing of health warnings than branded cigarette packs [27].

#### Plain packaging enhances the effectiveness of large pictorial warnings among youth

- A UK study found that youth (aged 11 to 17 years) were more likely to perceive plain cigarette packs with large pictorial warnings (40% or 80%) as less attractive, less smooth, have a greater health risk, to be higher in tar, and to have greater health warning impact than plain packs with a text-only warning [7].
- A UK study of youth (aged 11 to 17 years) showed that plain cigarette packs with 80% pictorial warnings were perceived as less attractive, less likely to have a smoother taste, and lower in tar, than plain packs with 40% pictorial warnings. Health warnings on plain packs with 80% pictorial warnings were perceived as having a greater impact than those on plain packs with 40% pictorial warnings [37].
- A survey of smoking and non-smoking Canadian youth (aged 12 to 18 years) found that plain cigarette packs were rated as more effective than branded packs for: communicating health effects of tobacco (52% for plain packs vs. 26% for branded packs with 75% pictorial warnings); and encouraging Canadians to reduce tobacco use (54% for plain packs vs. 22% for branded packs with 75% pictorial warnings) [38].

#### Evidence on the potential impact of plain packaging on youth in LMICs

There are few studies on the potential impact of plain packaging and youth in LMICs. Available evidence suggests that plain packaging will work in much the same way as it does in HICs to reduce pack and product appeal for young people.

- A study of the impact of plain packaging on brand appeal and perceptions of health risks among young women (aged 16 to 26 years) in Brazil found that plain cigarettes packs were rated as significantly less appealing, worse tasting, and less smooth on the throat than branded packs, with further decreases after color and flavor descriptors were removed from plain packs [39].
- A study conducted in Mexico found that adolescent smokers and non-smokers (aged 16 to 18 years) perceived branded cigarette packs as more appealing, and to contain better tasting cigarettes than plain packs, with stronger effects for females than males.
   Adolescents were also more likely to associate positive traits to users of branded packs versus plain packs. There were no differences in adolescents' perceptions of product harm for branded and plain packs [40].
- A study in Thailand found that youth and young adults (aged 15 to 24 years) who had never smoked and were 13 and 4 times more likely to report intention not to smoke after viewing plain cigarette packs, respectively, compared to current smokers [41].

#### Plain packaging is effective: real-world evidence from Australia and France

As of June 2018, legislation for plain packaging has been fully implemented in four countries: Australia (December 2012), France (January 2017), the UK (May 2017), and New Zealand (June 2018). A number of studies have evaluated the post-implementation policy impact in Australia, and there is some initial data from France.

#### Evidence for impact of plain packaging from Australia

Australia was the first country to introduce plain packaging in December 2012. Since then, studies on the impact of plain packaging have demonstrated that the policy has been largely effective in achieving its public health objectives.

Pack appeal decreased among youth after plain packaging

 In the 7 to 12 month period after plain packaging was implemented in Australia, significantly fewer students (aged 12 to 17 years) who had seen a cigarette pack in the previous 6 months agreed that some brands have better looking packs than other brands [42].

Awareness of health effects increased among youth after plain packaging

• There was a significant increase in the proportion of adolescents (aged 12 to 17 years) who agreed that smoking causes bladder cancer (a health effect not covered in previous health warnings on branded cigarette packs), in the 7 to 12 month period after plain packaging came into effect in Australia [43].

Support for plain packaging among young people increased after policy implementation

• In Australia, there was a significant pre- to post-implementation increase (6 months prepolicy vs. 6 months post-policy) in support for plain packaging among adolescents and young adults (aged 12 to 24 years): from 56% to 63% for never smokers; 55% to 72% for experimenters/ex-smokers; and 35% to 55% for current smokers [44].

Plain packaging has encouraged young people to quit smoking and prevented non-smokers from starting to smoke

Six months after plain packaging was implemented in Australia, 32% of adolescent and young adult smokers reported that they thought about quitting as a result of plain packaging; 18% said they smoked less, and 17% said they had tried to quit. Additionally, 15 to 20% of adolescent and young adult non-smokers, ex-smokers and experimenters said that plain packaging made them less likely to smoke in the future [44].

Perceptions of product harm and prestige decreased among young adults after plain packaging

 One year after plain packaging was implemented in Australia, there was an overall reduction in Aboriginal and Torres Strait Islander smokers' and non-smokers' (aged 12 years and older) perceptions that "some cigarette brands are more harmful than others." There was also a significant reduction in the perception that "some cigarette brands are more prestigious than others" among younger smokers and non-smokers (aged 35 years or younger) [45].

Impact of plain packaging on the salience of health warnings for adolescents remains unclear

 There were no changes in reading of, attention to, or thinking and talking about pictorial health warnings among adolescent smokers and non-smokers (aged 12 to 17 years) in the 7 to 12 month period after plain packaging was implemented in Australia [43].

#### Early evidence for the effectiveness of plain packaging in France

In France, plain packaging was implemented at the manufacturer level in May 2016 and at the retail level in January 2017. Initial data suggests that the policy has already been successful in driving down rates of smoking among young people.

Smoking rates markedly declined among youth (aged 17 years) from 2014 (~3 years before plain packaging) to 2017 (~3 months after plain packaging fully implemented): from 68% to 59% among those who experimented with smoking; from 44% to 34% among monthly smokers; and from 32% to 25% among daily smokers [46].

#### Plain packaging for other tobacco products

FCTC Article 11 and 13 guidelines recommend that Parties consider plain packaging for all tobacco products. A few studies conducted in HICs suggest that plain packaging is likely to have the same impact for tobacco products other than manufactured cigarettes.

- Plain roll-your-own cigarette packs were associated with less positive pack and product perceptions, lower brand attachment, and less positive feelings about smoking and using the pack in front of others than branded packs among young adult roll-your-own smokers (aged 18 to 25 years) in France [47].
- A study from the US found that youth (aged 14 to 17 years) and young adults (aged 18 to 25 years) were more likely to report that smokeless tobacco (SLT) plain packs had an effect on their perceptions of product harm and appeal than older adults (aged 26 to 65 years). Specifically, youth and young adults were more likely to select a plain SLT pack as having more dangerous chemicals, being more dangerous to their health, make them consider the health risks associated with use, and less attractive to a smoker than a branded SLT pack [48].

#### References

- DiFranza JR, Wellman RJ, Sargent JD, *et al.* Tobacco promotion and the initiation of tobacco use: assessing the evidence for causality. *Pediatrics* 2006;**117**:e1237–48. doi:10.1542/peds.2005-1817
- 2 Lovato C, Watts A, Stead LF. Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours. *Cochrane Database Syst Rev* 2011;Art. No.: CD003439. doi:10.1002/14651858.CD003439.pub2
- Paynter J, Edwards R. The impact of tobacco promotion at the point of sale: a systematic review. *Nicotine Tob Res* 2009:**11**:25–35. doi:10.1093/ntr/ntn002
- 4 Hammond D. Health warning messages on tobacco products: a review. *Tob Control* 2011;**20**:327–37. doi:10.1136/tc.2010.037630
- Cummings KM, Morley CP, Horan JK, *et al.* Marketing to America's youth: evidence from corporate documents. *Tob Control* 2002;**11 Suppl 1**:l5–17. doi:10.1136/TC.11.SUPPL\_1.l5
- Wakefield M, Morley C, Horan JK, *et al.* The cigarette pack as image: new evidence from tobacco industry documents. *Tob Control* 2002;**11 Suppl 1**:I73–80. doi:10.1136/TC.11.SUPPL 1.I73
- 7 Hammond D, Dockrell M, Arnott D, *et al.* Cigarette pack design and perceptions of risk among UK adults and youth. *Eur J Public Health* 2009;**19**:631–7. doi:10.1093/eurpub/ckp122
- 8 Kotnowski K, Hammond D. The impact of cigarette pack shape, size and opening: evidence from tobacco company documents. *Addiction* 2013;**108**:1658–68. doi:10.1111/add.12183
- 9 Centre for Tobacco Control Research. The packaging of tobacco products. Scotland, UK: 2012. https://www.cancerresearchuk.org/sites/default/files/cancer\_research\_uk-funded\_report\_on\_tobacco\_packaging\_written\_by\_the\_centre\_for\_tobacco\_control\_rese arch.pdf
- Ford A, Moodie C, MacKintosh A, *et al.* How adolescents perceive cigarette packaging and possible benefits of plain packaging. *Educ Health* 2013;**31**:83–8.
- Agaku IT, Adisa AO, Akinyamoju AO, *et al.* A cross-country comparison of the prevalence of exposure to tobacco advertisements among adolescents aged 13-15 years in 20 low and middle income countries. *Tob Induc Dis* 2013;**11**:11. doi:10.1186/1617-9625-11-11
- 12 Campaign for Tobacco-Free Kids. Big tobacco: tiny targets. 2018.http://www.takeapart.org/tiny-targets/
- Campaign for Tobacco-Free Kids. Plain or standardized tobacco packaging: international developments updated May 2018.
  2018.https://www.tobaccofreekids.org/assets/global/pdfs/en/standardized\_packaging\_dev elopments\_en.pdf
- European Parliament and the Council of European Union. Directive 2014/40/EU of the European Parliament and of the Council of 3 April 2014 on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco and related products and repealing

- Directive 2001/37/EC. 2014.https://eur-lex.europa.eu/eli/dir/2014/40/oj
- Pechey R, Spiegelhalter D, Marteau TM. Impact of plain packaging of tobacco products on smoking in adults and children: an elicitation of international experts' estimates. *BMC Public Health* 2013;**13**:18. doi:10.1186/1471-2458-13-18
- 16 Chantler S. Standardised packaging of tobacco. Report of the independent review undertaken by Sir Cyril Chantler. 2014. https://www.kcl.ac.uk/health/10035-TSO-2901853-Chantler-Review-ACCESSIBLE.PDF
- 17 Hammond D. Standardized packaging of tobacco products: evidence review. Prepared on behalf of the Irish Department of Health. 2014. http://health.gov.ie/wp-content/uploads/2014/06/2014-Ireland-Plain-Pack-Main-Report-Final-Report-July-26.pdf
- Quit Victoria. Plain packaging of tobacco products: a review of the evidence. Melbourne: 2011. http://www.cancervic.org.au/downloads/mini\_sites/Plain-facts/TCUCCVEvOverview\_FINALAUG122011.pdf
- McNeill A, Gravely S, Hitchman SC, et al. Tobacco packaging design for reducing tobacco use. Cochrane Database Syst Rev 2017;Art. No.: CD011244. doi:10.1002/14651858.CD011244.pub2
- Lilic N, Stretton M, Prakash M. How effective is the plain packaging of tobacco policy on rates of intention to quit smoking and changing attitudes to smoking? *ANZ J Surg* Published Online First: 5 June 2018. doi:10.1111/ans.14679
- 21 Moodie C, Bauld L, Ford A, *et al.* Young women smokers' response to using plain cigarette packaging: qualitative findings from a naturalistic study. *BMC Public Health* 2014;**14**:812. doi:10.1186/1471-2458-14-812
- Hammond D, Daniel S, White CM. The effect of cigarette branding and plain packaging on female youth in the United Kingdom. *J Adolesc Health* 2013;**52**:151–7. doi:10.1016/j.jadohealth.2012.06.003
- Hammond D, Doxey J, Daniel S, et al. Impact of female-oriented cigarette packaging in the United States. *Nicotine Tob Res* 2011;**13**:579–88. doi:10.1093/ntr/ntr045
- 24 Kotnowski K, Fong GT, Gallopel-Morvan K, *et al.* The impact of cigarette packaging design among young females in Canada: findings from a discrete choice experiment. *Nicotine Tob Res* 2016;**18**:1348–56. doi:10.1093/ntr/ntv114
- Babineau K, Clancy L. Young people's perceptions of tobacco packaging: a comparison of EU Tobacco Products Directive & Ireland's Standardisation of Tobacco Act. *BMJ Open* 2015;**5**:e007352. doi:10.1136/bmjopen-2014-007352
- Germain D, Wakefield MA, Durkin SJ. Adolescents' perceptions of cigarette brand image: does plain packaging make a difference? *J Adolesc Health* 2010;**46**:385–92. doi:10.1016/j.jadohealth.2009.08.009
- Gallopel-Morvan K, Jacques O, Mathias W, et al. Demarketing tobacco products: the influence of plain packs on smokers and non-smokers perceptions and behavioural intentions. J Gest d'économie Médicales 2012;30:322. doi:10.3917/jgem.125.0322
- Moodie C, Ford A, Mackintosh AM, *et al.* Young people's perceptions of cigarette packaging and plain packaging: an online survey. *Nicotine Tob Res* 2012;**14**:98–105. doi:10.1093/ntr/ntr136

- Ford A, Mackintosh AM, Moodie C, *et al.* Cigarette pack design and adolescent smoking susceptibility: a cross-sectional survey. *BMJ Open* 2013;**3**:e003282. doi:10.1136/bmjopen-2013-003282
- Lund I, Scheffels J. Young smokers and non-smokers perceptions of typical users of plain vs. branded cigarette packs: a between-subjects experimental survey. *BMC Public Health* 2013;**13**:1005. doi:10.1186/1471-2458-13-1005
- Madill-Marshall J, Goldberg M, Gorn G, *et al.* Two experiments assessing the visual and semantic images associated with current and plain cigarette packaging. *Adv Consum Res* 1996;**23**:267–8.
- Moodie C, Mackintosh AM, Hastings G, *et al.* Young adult smokers' perceptions of plain packaging: a pilot naturalistic study. *Tob Control* 2011;**20**:367–73. doi:10.1136/tc.2011.042911
- Maynard OM, Leonards U, Attwood AS, *et al.* Effects of first exposure to plain cigarette packaging on smoking behaviour and attitudes: a randomised controlled study. *BMC Public Health* 2015;**15**:240. doi:10.1186/s12889-015-1586-8
- Andrews JC, Netemeyer RG, Burton S, *et al.* Effects of plain package branding and graphic health warnings on adolescent smokers in the USA, Spain and France. *Tob Control* 2016;**25**:e120–6. doi:10.1136/tobaccocontrol-2015-052583
- Beede P, Lawson R. The effect of plain packages on the perception of cigarette health warnings. *Public Health* 1992;**106**:315–22.
- Maynard OM, Munafò MR, Leonards U. Visual attention to health warnings on plain tobacco packaging in adolescent smokers and non-smokers. *Addiction* 2013;**108**:413–9. doi:10.1111/j.1360-0443.2012.04028.x
- Hammond D, White C, Anderson W, *et al.* The perceptions of UK youth of branded and standardized, 'plain' cigarette packaging. *Eur J Public Health* 2014;**24**:537–43. doi:10.1093/eurpub/ckt142
- Environics Research Group. Consumer research on the size of health warning messages quantitative study of Canadian youth (HC-POR-07-46). Prepared for Health Canada. Toronto: 2008.
- White CM, Hammond D, Thrasher JF, *et al.* The potential impact of plain packaging of cigarette products among Brazilian young women: an experimental study. *BMC Public Health* 2012;**12**:737. doi:10.1186/1471-2458-12-737
- Mutti S, Hammond D, Reid JL, *et al.* Perceptions of branded and plain cigarette packaging among Mexican youth. *Health Promot Int* 2016;**32**:650–9. doi:10.1093/heapro/dav117
- 41 Auemaneekul N, Silpasuwan P, Sirichotiratana N, *et al.* The impact of cigarette plain packaging on health warning salience and perceptions. *Asia Pacific J Public Health* 2015;**27**:848–59. doi:10.1177/1010539515602088
- White V, Williams T, Wakefield M. Has the introduction of plain packaging with larger graphic health warnings changed adolescents' perceptions of cigarette packs and brands? *Tob Control* 2015;**24**:ii42–9. doi:10.1136/tobaccocontrol-2014-052084
- White V, Williams T, Faulkner A, et al. Do larger graphic health warnings on standardised

- cigarette packs increase adolescents' cognitive processing of consumer health information and beliefs about smoking-related harms? *Tob Control* 2015;**24**:ii50–7. doi:10.1136/tobaccocontrol-2014-052085
- Dunlop S, Perez D, Dessaix A, *et al.* Australia's plain tobacco packs: anticipated and actual responses among adolescents and young adults 2010-2013. *Tob Control* 2016:**26**:617–26. doi:10.1136/tobaccocontrol-2016-053166
- Maddox R, Durkin S, Lovett R. Plain packaging implementation: perceptions of risk and prestige of cigarette brands among Aboriginal and Torres Strait Islander people. *Aust N Z J Public Health* 2016;**40**:221–5. doi:10.1111/1753-6405.12489
- Observatoire Français des Drogues et des Toxicomanies. Les drogues à 17 ans: analyse de l'enquête ESCAPAD 2017. 2018.
- Gallopel-Morvan K, Moodie C, Eker F, *et al.* Perceptions of plain packaging among young adult roll-your-own smokers in France: a naturalistic approach. *Tob Control* 2015;**24**:e39–44. doi:10.1136/tobaccocontrol-2013-051513
- Adkison SE, Bansal-Travers M, Smith DM, *et al.* Impact of smokeless tobacco packaging on perceptions and beliefs among youth, young adults, and adults in the U.S: findings from an internet-based cross-sectional survey. *Harm Reduct J* 2014;**11**:2. doi:10.1186/1477-7517-11-2