# Feed Safe: a multidisciplinary partnership approach results in a successful mobile application for breastfeeding mothers

Becky White A, Lames White A, Roslyn Giglia B, and Susan Tawia D

#### **Abstract**

**Issue addressed:** Mobile applications are increasingly being used in health promotion initiatives. Although there is evidence that developing these mobile health applications in multidisciplinary teams is good practice, there is a gap in the literature with respect to evaluation of the process of this partnership model and how best to disseminate the application into the community. The aim of this paper is twofold, to describe the partnership model in which the Feed Safe application was developed and to investigate what worked in terms of dissemination.

**Methods:** The process of working in partnership was measured using the VicHealth partnership analysis tool for health promotion. The dissemination strategy and reach of the application was measured using both automated analytics data and estimates of community-initiated promotion.

**Results:** The combined average score from the partnership analysis tool was 138 out of a possible 175. A multipronged dissemination strategy led to good uptake of the application among Australian women.

**Conclusions:** Multidisciplinary partnership models are important in the development of health promotion mobile applications. Recognising and utilising the skills of each partner organisation can help expand the reach of mobile health applications into the Australian population and aid in good uptake of health promotion resources.

**So what?** Developing mobile applications in multidisciplinary partnerships is good practice and can lead to wide community uptake of the health promotion resource.

Key words: dissemination strategies, evaluation methods, information and communication technology, mhealth.

Received 14 September 2015, accepted 4 April 2016, published online 30 May 2016

# Introduction

The use of mobile technology in Australia has increased markedly over the past 10 years.<sup>1</sup> Four out of five Australians now own a smartphone, and around half own a tablet computer;<sup>2</sup> Australians now access the internet more from mobile devices than they do from desktop or laptop computers.<sup>3</sup> Mobile technology offers unique ways to interact with individuals and, as smartphone penetration has grown, health promoters have increasingly sought opportunities to use the technology in promoting health to the wider community.<sup>4</sup>

With over 100,000 health and fitness applications available for download on the two major mobile operating systems, iOS and Android,<sup>5</sup> the choice and range can present a challenge to health

consumers and health professionals alike.<sup>6</sup> However the existence of health and fitness applications does not mean that they are being widely used, are of high quality or that they contain credible, evidence-based information and approaches.

A 2013 review of 55 sexually transmissible infection- and HIV-focused applications found that the applications had largely failed to attract attention from users and the authors urged public health practitioners to work with developers to improve the quality and reach of such applications.<sup>7</sup> Another review of physical activity and nutrition applications which made use of gamification approaches concluded that health promotion practitioners and application developers needed to work together to embed behavioural theory

<sup>&</sup>lt;sup>A</sup>Reach Health Promotion Innovations, PO Box 58, Wanneroo, WA 6946, Australia.

<sup>&</sup>lt;sup>B</sup>Telethon Kids Institute, University of Western Australia, 100 Roberts Road, Subiaco, WA 6008, Australia.

<sup>&</sup>lt;sup>C</sup>Curtin University, GPO Box U1987, Perth, WA 6845, Australia.

<sup>&</sup>lt;sup>D</sup>Australian Breastfeeding Association, 1818–1822 Malvern Road, Malvern East, Vic. 3145, Australia.

<sup>&</sup>lt;sup>E</sup>Corresponding author. Email: becky@rhpi.com.au

into applications in order to increase their potential for behaviour change.<sup>8</sup>

Development of native mobile applications (that is, applications built specifically for a mobile operating system) generally requires more specialised development skills than some other communication technologies, such as websites or SMS interventions. Several researcher-led application development projects have recommended that software developers be engaged early in the process and that development is collaborative. 7,9,10 Working in partnership for the delivery of health promotion initiatives is a well-recognised approach<sup>11,12</sup> and the need to gather multidisciplinary teams has been recommended in wider health communication campaigns, including those utilising the web and social media. 13,14 The importance of designing applications with due consideration to usability and functionality cannot be underestimated. Partnerships must bring together individuals with unique and specialised skills to develop applications that have the best chance of reaching the target group.

With so many health applications available, and such variation in quality, credibility and intent, it can be difficult for the health consumer, and the health professional, to determine what is a good application and what is not. Five key criteria have been identified for evaluating health applications – four objective scales (aesthetics, engagement, functionality and information) and one subjective quality scale.<sup>6,15</sup> Each of these criteria is important and a high rating on one does not necessarily counterbalance a low rating on another. For example, an application may contain highly credible information, and be very attractively designed, but if it has been engineered in such a way that the application exhibits an unacceptably long loading time, users will quickly become disengaged. This particular problem was experienced by researchers who developed a physical activity and nutrition web-based application; they found that the slow operating speed was a barrier to their participants' engagement.<sup>16</sup>

The application development process is a complex network of interwoven considerations, all with long-term ramifications, and many health professionals will not have the technical experience to navigate the options.<sup>17</sup> Indeed, keeping up to date with the progression of technology is something that has been identified as a challenge by public health researchers.<sup>18</sup>

Despite the common call from researchers in the literature for mobile health applications to be developed according to multidisciplinary models, <sup>7,9,10</sup> there is relatively little explanation and evaluation of the models that may be suitable for these kinds of projects. Many health applications described in the literature have been developed for research purposes only; relatively few go beyond an analysis of the development and impact of the application, into explorations of what is effective in terms of disseminating the application into the community and reaching the target group.

This study aimed to describe a partnership formed to develop and promote a health promotion application, and to investigate what worked in terms of dissemination. We hypothesised that working as a multidisciplinary team would lead to good outcomes and reach for the application.

## Methods

## The Feed Safe application

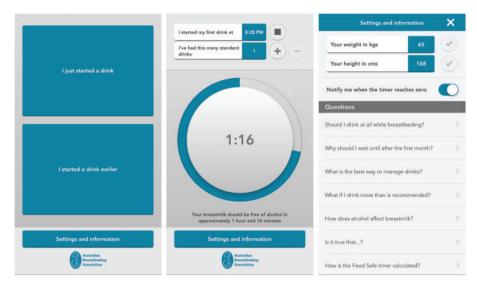
Feed Safe is an application designed to educate breastfeeding women about the impact of alcohol consumption. It is based on the National Health and Medical Research Council's *Guidelines to reduce health risks from drinking alcohol*<sup>19</sup> and takes a harm minimisation approach. It was developed in a collaborative partnership model involving a health promotion software development company, a breastfeeding researcher from Curtin University of Technology, and Australia's peak body for breastfeeding information and support.

The content of the application was based on a 2009 information brochure developed to inform women about alcohol consumption and breastfeeding.<sup>20</sup> One of the core features of the application is a timer showing women the time at which their breastmilk will be free of any alcohol they have consumed. The known alcohol dissipation formula based on total body water and ethanol intake<sup>21</sup> was first applied to breastmilk by Ho *et al.* who developed a nomogram for public use.<sup>22</sup> This was adapted for Australian use by Giglia and Binns.<sup>23</sup>

The development of the Feed Safe application was initiated and led by the health promotion software development company in partnership with Australia's peak body for breastfeeding and the researcher. Feed Safe was initially developed for one mobile platform to examine the effectiveness of, and demand for, the application. The iOS platform was chosen, due to the reduced complexity of development and testing; at the time, iOS development required testing on just four device categories, whereas Android has thousands of device models and configurations to consider. Since launch there has been significant community interest in an Android version of the application. An arrangement to develop this version was secured in early 2016 and the version was released in April 2016. The application was developed, tested and trialled with breastfeeding mothers and released to the public in February 2014 for free download on the Australian App Store (see Fig. 1).

#### **Evaluating the partnership**

The Victorian Partnership analysis tool for health promotion was used to measure the effectiveness of the multidisciplinary partnership. The tool was developed by VicHealth in 2004, revised in 2011 and was designed explicitly for health promotion activities. <sup>12</sup> This particular evaluation tool was chosen due to its specific focus on evaluating health promotion partnerships, the comprehensive approach to development and evaluation and the concise, easy-to-use activities for people working across different disciplines.



**Fig. 1.** Screenshots from the Feed Safe application.

The tool comprises three activities designed to measure the nature of partnerships at different points. Activities one and two are designed to explore the nature of partnerships and determine the need for partnerships in particular projects. Activity three comprises a checklist designed to analyse existing or potential partnerships. The checklist is broken into seven areas:

- 1. Determining the need for the partnership
- 2. Choosing partners
- 3. Making sure partnerships work
- 4. Planning collaborative action
- 5. Implementing collaborative action
- 6. Minimising the barriers to partnerships
- 7. Reflecting on and continuing the partnership.

To evaluate the partnership for the present study, the third activity, the partnership checklist, was used. The checklist was completed online by research partners from each organisation and the results were collated and averaged to give an overall score.

## **Dissemination strategy**

A comprehensive, multipronged, dissemination plan was developed with different strategies targeting both end-users and health professionals. Using the skills and reach of each organisation, individual dissemination activities were led by the most appropriate organisation, in close consultation with other partners. A set of guidelines was developed to help ensure the message was consistent and all partners were recognised.

The strategy targeted end-users through several channels, including:

- Health professionals
- Breastfeeding and other relevant websites
- Social media
- Word-of-mouth

Health professionals were targeted through the dissemination of posters, conferences and targeted articles. A media campaign was also initiated.

#### Measuring application reach

## Application and website usage overall

Reach of the application was measured via analysis of visits to the application website<sup>24</sup> and application download numbers available via iTunes Connect (a portal for management of App Store applications). The application was released in Australia for iOS devices (iPhone, iPad and iPod Touch), but as Google Analytics can provide information on which country people are in while they are viewing the website, this provided a measure of interest from other countries as well as providing an avenue for people to contact the developers about other non-supported mobile platforms (primarily Android).

The analytics data were also examined for acquisition routes, that is, how people came to the website. Google Analytics breaks the sources of website acquisition into four main categories: direct; referral; organic; and social. 'Direct' traffic can include:

- Visitors who directly type the website address into their browser
- Visitors directed via a link in an email or a pdf
- Visitors who had the site bookmarked

'Referral' traffic refers to visitors who have followed a link from another website, 'organic' refers to visitors who have found the website via an unpaid search engine (i.e. Google)<sup>25</sup> and 'social' refers to people who come to the website via social media, including Facebook and Twitter.

#### Application usage patterns

Daily usage data were obtained via the Google Analytics framework included in the Feed Safe application. The daily usage was averaged

over time to give an overall number and patterns of high usage were recorded.

#### Media events linked to increased downloads

A log was maintained to record media mentions of the application, enabling analysis of the impact of different types of media on downloads.

#### Community-initiated promotion

To provide a measure of community-initiated promotion a search for the term 'Feed Safe' was conducted on the public forum of a popular parenting website *BabyCenter*.<sup>26</sup> The search results were restricted to only those referring to the Feed Safe application and posted on the public forum between 20 February 2014 and 20 February 2015. *BabyCenter* is one of the most popular parenting websites in Australia, with a self-reported monthly reach of 40 million mothers worldwide.<sup>27</sup> App Store reviews and ratings are an important metric of user satisfaction, and one which has a bearing on the relative ranking of applications for given search terms. The App Store reviews and ratings for Feed Safe were recorded for the first year.

## **Ethics approval**

This research was approved by the Curtin University Human Research Ethics Committee (approval number: SPH-55–2013).

## **Results**

#### Partnership analysis

The average overall score for the partnership analysis checklist was 139 (range 125–163). According to the checklist, scores of 127–175 indicate that 'a partnership based on genuine collaboration has been established. The challenge is to maintain its impetus and build on the current success.' As shown in Table 1, the strongest section within the checklist was section one: determining the need for the partnership.

#### Dissemination

The media campaign resulted in coverage in the *West Australian* newspaper<sup>28</sup> as well as interviews on five different radio programs (720 Perth, 6PR, ABC Great Southern, Health Professional Radio and Curtin FM). The application was also presented at several health conferences. Over 1000 posters were disseminated to health

Table 1. Results of the partnership analysis tool

Section	Average score	Range
1. Determining the need for the partnership	23.25	(22–25)
2. Choosing partners	20.75	(20-22)
3. Making sure partnerships work	17.75	(14-23)
4. Planning collaborative action	19.25	(16-23)
5. Implementing collaborative action	20.00	(18-23)
6. Minimising the barriers to partnerships	19.50	(16-25)
7. Reflecting on and continuing the partnership	18.50	(15-25)
Total	139	(125–163)

professionals and two articles written by researchers were published in health newsletters.

## Measuring application reach

#### Application and website usage overall

Over a 1-year period commencing with the application's launch, the application was downloaded 28 330 times and the website was visited 40 332 times (see Table 2).

Promotion was targeted at Australian audiences, as Feed Safe can only be downloaded by users with an Australian iTunes account. Most website visits were from within Australia (82%), followed by the US (7%), the UK (3%) and New Zealand (2%). More than 30 emails were received from overseas website visitors requesting that Feed Safe be made available in their country.

Figure 2 shows the acquisition of visitors to the website, with 'direct' traffic accounting for almost three-quarters of all website visitors. Facebook was the major source of all social media referrals, contributing 99.13% of social traffic. However, social traffic made up only 16.1% of all traffic, as shown in Fig. 2.

## Application usage patterns

Use of the Feed Safe application (that is, number of times per day the application was used in total) increased steadily over time. At the end of the first year, Feed Safe had been used an average of 732 times each day, with significant spikes on Christmas day (1340 uses) and New Year's Eve (1732 uses). Approximately 90% of usage occurred on iPhones, with the remainder on iPads and touch screen iPods.

#### Media events linked to increased downloads

Analysis of media mentions of Feed Safe highlighted three main events that led to spikes in downloads (see Table 3). Two of these were Facebook posts from Australia's peak body for breastfeeding

Table 2. Website visits and application downloads by quarter (February 2014–February 2015)

		Website visits	
Quarter	Application downloads		
First quarter	8180	12 768	
Second quarter	6180	7315	
Third quarter	6710	9422	
Fourth quarter	7260	10827	
Total	28 330	40 332	

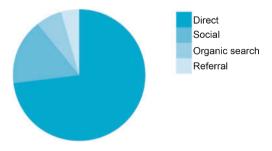


Fig. 2. Acquisition of website visitors.

1477

Event

Download increase (from previous day) (%)

Facebook post on peak body's page announcing launch. Post was shared 443 times
Online Essential Baby article about mother in US who was removed from restaurant while breastfeeding and drinking beer (FeedSafe.net link included in article)<sup>29</sup>

Webpage increase (from previous day) (%)

741

763

763

Table 3. Peaks of downloads linked to specific media events

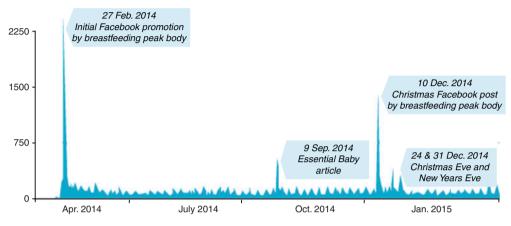


Fig. 3. Peaks in application downloads linked to specific events.

information and support, and the third was an online *Essential Baby* article,<sup>29</sup> mentioning Feed Safe, that was promoted and shared via social media (see Fig. 3). There were smaller peaks at Christmas Eve and New Year's Eve).

Peak body's Christmas Facebook post about alcohol consumption over festive season

## Community-initiated promotion

Researchers identified 83 different *BabyCenter* forum threads either about the Feed Safe application or where Feed Safe was discussed in the comments. These included threads sharing information about Feed Safe, users seeking advice about alcohol consumption while breastfeeding and users sharing information about parenting applications in general.

At the end of the first year Feed Safe had a four-and-a-half star App Store rating, averaged from 28 ratings and 22 user reviews. Over 500 emails were received in the period 20 February 2014–20 February 2015 from women in the community about Feed Safe, with the majority of these (430) requesting that the application be made available for the Android operating system.

#### Discussion

#### Working in partnership

The results of the partnership analysis tool demonstrated overall strength. The highest rating section was 'determining the need for the partnership'; this indicated that there was a shared understanding of the need for partnership working and a commitment to working together. Lower scores were recorded for specific statements in sections three and seven, such as 'the roles, responsibilities and expectations of partners are clearly defined and

understood by all other partners' and 'there are resources available from either internal or external sources to continue the partnership.' The former may suggest that more clarification of the roles and expectations of all partners early on would have been beneficial, and the latter may be due to the partnership being borne of a specific grant-funded project with a limited scope.

Following completion of the grant and expenditure of the funding, the partners have continued to work together on the Feed Safe application including securing an Android version, releasing Feed Safe in other countries and managing media and user correspondence.

## Dissemination and application reach

1213

The findings of this research confirm that the collaborative dissemination strategy was key to the success of the Feed Safe application. Each organisation contributed unique skills and led in different components of the dissemination strategy.

The application download numbers for the first year were steady, and the application consistently ranked in the top 100 health applications on the Australian App Store suggesting that the dissemination strategy was successful.

#### Application usage patterns

Measuring daily application usage is an important indicator of continued relevance and user acceptability. Although the download statistics give a measure of the number of people who have sourced and downloaded the application, this does not reveal whether they have found the application of sufficient value for regular use.

The average of 732 uses per day over 12 months is a strong indicator of ongoing, repeated use of the application.

#### Media events linked to downloads

Although a small number of social media events resulted in download peaks, webpage referrals from social media accounted for only 16% of total website visits. The majority of referrals (84%) were from a permanent link to the application on a relevant, high-traffic page on the website of Australia's peak body for breastfeeding information and support, from popular Internet forums and from direct visits (presumably from word-of-mouth, promotional print material and communication with health professionals).

## Community-initiated promotion

Promotion that is led by the target group, including word-of-mouth promotion, is difficult to plan for and to measure comprehensively. We approached this by analysing the forum of a popular parenting website and identified a consistent sharing of information about Feed Safe in online discussions.

In their review of HIV and sexually transmissible infection applications Muessig *et al.* found that many applications were generally poorly utilised and few had high App Store ratings.<sup>7</sup> Over half of the applications had an average score of 3.7 stars out of 5 and the median number of times the applications were downloaded was 500–1000 (downloads were reported for Google Play (Android) application downloads only; download numbers for iOS are not publicly available). Feed Safe has achieved high ratings and positive reviews which has likely contributed to the reach of the application.

In short, the application reach has benefited from a multipronged approach targeting women via several different channels.

#### Limitations

The Vic Health partnership analysis tool stated that it is usually preferable that the tool be completed with all partners together as a group. This was not feasible due to partners being based in different Australian states. This paper describes the evaluation of the partnership, dissemination of information about the application, and its subsequent reach. Although some user -testing was completed with members of the public (results being prepared for publication), the evaluation of the project did not extend to measuring health outcome data, including impact on alcohol intake or breastfeeding duration. Further study examining these factors would be beneficial.

# Conclusion

This paper describes the partnership formed to develop an applied health promotion resource for breastfeeding women, and examines what worked in terms of dissemination. However we believe the findings are relevant to those working on broader technological health promotion initiatives at a population level.

The multidisciplinary partnership model described here exhibited strength according to the evaluation tool used. Using the skills and

reach of each organisation, the Feed Safe application has had good reach and uptake by Australian women.

Working with multidisciplinary teams to develop and disseminate health promotion applications is important. When working in the mobile health space, waiting too long to fully engage design and development professionals in project planning may lead to unfortunate limiting parameters which may have long-term implications on the outcome of the project. There is sometimes a 'build it and they will come' mentality in application development, but the market is increasingly flooded with health applications. Successfully promoting a product or service to the community requires a comprehensive dissemination strategy encompassing both traditional and social media.

Importantly, as health promotion practitioners compete for funding and visibility in the health application market space, the quality, reach and health impact of these applications becomes a priority. Objective measures such as download numbers, usage statistics and user feedback can provide a strong indication that an application fills a real-world need and has been found to be both useful and usable by users. As partners in health promotion initiatives become more proficient at building strong multidisciplinary teams, they will increasingly adopt best practice in design, development and dissemination of health applications. As a result, greater value will be seen by those partners, by project funders and, most importantly, by end-users themselves.

# Acknowledgements

Development of the Feed Safe application was made possible by funding from Healthway (the Health Promotion Foundation of Western Australia) health promotion project grant (no. 30514). The authors would like to thank everyone who has downloaded the application or told friends or colleagues about it. We are particularly grateful to the passionate volunteers of the Australian Breastfeeding Association.

#### References

- Australian Communications and Media Authority. Smartphones and tablets. Uptake and use in Australia. Canberra: Australian Communications and Media Authority; 2013.
- Deloitte. Media consumer survey 2014. Sydney: Deloitte. 2014. Available from: http://landing.deloitte.com.au/rs/deloitteaus/images/Deloitte\_Media\_Consumer\_ Survey\_2014.pdf?mkt\_tok=3RkMMJWWfF9wsRonua%2FPce%2FhmjTEU5z16egsWK %2B%2Bh4kz2EFye%2BLIHETpodcMTcVnN73YDBceEJhqyQJxPr3CKtEN09dxRhLgAA %3D%3D [Verified 22 April 2016].
- Neilsen. The Australian Online Landscape Review. August 2014. 2014. Available from: http://www.nielsen.com/content/dam/nielsenglobal/au/docs/reports/online-landscape-review/nielsen-landscape-review-august-2014.pdf [Verified 20 March 2015].
- Kratzke C, Cox C. Smartphone technology and apps: rapidly changing health promotion. Int Electron J Health Educ 2012; 15: 72–82.
- Research2guidance. mHealth app developer economics 2014: the state of the art of health App publishing. 2014. Available from: http://www.research2guidance. com/r2g/research2guidance-mHealth-App-Developer-Economics-2014.pdf [Verified 10 April 2015].
- Stoyanov SR, Hides L, Kavanagh DJ, Zelenko O, Tjondronegoro D, Mani M. Mobile app rating scale: a new tool for assessing the quality of health mobile apps. JMIR Mhealth Uhealth 2015; 3(1): e27. doi:10.2196/mhealth.3422

- Muessig KE, Pike EC, LeGrand S, Hightow-Weidman LB. Mobile phone applications for the care and prevention of HIV and other sexually transmitted diseases: a review. J Med Internet Res 2013; 15(1): e1. doi:10.2196/jmir.2301
- Lister C, West JH, Cannon B, Sax T, Brodegard D. Just a fad? Gamification in health and fitness apps. JMIR Serious Games 2014; 2(2): doi:10.2196/games.3413
- Becker S, Miron-Shatz T, Schumacher N, Krocza J, Diamantidis C, Albrecht U. mHealth 2.0: experiences, possibilities, and perspectives. *JMIR Mhealth Uhealth* 2014; 2(2):e24. doi:10.2196/mhealth.3328
- Middelweerd A, Mollee J, van der Wal C, Brug J, te Velde S. Apps to promote physical activity among adults: a review and content analysis. Int J Behav Nutr Phys Act 2014; 11(1): 97. doi:10.1186/s12966-014-0097-9
- Dennis S, Hetherington SA, Borodzicz JA, Hermiz O, Zwar NA. Challenges to establishing successful partnerships in community health promotion programs: local experiences from the national implementation of healthy eating activity and lifestyle (HEAL™) program. Health Promot J Austr 2015; 26(1): 45–51. doi:10.1071/ HE14035
- 12. VicHealth. The partnerships analysis tool. Melbourne: Victorian Health Promotion Foundation; 2011.
- Gold J, Pedrana AE, Stoove MA, Chang S, Howard S, Asselin J, Ilic O, Batrouney C, Hellard ME. Developing health promotion interventions on social networking sites: recommendations from the FaceSpace Project. J Med Internet Res 2012; 14(1): e30. doi:10.2196/jmir.1875
- Leavy JE, Rosenberg M, Barnes R, Bauman A, Bull FC. Would you find thirty online? Website use in a Western Australian physical activity campaign. Health Promot J Austr 2013; 24(2): 118–25. doi:10.1071/HE12916
- Hides L, Kavanagh D, Stoyanov S, Zelenko O, Tjondroegoro D, Mani M. Mobile application rating scale (MARS): a new tool for assessing the quality of health mobile applications. Melbourne: Young and Well Cooperative Research Centre; 2014.
- Hebden L, Cook A, van der Ploeg HP, Allman-Farinelli M. Development of smartphone applications for nutrition and physical activity behavior change. *JMIR Res Protoc* 2012; 1(2): e9. doi:10.2196/resprot.2205
- White J. Going native (or not): five questions to ask mobile application developers. Australas Med J 2013; 6(1): 7–14. doi:10.4066/AMJ.2013.1576

- 18. Carter MC, Burley VJ, Cade JE. Development of 'My Meal Mate' a smartphone intervention for weight loss. *Nutr Bull* 2013; **38**(1): 80–4. doi:10.1111/nbu.12016
- National Health and Medical Research Council. Australian guidelines to reduce health risks from drinking alcohol. Canberra: National Health and Medical Research Council; 2009.
- Giglia R, Australian Breastfeeding Association (ABA) Alcohol and breastfeeding: a guide for mothers. Australian Breastfeeding Association. 2009. Available from: http://www.breastfeeding.asn [Verified 22 April 2016].
- Montgomery MR, Reasor MJ. Retrograde extrapolation of blood alcohol data: an applied approach. J Toxicol Environ Health 1992; 36: 281–92. doi:10.1080/1528739 9209531639
- Ho E, Collantes A, Kapur B, Moretty M, Koren G. Alcohol and breastfeeding: calculation of time to zero level in milk. *Biol Neonate* 2001; 80: 219–22. doi:10.1159/ 000047146
- 23. Giglia R, Binns C. Alcohol and lactation: a systematic review. *Nutr Diet* 2006; **63**: 103–16. doi:10.1111/j.1747-0080.2006.00056.x
- 24. Reach Health Promotion Innovations. Feed Safe. 2016. Available from: http://www.feedsafe.net [Verified 22 April 2016].
- 25. Park C. Back to basics: direct, referral or organic definitions straight from the source 2016 Google Analytics Blog. Google. 2009. Available from: http://analytics.blogspot.com.au/2009/08/back-to-basics-direct-referral-or.html [Verified 2].
- 26. BabyCentre. BabyCentre. 2016. Available from: http://www.babycenter.com.au [Verified 22 April 2016].
- BabyCenter. BabyCenter 2015 Media Kit. 2015. Available from: http://www.babycentersolutions.com/docs/BabyCenter\_2015\_Media\_Kit\_v2.pdf [Verified 9 April 2016].
- 28. O'Shea B. Drink timer. The West Australian 26 February 2014, p. 2.
- Rodie C. Breastfeeding mum kicked out of restaurant for drinking beer. 2014. Available from: http://www.essentialbaby.com.au/baby/breastfeeding/breastfeeding-mum-kicked-out-of-restaurant-for-drinking-beer-20140909-3f4lm.html [Verified 18 August 2015].