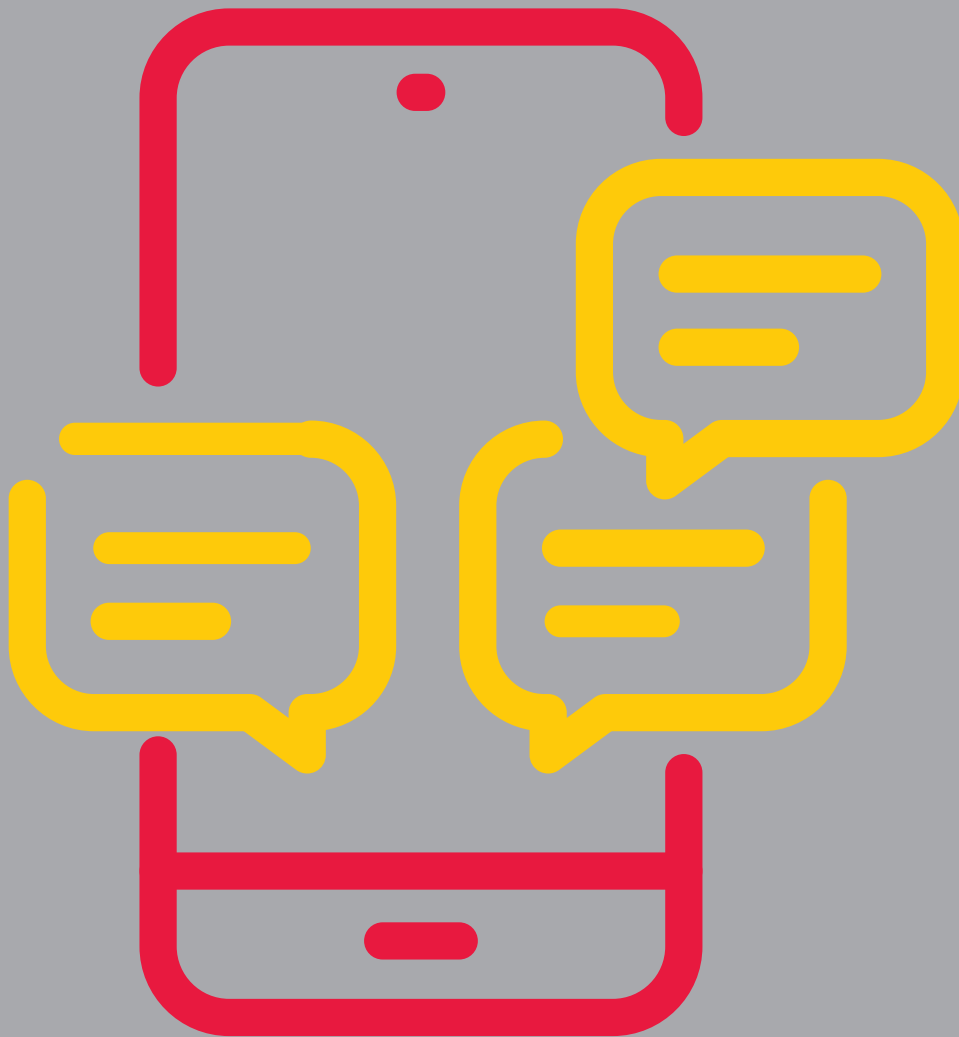


Evidence-based apps.



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Key messages

- An app, or application, is a computer program or software application.
- Apps are increasingly used in health, largely due to the rapid increase in smartphone ownership in Australia.
- Apps offer behaviour change tools to help people monitor and reduce their alcohol consumption, but we don't know if they are effective. There has been little evaluation of the effectiveness of alcohol reduction apps.
- There are millions of apps designed to do different things for different target audiences.
- A number of alcohol harm prevention apps have been reviewed for their behaviour change and functionality rating.
- Apps can be easily accessed; almost every platform (mobile, desktop, web) has a repository where its users can download both free and paid apps.
- Choosing apps can be challenging. With so much choice, make sure your apps are based on evidence.
- Successful alcohol harm prevention campaigns and activities require multiple strategies; apps should not be used in isolation.

1. Overview of apps

1.1 What is an app?

An app, or application, is a computer program or software application.

Applications have been around as long as computers, but the term 'app' is a modern term, associated with the software that runs on a smartphone or other mobile device (e.g. tablet, smart watch). Because smartphones and tablets are a type of computer, everything they do needs a program, or app.¹

Many companies make their software available in app form – making it easier for customers to find and use their services.

1.2 What does an app do?

Like a computer program, an app is designed to perform a particular function. That might be a single task, or a number of related tasks.

Smartphones and tablets come ready loaded with basic apps, like a phone app to make calls, a browser, calendar, email and chat software, but many more are available for free or at low cost.² Many apps make use of the built-in features of the smartphone such as the camera or GPS – which is used for location-based services and maps.

There are millions of apps, designed to do many different things. The most popular are games, news, weather and social networks.

1.3 What devices use apps?

Smartphones, tablets, laptops and desktop computers all use apps. An app usually does the same thing, regardless of the device you're using. All smartphones and tablets, for example, use a browser app for going onto the internet, just like computers do. The way an app looks or behaves on a mobile device, however, can be different to a laptop or desktop computer. This is because smartphone and tablet apps are designed to be used on a small screen, not the large screen of a laptop or desktop computer. Therefore, some of the features might be hidden in a menu, or may not even be included.

While some apps don't need the internet to work, many apps do.³

1. Australian Government, So what is an app? beconnected.esafety.gov.au/topic-library/essentials/all-about-apps/what-is-an-app/so-what-is-an-app#
2. Ibid
3. Ibid

2. The rise of health apps

Apps are increasingly being used as tools to communicate health messages and help people to make informed decisions about their health.

The rise in the uptake of health apps is driven by:

- The rapid uptake of smartphones. 89% of Australians own a smartphone, which is one of the highest rates of ownership globally.⁴ The apps market is considered a major and growing part of the smartphone market.
- A proliferation of health apps. One study in 2010 documented over 7,000 smartphone health apps.⁵
- The popularity and accessibility of apps. Apps are easy and inexpensive to access. Many of us have used one or more of the health and wellbeing apps available in online app stores and use continues to be strong.⁶

2.1. Do apps work?

Health apps, including apps that focus on alcohol, are increasingly popular as behaviour change tools, but we don't know if they are effective.

Most alcohol reduction apps appear to be developed without explicit reference to scientific evidence or theory.⁷ Whilst there have been numerous trials of using text messaging to support alcohol reduction,^{8,9} there has been little evaluation of the effectiveness of alcohol reduction apps.^{10,11}

More systematic evaluations are necessary to ensure that apps are effective.

2.2. Apps to prevent alcohol harms

2.2.1. Potential role

As Australia has one of the highest rates of smartphone ownership globally, alcohol harm prevention smartphone apps offer promise as behaviour change tools, as they are portable, enable reinforcement throughout the day, and can provide context-specific advice.

Alcohol prevention apps may be able to support people who are attempting to reduce their alcohol consumption by communicating health messages, tracking alcohol use and supporting behaviour change. Apps have the potential to monitor alcohol use and craving in the context of people's everyday lives, and deliver personalised advice when people need it most.

Patient self-management and continuing care are needed to combat risky levels of drinking in the community. However, services are rarely provided to patients outside of clinic settings or following brief intervention. As with many health apps, alcohol harm prevention apps may help to narrow the divide between traditional health care and patient needs.

4. Deloitte, *Mobile Consumer Survey 2018* www2.deloitte.com/au/mobile-consumer-survey

5. Kailas A, Chong CC, Watanabe F: *From mobile phones to personal wellness dashboards*. IEEE Pulse 2010, 7/8:57–63.

6. VicHealth, *Healthy Living Apps* vichealth.vic.gov.au/media-and-resources/vichealth-apps

7. Crane, D., Garnett, C., Brown, J., West, R. & Michie, S, 2015. *Behavior Change Techniques in Popular Alcohol Reduction Apps*. J. Med. Internet Res. 17, e118. Available at: nature.com/articles/s41598-018-22420-8

8. Liu, F. et al. *Mobile Phone Intervention and Weight Loss Among Overweight and Obese Adults: A Meta-Analysis of Randomized Controlled Trials*. Am. J. Epidemiol. 181, 337–348 (2015).

9. Lyzwinski, L. N. *A Systematic Review and Meta-Analysis of Mobile Devices and Weight Loss with an Intervention Content Analysis*. Journal of Personalized Medicine 4, 311–385 (2014).

10. Crane, D., Garnett, C., Brown, J., West, R. & Michie, S, 2015. *Behavior Change Techniques in Popular Alcohol Reduction Apps*. J. Med. Internet Res. 17, e118. Available at: nature.com/articles/s41598-018-22420-8

11. Meredith S, Alessi S, Petry N, 2015, *Smartphone Applications to Reduce Alcohol Consumption and Help Patients with Alcohol Use Disorder: a State-of-the-art Review* dovepress.com/smartphone-applications-to-reduce-alcohol-consumption-and-help-patient-peer-reviewed-fulltext-article-AHCT



2.2.2. Target audience

Successful apps are rarely targeted at everyone. They are often designed to address a specific issue for a particular audience and subsequently, different apps focus on different target audiences.

When developing apps, app developers will define the profiles (sometimes called user personas) of their ideal users. These are the people who will get the most value from the app.

Different apps may target audiences based on user profiles as defined by:

- Age
- Socioeconomic bracket
- Gender
- Education level
- Employment status and type
- Health status, e.g. healthy or unhealthy, injured or experiencing an illness
- Interest and area of expertise.¹²

Alcohol harm prevention apps often target people who are trying to reduce their alcohol consumption. The apps can be used by people who drink at levels that place them at risk of injury or disease, as well as people receiving clinical care, and individuals who are not accessing the health care system.

2.2.3. Alcohol harm prevention apps

A number of alcohol harm prevention apps are available, but we often don't know if they are effective.

In 2019, VicHealth undertook a review of over 200 smartphone apps (Table 1) and rated each app according to its:

- Functionality – is the app user-friendly?
- Effect on user behavior – does the app help users to adopt new activities to achieve a healthier lifestyle?

These two ratings were averaged to get an overall star rating out of five. Most apps rated well in terms of functionality but did not achieve a high rating on their potential to help users change their behaviour. The top five apps are listed on the next page, along with the behaviour change and functionality ratings, as well as the overall star rating with the app reviews.

12. Dialogue Consulting 2015, Guidelines for Developing Healthy Living Apps. Melbourne, Australia. Available at: vichealth.vic.gov.au/media-and-resources/app-developers

Table 1. Alcohol harm prevention apps

App	Cost	Age groups	Description	Rating		
				Overall	Behaviour change	Functionality
Daybreak-Drink less by Hello Sunday Morning	Free	18+	Daybreak aims to help people control their drinking habits in order to cut back or quit completely. The app requires people to set goals and allows them to track their progress with weekly check-ins. The app also recommends activities; provides custom notifications; and offers 1-1 chats with health coaches inside the app. The Daybreak program is free and funded for Australian citizens by the Australian Government Department of Health.	3.5/5	3.5/5	3.5/5
Drinks Meter by Global Drug Survey Ltd	Free	18+	Drinks Meter offers anonymous feedback on alcohol use compared to thousands of people's drinking habits. The app can track an individual's drinking in terms of cost; calories and units; including weekly financial spend and units consumed. The app then compares this information to an anonymous database to evaluate the person's drinking habits and provide advice; details about health and legal risks; and other information.	3.5/5	3/5	4/5
Stop Drinking by Michael Schneider	\$4.49	18+	Stop Drinking is a mobile app that encourages people to cut down or stop drinking alcohol. This app features relaxation; hypnotherapy; positive suggestion; and visualisation activities. Other features include newsletters; personalised reminders; and a discrete display name on your device.	2/5	0.5/5	3.5
Sober Today - Quit Alcohol by Tushar Bhagat	Free	18+	Sober Today is a health app that encourages people to quit drinking alcohol. The app features a sobriety calculator that can track the user's sobriety time in days; minutes; hours; and seconds. Other features include unlockable sobriety chips; meditation exercises; and a calculator to determine money saved and units not consumed.	2/5	1.5/5	2/5
Alcohol and Your Brain by 3Dme Pty Ltd	Free	18+	Alcohol and Your Brain is a health education app that explains the physiological effects of alcohol on the developing brain. The app includes a video that introduces you to the structures of the brain and how alcohol affects them. The app also explains Blood Alcohol Concentration (BAC) and contains a multiple choice quiz that you can take after viewing the video.	1/5	0.5/5	2/5

3. Where to get apps

In the context of mobile apps, almost every platform (mobile, desktop, web) has a repository where its users can download both free and paid apps. These are normally accessible through the device itself or a website so that the app can be queued up for download the next time the user is on the device.

The Google Play Store and Amazon's Appstore are two places where Android users can download mobile apps. iPhones, iPod Touch devices, and iPads can get apps through Apple's App Store straight from their devices.

Desktop apps are more widely available from unofficial sources such as Softpedia and FileHippo.com, but some official app repositories include the Mac App Store for macOS apps and the Windows Store for Windows apps.

Web apps load within a web browser and don't need to be downloaded, unless it's something like Chrome Apps that are downloaded to your computer but then run small web-based apps through the <chrome://apps/URL>, such as Video stream.

Google refers to its online services as apps, but the company also sells a specific suite of services known as Google Apps for Work. Google has an application-hosting service called Google App Engine, which is a part of the Google Cloud Platform.¹³

Apps can be installed and removed from a device almost instantly without affecting the device's systems or other apps. Once downloaded, an app is usually represented by a small picture, known as an icon, on the screen of your device. Apps are usually accessed by clicking or tapping on the icon on the screen of your smartphone or other mobile device or desktop computer. This means you don't need to search for a program or key in the address of a website.

13. A beginner's Guide to Apps. Available at: www.lifewire.com/what-are-apps-1616114

4. Top tips for choosing an app

It can be difficult to choose an effective app when faced with so many choices. The most important consideration is to make sure apps are based on evidence. The following tips developed by VicHealth provide guidance on choosing a healthy living app; the tips are also helpful and relevant for choosing an alcohol harm prevention app.

1. Make sure the app is enjoyable to use

You will use an app more often if you find it enjoyable and engaging. It will also make it feel like less of a chore.

2. Find an app that suits your needs

There are many apps available so choose one that suits your needs. For instance, choose an app that's suitable for your age, fitness levels or accessibility needs.

3. Choose an app supported by someone you trust

Not all apps have the same quality of information. Choose an app that is made or supported by an organisation that you trust.

4. Use an app that supports what you already have

Find an app you can incorporate with equipment you already have access to. For example, if you already have a fitness tracker device, exercise equipment or access to gym facilities (such as a swimming pool), pick an app that can be used in conjunction with these. You can always upgrade or change later on.

5. Make sure the app allows you to create and modify your own goals

Setting yourself a goal will help you to build healthy habits and stick to them, such as doing more physical activity next week.

6. Choose an app that lets you track your behaviour

Keeping a record of your behaviour will help you change it. For example, you can choose an app that displays the times you go on walks, on what days and at what intensity. There are many apps that let you track your behaviour.

7. Choose an app that shows you how to do an activity

If you don't know how to perform an activity, watching it being done will help you to get started.

8. Use an app that allows you to share your progress with your friends, whether this is through social media or other users of the app community

Having support from other people will help you achieve your goals.

9. Find an app that has notifications

Let the app remind you of healthy habits, such as when you had planned to go for a walk or eat a piece of fruit instead of a snack. This will help you build habits and stick to your plans.

10. Choose an app that rewards you when you succeed

Getting a reward for doing a specific activity will help reinforce it. This could be as simple as praise and encouragement or your name appearing on a leader board.¹⁴

14. VicHealth, VicHealth's top 10 tips for choosing a healthy living app, vichealth.vic.gov.au/media-and-resources/top-ten-app-tips

5. Developing an app

For information on developing apps, see VicHealth's *Guidelines for Creating Healthy Living Apps*. This guide is for people interested in creating evidence-based and effective apps that improve the health and wellbeing outcomes for people. The guide is for both those new to developing apps with little software development knowledge, and those new to working in health promotion or behaviour change.

VicHealth's *Guidelines for Creating Healthy Living Apps*:
vichealth.vic.gov.au/media-and-resources/app-developers

6. Alcohol harm prevention requires multiple strategies

Successful alcohol harm prevention campaigns and activities have shown that multiple strategies lead to the greatest change. We know that action is more effective when a comprehensive approach is used that includes multiple, mutually reinforcing approaches, and when action is led by the community.

Apps can be promoted as tools to help people monitor and reduce their alcohol consumption, however we often don't know if they have an effect on changing behaviour longer term.

It is also important to note that the reliability of some apps may not be consistent. Software upgrades to apps may mean an app is not supported for the duration of an LDAT's Community Action Plan activity or content may become outdated.

When planning local action to prevent alcohol harm, LDATs should not rely solely on the use of apps. Instead, apps should be used in conjunction with other strategies.

The Alcohol and Drug Foundation has produced a suite of evidence-based toolkits for alcohol harm prevention activity; these may be useful to guide local efforts.

Alcohol and Drug Foundation's suite of toolkits for alcohol harm prevention activity

Strong and connected communities

Mentoring

Peer support

Education in schools

Positive parenting

Alcohol and pregnancy

Community participation in liquor licensing

Supporting teenagers

Alcohol, other drugs and young adults

Pharmaceutical drugs and your community

Healthy workplaces

Download the free toolkits: community.adf.org.au/plan/project-and-activity-toolkits