

What do on-demand delivery services mean for the health of our communities?

With the recent growth of on-demand food and beverage services, we have researched how these services are potentially impacting New Zealand's consumer environment and public health. This summary of our findings includes the consideration of whether our current regulatory processes are still relevant in this new environment.

SOME CONTEXT TO BEGIN

On-demand services connect customers with products like meals and alcohol, with **delivery under two hours, directly to the door**. This means customers can potentially rapidly access a much broader range of items than they might traditionally access within their local neighbourhood.

Although getting takeaways delivered is not new, there are potential changes with on-demand delivery that make it easier and more convenient to do so, that may drive up consumption. This has the potential to impact individual health, public health and health equity.

Some of the **products available for delivery are harmful to health**. Unhealthy food, alcohol and tobacco/nicotine products cause significant health harm in New Zealand and are a preventable cause of loss of healthy-life years.

Government currently regulates access to some harmful products, for example through age restrictions on purchasing alcohol and restricting liquor licenses within a particular area.

At present, **there is no standardised regulation for on-demand services** in New Zealand and they operate in a policy 'grey area'. Changes in the way we access products (on-demand) means the way we regulate access also needs to change.



OVERVIEW OF OUR RESEARCH

Our multi-disciplinary team have been working to understand the public health impacts of on-demand access to unhealthy commodities in New Zealand. The specific aims of this research project were:

- » Understand the provision of on-demand access to food, alcohol and tobacco/nicotine products in New Zealand, considering neighbourhood demographics.
- » Understand how and why consumers (including youth) use on-demand access services.
- » Outline the regulatory issues and mechanisms available to manage supply of unhealthy commodities via on-demand access services.



WHAT WE DID

Our research project design incorporated multiple methods:

Desktop audit of on-demand app and website characteristics
We audited the available services in NZ.



Scoping review of public health impacts

We searched the international literature to understand the existing evidence base on public health impacts of on-demand access.



Mapping of access to on-demand services

We mapped available services and considered what is available at different addresses according to alcohol availability, healthiness of food, deprivation and physical accessibility.



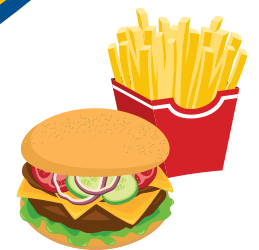
Interviews with health policy experts

We interviewed policy experts about the regulatory challenges associated with on-demand access.



Focus groups with consumers

We talked to a diverse range of people aged 16+ about their experiences of using on-demand services.



WHAT WE FOUND

Products Available

On-demand services are no longer a big city novelty, they are predominantly operating in the most populated areas but have expanded access to many rural areas. We identified 130 services operating across the country in May 2021 delivering food ready to eat, alcohol and nicotine products.

130 services nationwide delivering food/ alcohol/ nicotine products.

Alcoholic Offerings

There is wide access to on-demand alcohol across Auckland, Wellington and Christchurch. Alcohol outlets available nationwide across all on-demand services had a median number of five, though Christchurch had a raised median of nine (range 3-11).

Christchurch had a higher median number of alcohol outlets available on-demand.



Food Offerings

We developed a framework with trained nutritionists to assess the health quality of food offerings.

Over 75% items offered were unhealthy.

Findings confirmed that the services typically offer unhealthy and discretionary foods - over 75% of items offered by three on-demand services were unhealthy.

The proportion of unhealthy foods can be highest in areas of socioeconomic deprivation.

There was some evidence that the healthiness of the food being offered differed by neighbourhood demographics - one on-demand

service showed the proportion of unhealthy foods offered was highest in areas with the greatest socioeconomic deprivation and a higher Māori population.



Why are consumers using these services?

From our focus groups we found that within busy lifestyles, convenience is the main driver of usage. For some people it's a regular thing, others it's less frequent, more of a treat.

"It was just my birthday treat, I was just at home and I decided, ... I'm going to treat myself. I don't want to make any food."

"Most likely when I'm too tired to cook, when I come home late or something like that. So, once or twice a month."

"Sometimes it might be after I've had some drinks. Sometimes there might be a feed waiting for me after I've been in the city drinking and I know I need to eat something when I get home. So, it'll be waiting for me when I get there."

"My kids, it's quite scary seeing just how much they do that [order food] instead of learning to cook."

Our Food Environment

On-demand services are increasing and changing the nature of food and alcohol access in New Zealand.

"... These delivery services increase the reach of food outlets and are disrupting our traditional food environments..."

traditionally [your] food environment is defined as something that is a kilometre away from where you are but these apps are making it, on average, eight to ten kilometres away from themselves. If they don't have a McDonalds near them they can get it delivered from a McDonalds seven kilometres away."

Policy interviews

"... These delivery services increase the reach of food outlets and are disrupting our traditional food environments..."

Among the addresses we sampled in Christchurch, Auckland and Wellington we found that patterns of digital access of food are similar to physical access – addresses that had high physical access also had high digital access. The broader range of food environment may have more of an impact in peri-urban areas, but we have not yet looked into this.



But for alcohol, in some cities such as Auckland and Christchurch, there was no relationship between digital and physical access – suggesting on-demand services widen access to alcohol in areas with poorer physical access.

How are the on-demand services making an impact?

Verifying Age

In the current framework, on-demand alcohol services may increase alcohol-related harm, particularly underage and binge drinking, due to their processes of verifying age and intoxication.



All services in New Zealand delivering age-restricted items had an age verification process at the point of purchase. The point of delivery is the final screening measure, and compliance by delivery drivers has not been validated.

It is more difficult to verify age and intoxication with delivery.

Policy makers have expressed their concern about this: *"The way the Act is structured, it's if a courier or deliverer on behalf of the licensee, were to deliver to a minor, knowingly delivered to a minor, they can be held*

responsible for that. If they knowingly deliver to an intoxicated person, they can be held responsible for that. If they just leave the alcohol and go, there's no accountability for that in the Act."

Policy interviews

International evidence suggested that alcohol is often delivered without an age check at the point of delivery, our interviews suggested a similar result in New Zealand.

"It alarmed me that our rangatahi were able to purchase alcohol and it was dropped off at the doorstep, and so they could be 14, 15 [years old]. So that was, for me, a major concern."

Focus group



Data Use

Most on-demand services employ powerful promotional techniques to increase consumption, such as promotions, memberships and referral rewards.

Focus group participants talked about personalisation, the app coming up with a list of favourite items from their previous purchases, which were listed as suggestions to purchase again. Policy interviews also brought up the notion

of customer specific marketing of certain products, though went further to indicate that companies may be using data in ways that the public are not aware of. For example, when a product is listed as popular the customer believes it's due to other people buying it, whereas it may be that the larger franchises have the money to effectively purchase space on the 'popular' list.

There are concerns about data use and integrity by on-demand services.

"... All these online food delivery apps have a very strong commercial interest with large fast food franchises, so these large fast food franchises actually pay them money to be the most popular items on their apps... it's like lobbying for space; lobbying for real estate on the app... the end user thinks it is popular because a lot of people are buying from it, but a lot of times you will see the popular items are things like KFC or McDonalds because they have the money to pay to get on those popular areas whereas a small business outlet does not have that capacity."



WHERE TO FROM HERE?

Health policy experts highlighted harms, related to increased access and availability of unhealthy commodities, potentially undermining personal efforts to reduce consumption.

On-demand food delivery adds to an existing food environment in New Zealand where unhealthy foods are heavily marketed and readily available.



Local councils need to consider virtual access as well as physical access when developing Local Alcohol Policies.

The current legislative and policy environment requires urgent revision to ensure that these services are appropriately regulated. Local councils need to be

aware of on-demand alcohol services, and to consider virtual access as well as physical access when developing Local Alcohol Policies.

"There's no kind of mechanism at the moment for control over any kind of density or location or anything like that. And that's in part because of the flow on effect from the Food Act, that that defines safety and suitability of food, but doesn't let you define it based on its impact on things like obesity... its impact long term." Policy interviews

Further research into consumer behaviour and the impacts on their health and wellbeing, as well as the broader environmental and labour market impact, needs to be undertaken.



The current legislative and policy environment requires urgent revision to ensure that on-demand services are appropriately regulated.

Solutions to address harms were offered throughout our research, including the urgent need to update regulations for the digital sale and supply

of alcohol and vaping products, and the necessity of cross-sector collaboration to strengthen knowledge of harms and build support for change.



OUR TEAM



Dr Christina McKerchar
BCApSc, MSc, PhD
Senior Lecturer in Māori Health

Research specialty - Public health nutrition and hauora Māori

Christina trained as a nutritionist, and worked for a number of years for Te Hotu Manawa Māori, a national Māori Health provider. Her research has focused broadly on food environments and how this impacts Māori health, especially for children.



Dr Angela Curl
BA (Hons), PhD
Senior Lecturer in Population Health

Research specialty - Transport and health, including access to healthy environments

Angela's research focuses on the relationships between urban environments, transport and health. In this project she is interested in how on-demand apps change the nature of access.



Dr Rose Crossin
BSc (Hons), PhD
Senior Lecturer in Population Health

Research specialty - Alcohol harm and policy

Rose worked in the public sector in research and strategy roles for a number of years. Following her PhD, her research has focused broadly on alcohol and other drugs, associated policy responses, and how to prevent harm.

Dr Susan Bidwell, Dr Dru Norriss, Tessa Pocock, Dr Cassian Duthie, Dr Brylie Apeldoorn, Dr Hannah Miles, Dr Elinor Clark, Dr Gemma Martin, Ryan Gage, Dr Matt Cowie.

For more information and links to full research papers:

<https://www.otago.ac.nz/christchurch/research/populationhealth/otago0237739.html>

Published research papers

Crossin, R; Norriss, D., McKerchar, C., Martin, G., Pocock, T. & Curl, A (under review). Quantifying access to on-demand alcohol in New Zealand.

McKerchar, C., Bidwell, S., Curl, A., Pocock, T., Cowie, M, Miles, H. & Crossin, R (in prep). Promoting health in the digital environment: policy responses to on-demand delivery in New Zealand.

Miles, H., Apeldoorn, B., McKerchar, C., Curl, A., & Crossin, R. (2022). Describing and characterising on-demand delivery of unhealthy commodities in New Zealand. *Australian and New Zealand Journal of Public Health*. 46(4):429-437. <https://doi.org/10.1111/1753-6405.13230>.

Duthie, C., Pocock, T., Curl, A., Clark, E., Norriss, D., Bidwell, S., McKerchar, C., & Crossin, R. (2023). Online on-demand delivery services and exposure to (un)healthy food and alcohol: A scoping review of public health impacts. *SSM-Population Health* 21:101349. <https://doi.org/10.1016/j.ssmph.2023.101349>.

Norriss, D., Crossin, R., Curl, A., Bidwell, S., Clark, E., Pocock, T., Gage, R., & McKerchar, C. (2022). Food outlet access and the healthiness of food available 'on-demand' via meal delivery apps in New Zealand. *Nutrients*, 14(4228). <https://doi.org/10.3390/nu14204228>.