

SHIFT WORK

THE SHIFT WORK CHALLENGE

How might we improve the health and wellbeing of shift workers in South Auckland?

Background

Healthy Families Manukau, Manurewa-Papakura, in partnership with **innovate change**, is working with a range of businesses to identify, test and refine approaches to improving the health and wellbeing of shift workers in South Auckland.

Healthy Families NZ is a large-scale initiative that brings together community leadership in a united effort for better health. It is about thinking bigger, activating leadership at all levels, and driving innovation to create health promoting environments in the places we spend our time; from our schools and workplaces, to sports clubs, marae and other key community settings.

Healthy Families Manukau, Manurewa, Papakura* represents 2 of 10 locations across Aotearoa that are part of this initiative and is delivered by a partnership of Auckland Council - The Southern Initiative, Alliance Community Initiatives Trust, Ngā Mana Whenua o Tāmaki Makaurau and the Ministry of Health.

Taking a systems approach we can better understand and respond to the complex environments that influence and affect health and wellbeing. We are mandated to work alongside local leadership and key stakeholders to activate sustainable community-led solutions that positively disrupt the systems that influence the underlying causes of preventable chronic disease.

innovate change is a social change agency[†]. We use creative and participatory approaches to build social connectedness - enabling youth development, whānau wellbeing and positive ageing. Our partner agency, **Curative**[‡], has also played a critical role as part of the design team for this project.

We've engaged a small number of different workplaces, particularly those with high numbers of Māori and Pacific shift workers, to help us gather insights and design and test solutions that can make a difference. Businesses involved in the Shift Work Challenge include:

- Air New Zealand, Auckland Council, Fonterra, Frucor Suntory NZ, The Warehouse Group



ACKNOWLEDGEMENTS

We would firstly like to acknowledge the shift workers who generously gave their time and valuable perspectives throughout this process. We would also like to acknowledge the leadership of the businesses who have partnered with us to enable this work to happen. Thank you for your organisation's commitment to having a positive impact on the health and lives of shift workers in South Auckland.

* See more: <http://www.healthyfamilies-mmp.org.nz/>

† See more: <http://www.innovatechange.co.nz/>

‡ See more: <http://curative.co.nz/>

About

This document provides an overview of our social innovation process to date. It has been created to support the Business Community of Practice¹ to engage with the ideas generated so far, and to help decide on next steps.

The document is laid out in the following sections:

- An overview of our social innovation process
- Understanding phase: Insights on the health and wellbeing challenges of shift workers in South Auckland
- Designing phase: Ideas generated through the co-design process with shift workers and employers
- Refining phase: Further development and prototyping of ideas
- Next steps
- Critical learnings from the Shift Work Challenge to date

Social innovation is the process of designing, developing and growing new ideas, products, services, strategies and organisations that work to address pressing unmet social needs. We believe in placing people's needs at the heart of all research, design and improvement activities.

Social innovation is not just about reaching an outcome. It's also about developing capability within organisations, communities and individuals to better respond to social challenges in the future.

Co-design is a method and a mindset. It involves gathering different perspectives, insights and experiences from people directly affected by an issue to create solutions to a challenge, problem or opportunity. Co-design is underpinned by the mindset that people are experts in their own lives and should have the opportunity to play an active role in the decisions that shape their lives, as well as understanding the forces that shape their attitudes and behaviours. Involving people in the development of solutions increases the chances of the interventions having deep resonance and impact with the target groups.

¹ Healthy Families Manukau, Manurewa-Papakura Business Community of Practice is a collective of South Auckland employers exploring a collaborative approach to advancing workplace health and wellbeing.

Our Process

This project draws on the first four stages of the **innovate change** innovative action model*.

Completing the first four stages of questioning, understanding, designing and refining has involved:

- Peer-led insight gathering - six shift workers were trained in interviewing techniques and collectively completed around 40 interviews with their shift worker colleagues
- Interviewing nine key informants - including employers, a researcher, an ACC manager, a nurse, a doctor, and a community constable
- Reviewing a sample of relevant information and literature
- Consolidation of all the information into a set of key insights
- A co-design workshop with shift workers and employers to generate ideas for action
- Further development of ideas, and
- Rapid prototyping of ideas to test their desirability, feasibility and viability.



* Find out more here: <http://www.innovatechange.co.nz/how-we-work#our-process>



UNDERSTANDING

Insights on the health and wellbeing impacts of shift work in South Auckland

The first part of our process involved gathering a range of perspectives on the health and wellbeing impacts of shift work. This section outlines the output of that research – a set of key insights that shed light on the lived experience of shift workers in South Auckland, and provides valuable clues for how we might improve shift workers health and wellbeing.

The insights that follow reflect strong themes that emerged throughout our process, however, it is important to note that not all of the shift workers we talked to experienced significant impacts on their health and wellbeing.

Shift work is essential for business continuity, and provides an important opportunity for people to participate in the workforce.

For some people, the hours associated with shift work actually enable them to meet their family commitments - for example, enabling continuous care for a chronically ill family member or young children.



Shift work can increase an individual's susceptibility to chronic illness and disease

Shift workers are more likely to be obese, which is a key risk factor for type 2 diabetes, cardiovascular disease and some cancers. A study over a 15 year period found that shift workers have an increased risk of breast cancer, cardiovascular disease, gastrointestinal disorders, reproductive health problems, and reduced fertility.

Shift work appears to contribute to lifestyle-related risk factors, including a dependency on caffeine, smoking and alcohol use. Night shift workers tend to smoke more and have an increased number of caffeine drinks at night. Night shifts also derails metabolism, making it more difficult to lose weight.

Scheduling of work hours is an important factor. Long hours (>8 hours) and rotating night shifts have the biggest negative impacts on sleep and health behaviours.



“Then you have the chronic diseases - diabetes, high blood pressure or a mental illness and they need to be on medication but most of the medication will only work well if taken at the right time. For example, diabetes - they have to think about when they have to take the medication - and because they need to take it with food they need to work out when this is best given their hours, their roster, and so forth and I worry because they miss the medication because of a routine that is actually hard to determine given the nature of the work. So speed of recovery is impacted, efficiency to get back to work is affected, and it can create other stresses in an already stressed out life”

- Doctor

Businesses are aware of some of the health and wellbeing impacts of shift work on their staff, and have some measures in place to provide support. However these don't appear to be as responsive to shift workers' needs as they could be, and generally don't address issues of chronic disease.

There is strong evidence for taking a coordinated, systematic and comprehensive approach to improving workplace health.

Best practice includes gaining the support of senior management, involving staff at all levels, having dedicated resourcing, and making it an ongoing quality improvement process that is embedded in 'business as usual'.



Family is consistently the highest priority for shift workers, and often a financial driver, however shift work itself can compromise family dynamics.

"Whatever time I've got to spend with my family the better, but shift work is demanding on time, it's hard to plan for family"
- Shift worker

"I always tell him thank you for the hard work. The kids always ask me where their dad is and I tell them and explain why he needs to go work to provide, get their toys. I always text to tell him they asking for him and he says he hopes one day they will understand his sacrifice"
- Spouse of shift worker

"Kids don't want iPads and toys, they just want your time"
- Shift worker

Sleep is often sacrificed in order to meet family and other commitments. Sleep deprivation has an impact on mood and ability to function well at work.

Being grumpy due to tiredness can have a significant impact on the relationship shift workers have with their spouses.

Shift work plays a major role in the disruption of the sleep/wake cycle, and many industry work schedules don't allow for adequate downtime for rest. Downtime is often spent catching up on quality family time rather than resting, so shift workers continue to accumulate sleep deprivation.

Shift workers are 60% more likely to suffer sleep disorders. Sleep restriction suppresses the immune system, increases appetite, and makes the body increasingly resistant to insulin. Fatigue impairment can be equal to or worse than illegal alcohol levels.



Shift workers are aware and concerned that they are not eating well but find it hard to make healthy food choices due to being tired and time poor. The food environment and social norms at work seem to have a big influence on eating patterns.

Having time to prepare healthy food seems to be a significant barrier.

There is a connection between shift work and weight gain. Night shift workers tend to snack more because of limited access to nutritious food. Food choices are dependent on the availability of time, ease and accessibility.



“Watching everyone else with their fatty foods makes me hungry for their foods”
- Shift worker



“After a long day I just don’t have the energy to cook, so anything fast and cheap always seems like the best choice”
- Shift worker

“Very hard to plan and cook, and even to decide what to eat and you end up cooking things that you don’t want to eat”
- Shift worker



“Vending machines with chocolate and fizzy drinks don’t help”
- Shift worker



The nature of shift work has a negative impact on shift workers ability to fully participate in their communities and maintain meaningful social and spiritual connections.

Shift work also decreases opportunities for physical activity and participation in community sports.



Unpredictable work schedules, and overtime in particular, further impacts sleep, eating habits, relationships with family and participation in community.

The opportunity to do overtime and make things easier financially is hard to resist. Most shift workers will seek more shift work to maintain a basic standard of living - the need for financial stability over-rides health and wellbeing.



Shift workers often feel financially, physically and emotionally stretched as they try to balance and meet the expectations of family, community and the workplace. This has a direct impact on their health and wellbeing, and can lead to high levels of stress, depression and anxiety.



"Health and wellbeing means being able to provide for my family at the expense of my health"

- Shift worker

"It varies from asthma, to unmanaged diabetes or high blood pressure conditions - and it tends to be due to the nature of the work. It can also vary due to the nature of the work e.g [business name] because there is a rotational cycle it does impact their sleeping behaviours to the extent that it creates anxiety - so there have been a few cases whereby we have had to prescribe anti-anxiety medication"

- Doctor



"Nothing helps me get by - it's all me. I am the support for my wife and my family"

- Shift worker

"When things are not going good it sometimes causes anxiousness, depression, feeling worthless, so family situation needs to be balanced"

- Shift worker

"A lot of the time when people come in to see these health professionals, pastoral care is a key component of the engagement... You are having to deal with other social issues or emotional support and not the initial reason why they have come to see you"

- Health Professional/Academic



Night shift has a sub-culture where staff feel more connected to each other, but as a team can feel isolated from the wider businesses support and reporting structures. There is also suggestion that injuries are higher during night shift, and they often go unreported.

Working at night has a greater impact than those working the same hours during the day. Night shift workers experience increased stress through a combination of all impacts of shift work:

- Impaired relationships
- Inability to attend family and community activities
- Parenting responsibilities
- Sleep deprivation
- Poor diet



"Sometimes they [night shift] feel isolated and not as supported as the day shift"

- Employer

What shift workers need from efforts to improve health and wellbeing

To frame the idea generation phase, we used the insights to identify some of the core needs that would enable shift workers to better manage their health and wellbeing.

Any of the ideas generated from this project would need to enable:

- Shift workers, their families and their communities having a better understanding of the realities of shift work, and how this impacts their health. Shift workers need to feel well supported at home, at work and in their communities
- More predictable work schedules to allow for greater planning of time and energy
- Better quality time with family
- Time and tactics to ensure that they get enough quality sleep
- Access to good, affordable, healthy food in the workplace and at home, and to feel comfortable making healthy choices
- Financial stability and security
- Employers to understand the realities of shift work and create solutions that respond to the real needs (acknowledging employers also need to ensure new ideas work for business goals)

These 'needs' provided a valuable lens for assessing and further iterating the ideas that were generated through the co-design workshop.



DESIGNING

Ideas generated through a co-design process with shift workers and employers

A co-design workshop was held on Monday 13 November 2017 with 25 individuals from five different businesses in South Auckland. Participants included shift workers, managers and wellbeing managers.

Participants generated ideas in response to the following questions:

- How might we make it easier for shift workers to eat more healthily?
- How might we improve the quality of the time shift workers spend with their families?
- How might we enable shift workers to have better quality sleep?
- How might we better support shift workers to manage their time and energy?
- How might we help businesses better respond to shift workers' health and wellbeing needs?
- How might businesses provide more predictable schedules for shift workers?

A number of strong ideas were generated through the workshop, as outlined in the following pages.

Healthy Eating & Sleeping ‘Seminars’

Fun and interactive sessions for the whole family to attend where practical advice is shared about how to prepare healthy food and get good quality sleep.

IMPORTANT CONSIDERATIONS

- All content would need to be relevant to shift workers, both financially and culturally
- The whole family can participate
- Needs to feel desirable - possibly fronted by a celebrity, or a co-worker who has changed their health and wellbeing habits

G-Hub

A centralised hub (one-stop shop) is established to help make it easier for shift workers to access essential services like health care and child care. This could reduce some of the time pressures that shift workers experience when trying to support their families and manage their own health and wellbeing.

IMPORTANT CONSIDERATIONS

- Needs to be either on-site or in close proximity to workplaces
- Services offered could include; child care centre, medical centre, financial advisor, mental health support, sleep clinics, cooking classes, stop smoking services, and other relevant support services.
- Services offered could be subsidised, but funding could include: business support, government funding, tertiary or healthcare partners, and a user pays model (membership or union fees)
- A business case could be prepared to show businesses and potential partners the financial impact of making an investment

Balancing ACT

A new recruitment practice which creates a three way conversation between shift workers, their families and the employer to establish a working schedule that works best for all three parties.

IMPORTANT CONSIDERATIONS

- This would require a shift in organisational culture, led by HR, to an empathybased approach
- Conversations would need to be carefully designed with a framework in place to ensure that each party is heard, and their needs are met in realistic ways
- Conversations need to feel safe and productive; a performance development focus rather than disciplinary performance management
- A co-worker could also attend these sessions to start a peer-mentoring relationship to help navigate the challenges of shift worktheir health and wellbeing habits

Health, Safety and Wellbeing Protocols

While not yet articulated as an idea, there was a strong indication that shift workers don't feel that their needs are being heard or met. Decisions are largely made through a Health & Safety lens to manage the risk of accidents in the short term, which doesn't consider broader wellbeing impacts, and the very real possibility of long term chronic disease impacting those who do shift work.

This suggests that there may be an opportunity to review and update Health & Safety Protocols to enable them to be more people focused, and include measures to protect and support individual's overall wellbeing. With the new Health and Safety at Work Act 2015 placing greater emphasis on worker participation, there is great opportunity to include shift workers in reviewing the protocols.

Other ideas that weren't explored fully in the workshop, but warrant further discussion with the Business Community of Practice include:

- Creating opportunities for employees to help design shift scheduling to enable better predictability of shift work
- Development of best-practice guidelines for management to offer overtime; including not offering to those who are known to not have had enough rest/down time
- Working with shift workers to review the food available on site, particularly vending machines and cafeterias, and providing healthier options
- Establishing a model for engaging staff in the development and implementation of wellbeing initiatives, and embedding this into 'BAU' processes where possible. It makes sense to leverage existing workplace health programmes, tools and services* rather than workplaces 'reinventing the wheel'
- Creating a platform for sharing learnings and initiatives across different businesses who employ shift workers

Overall, the themes for the ideas generated through the co-design workshop showed that:

- It's important to involve the whole whānau where possible
- There is an appetite for better information, best-practice and practical advice to help manage and reduce the negative impacts of shift work
- Anything new must be simple to access, without creating additional time commitments or cost to shift workers
- New initiatives can't impact the business ability to deliver on time and within budget
- There is a desire for a mutual valuing of both workers and employers needs
- Shift workers' voices and ideas need to be heard by senior management; this starts with truly listening and understanding

* See wellplace.nz for information on workplace wellbeing initiatives



REFINING

Further development and prototyping of ideas

The ideas generated in the workshop session indicated areas for potential exploration, however none of the ideas were yet fully formed. The ideas were assessed following the workshop against the core needs and the themes that emerged, and two were developed further.

Before recommendations are made about what to take forward, it is important that we now iterate and prototype the ideas to test what is most viable, likely to be embraced by businesses and shift workers, and ultimately what will make the biggest impact.

WHAT IS PROTOTYPING?

Prototyping is a rapid and inexpensive way of making an idea, or an aspect of an idea, tangible to test and further develop that idea. The form a prototype takes depends on the idea, and the audience we need to engage with. A prototype could be on paper, within a storyboard or sketch, a model, short video, performance or role play, a game or an experiential mock-up such as a pop-up space made of cardboard and other inexpensive materials.

Testing these prototypes with people who could use or deliver the idea helps us understand whether it could work in practice.

As a starting point, the two following ideas have been developed into prototypes for testing. A number of other promising ideas require further discussion and development with the Business Community of Practice to determine how they may be progressed.

Shift Work Cook Book

Building on the idea of the seminars and the need for good information that the whole family can engage with, a beautiful cook book would be produced, co-created with shift workers to share their best healthy, quick and easy meals. This could be produced with Heart Foundation or another health organisation to validate recipes.

The recipes could:

- showcase content created by shift workers, including their stories and advice about how to manage time, get enough sleep etc
- be designed in collaboration with a celebrity chef, such as Michael Meredith, Cameron Petley or Nadia Lim
- include cost per serving

The recipes could be:

- offered to other employers of shift workers
- gifted to staff (e.g. as a Christmas gift)
- made available for free online
- an annual or bi-annual collaboration between businesses who employ shift workers
- funded by the businesses involved, or partnerships could be explored.

THE PROTOTYPE

In order to test the idea, a profile of a shift worker with an inspiring weight loss story and their healthy recipe was created and inserted into an existing cookbook to give a sense of what it could look like.

This prototype will be tested with shift workers from a couple of different businesses to see if it is worth developing further.

Some of the assumptions we want to test with this prototyping include, that:

- shift workers would find the information valuable
- shift workers and their families need better access to quick, culturally appropriate and cost effective recipes
- shift workers would want to be featured in the cookbook and be seen as a community champion
- businesses see value in providing a platform for shift workers to share this kind of information

Closer to work

This idea grew from the ‘G-hub’ concept from the co-design workshop. It involves creating a framework for businesses to identify and map essential services in their neighbourhood and establish partnerships with each to help their staff access what they need at a closer proximity.

- Services could include; child care centre, medical centre, financial advisor, mental health support, sleep clinics, cooking classes, stop smoking services, and other relevant support services.
- Businesses could also offer transportation to and from these services
- Once businesses have established their partnerships, a map could be published and circulated to staff or made available in staff-rooms to show what services the business can help them access more easily
- Long term, there could be a ‘one stop shop’ solution that multiple business might access, which houses essential services to help shift workers manage their health and wellbeing, and that of their families

THE PROTOTYPE

We are taking a two-step process to prototype this idea. Firstly, a workshop will be held at a workplace with some managers and shift workers. This workshop will explore what services are currently used, what services are nearby, and whether shift

workers would use them if partnerships were formed to make them easier or cheaper to access.

If the workshop is successful, a second prototype could be created, including a:

- questionnaire to help businesses map the essential services nearest to them
- card with a step-by-step process to form a partnership
- map to put up in workplaces identifying key services available to staff nearby

The testing would involve:

- Showing the questionnaire, step-by-step card and map to senior managers, with an interview sheet of questions
- Showing the map to staff, with an interview sheet of questions

If the workshop is successful, a further prototype could be created, including a:

- if essential services were easier to access, shift workers would use them
- making services easier to access will reduce time pressures on shift workers
- workplaces have the time and interest in forming partnerships with services to make shift workers’ lives easier to manage

Next Steps

Two prototypes are currently underway and will provide valuable learning on where to next for the Shift Work Challenge. However, there are a range of other ideas and strategic directions that have been identified through this process. Suggested next steps for consideration include:

- Assessing whether to pursue and create prototypes for the ‘Balancing Act’ and ‘Health, Safety and Wellbeing Protocols’ ideas
- Further discussion and development of the other ideas generated in the co-design workshop, including:
 - Creating opportunities for employees to help design shift scheduling to enable better predictability of shift work
 - Development of best-practice guidelines for management to offer overtime; including not offering to those who are known to not have had enough rest/down time
 - Working with shift workers to review the food available on site, particularly vending machines and cafeterias, and providing healthier options
 - Establishing a model for engaging staff in the development and implementation of wellbeing initiatives, and embedding this into ‘BAU’ processes where possible. It makes sense to leverage existing workplace health programmes, tools and services* rather than workplaces ‘reinventing the wheel’
 - Creating a platform for sharing learnings and initiatives across different businesses who employ shift workers
- Identifying other previous or current work that the Shift Work Challenge can connect to and/or build on.
- Exploring national and system-level opportunities to scale up the ideas and share learnings from the Shift Work Challenge with those who have an interest in improving workplace wellbeing across Aotearoa.

* See [wellplace.nz](https://www.wellplace.nz) for information on workplace wellbeing initiatives

Critical learnings from the Shift Work Challenge

We have learnt a lot through this social innovation process. Some of the key learnings identified through our reflection process include:



We made a decision at the beginning of this project that ethically we didn't want to place additional pressure on shift workers' lives by expecting them to participate in the project in their free time. We asked the businesses involved to release shift workers on paid leave so they could participate, and be back filled where possible. We are really grateful for the positive response to this request.



Mapping the shift work 'system' in South Auckland at the beginning of this project helped us to identify community members and people with system-level insight who might be able to provide a different perspective on the challenge. Getting the perspective of the wider community (e.g. Church Minister, Police Officer, Doctor) proved really valuable.



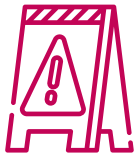
Peer-led insight gathering, where shift workers were trained in interviewing techniques and then interviewed their shift worker colleagues, was a great method for getting access to people we may never have been able to talk to ourselves. The approach also provided a positive learning opportunity for shift workers and helped to generate buy-in.



We learned the importance of being flexible and going to where people are - for example when some of the peer-led insight gatherers couldn't make it to the analysis workshop, we took the workshop to them, at their workplace. Constant communication and relationship building with the organisations involved was crucial.



The innovate change approach to insight development enabled us to incorporate peer-reviewed evidence (where available), while at the same time privileging the voice of shift workers in South Auckland.



Because Healthy Families NZ is focussed on preventing chronic disease, we went into this project particularly interested in how the risk factors of smoking, harmful alcohol use, lack of physical activity and poor diet featured in shift workers lives. While all of these risk factors featured to some extent, shift workers concern about their nutrition choices was by far the strongest theme we encountered.



Recruiting people into a co-design process can be tricky and it always takes longer than expected. To overcome challenges around recruitment, we requested that employers sign a form that outlined the commitment required for their organisation to be involved in the co-design process. This resulted in a 100% attendance rate for our co-design workshop.



Rapid prototyping is different to piloting. The intention of prototyping is to quickly and inexpensively 'test' an idea to see if it works, make changes, and add or remove elements as we learn more. We need to be prepared to respond to the learning generated from our prototyping and not be emotionally attached to ideas.

Innovate change, and their partner agency Curative, have played a key role in process design, mentoring, training and facilitating this process with Healthy Families Manukau, Manurewa-Papakura.

Some of the team's key learnings from this process relevant to the capability building focus include:

- The importance of regular reflection and problem solving throughout the process
- That it is ok (and necessary) to be 'in the grey'^{*}. We need to resist the urge to jump to solutions.
- People are the experts[†]. Starting with understanding the lived experience of shift workers, and keeping this at the centre of our process throughout, has massively increased the likelihood that the solutions we are developing will have an impact.
- The value of learning by doing[‡], not just talking - and being supported and guided by innovate change and Curative throughout the process.

^{*} <https://www.innovatechange.co.nz/news/2015/6/21/being-in-the-grey>

[†] <https://www.innovatechange.co.nz/news/people-are-the-experts>

[‡] <https://www.innovatechange.co.nz/news/2017/3/10/learningbydoing>

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