Produce Prescription for Type 2 Diabetes in Australia

A summary report based on the Translation Advisory Group Stage 1 Workshop

December 2023

produce PRESCRIPTION

The George Institute for Global Health

www.georgeinstitute.org

Table of contents

Acknowledgement of Country

The George Institute for Global Health acknowledges the Gadigal People of the Eora Nation as the Traditional Custodians of the land on which our Australian office is built and this submission is written. We pay our respect to Elders past, present and emerging.

The George Institute for Global Health – global headquarters
ABN 90 085 953 331

Level 18, International Towers 3, 300 Barangaroo Ave, Barangaroo NSW 2000 Australia

T +61 2 8052 4300
info@georgeinstitute.org
www.georgeinstitute.org

Abbreviations

DVA	Department of Veteran Affairs
eMR	Electronic Medical Record
KPI	Key Performance Indicators
LHD	Local Health District
MBS	Medicare Benefits Schedule
MOU	Memorandum of Understanding
NDIS	National Disability Insurance Scheme
NDSS	National Diabetes Services Scheme
NWAU	National Weighted Activity Unit
PBS	Pharmaceutical Benefits Scheme
PHN	Primary Health Network
RACF	Residential Aged Care Facility
TOR	Terms of Reference

Acknowledgements

This work would not be possible without the generous support of funders and research partners: The Ian Potter Foundation, Future Food Systems Cooperative Research Centre, The International Fresh Produce Association (IFPA), The University of New South Wales, Western Sydney University, Deakin University, Harris Farm Markets, One Harvest, Costa Group, Fresh Produce Group, Pinata Farms, Perfection Fresh, Royal Prince Alfred Hospital, Campbelltown Hospital, Diabetes Australia, National Heart Foundation, NSW Ministry of Health, NSW Agency for Clinical Innovation, University of Western Sydney and East Metropolitan Health Service in Western Australia.

We would like to say a particular thank you to the following members of the Produce Prescription project team for their involvement in the planning, facilitation, and execution of the first Translation Advisory Group workshop: Jennifer Madz (Diabetes Australia), Dr Daisy Coyle and Kimberly Glover (The George Institute).

Contributing authors

Ms Kristy Law, Dr Kathy Trieu and Professor Jason Wu

Introduction

The produce prescription randomised controlled trial (RCT) is a partnership initiative between The George Institute for Global Health (TGI), Diabetes Australia, and Harris Farm, supported by other partners including members within NSW Ministry of Health, NSW Primary Health Networks, National Heart Foundation and other researchers. The RCT will generate important Australia specific evidence for produce prescription to support the integration of a social prescription approach to patient care. Specifically, this trial will evaluate the clinical impact of produce prescription for individuals with type 2 diabetes experiencing food insecurity and persistently high blood sugar levels.

While the RCT will examine the approach's efficacy and cost-effectiveness, best-practice models and frameworks for integrating produce prescription into the Australian healthcare system is yet unknown. To help address this knowledge gap, a produce prescription Translation Advisory Group (TAG) for the project was established. The purpose of the TAG is two-fold:

1. To provide advice, direction and decision making to co-design a sustainable pathway and implementation model for the produce prescription RCT
2. To participate in the development of a produce prescription framework relevant to the Australian health system context

Members of the TAG were nominated based on the recognised expertise and perspective that each brings to the translation of the produce prescription RCT to the Australian context, and Members have agreed to participate in three workshops and other co-design process activities over the course of the 5-year term of the trial.

This report summarises key aspects of discussions held during the first 90-minute TAG workshop, on produce prescriptions for individuals with type 2 diabetes in Australia. To support TAG members' input into the development of a sustainable Australian produce prescription model for individuals with type 2 diabetes, a background brief was prepared and provided prior to the first workshop. This background brief included:

- a review of available research including a summary of produce prescription case studies
- an outline of relevant Australian health system factors to consider regarding over-arching governance for the RCT and local implementation

Workshop Overview

The virtual workshop, hosted by The George Institute for Global Health (TGI) and facilitated by Ms Jennifer Madz from Diabetes Australia, was held on 8 August 2023 as part of the produce prescription RCT partnership initiative. The invitation-only workshop was held using Microsoft Teams and brought together over 20 representatives from government, healthcare, food industry, non-governmental organisations and consumers with an interest in produce prescription *(see Table 1)*.

Table 1. Summary of produce prescription Translation Advisory Group stakeholders

Stakeholder category	Description of expertise related to produce prescription	Number of TAG workshop attendees
Government	Describes local, state and/or federal healthcare and public health policy, program and funding mechanisms that may support produce prescription.	5
Health Service Provider	Administers and/or provides healthcare and support services at the local level and receives funding to cover these services. Administration may include setting up parameters of health services/programs, coordinating payment and data collection among healthcare providers, managing system processes for program operations.	5
Clinician	Provides direct clinical care to their patients and understands clinic workflow including referrals, continuation of care, clinical data collection and reporting, funding and reimbursements.	4
Food Retailer	Oversees procurement, supply, and distribution of food to customers. Understands food system and vendor processes that may be needed to operationalise produce prescription.	4
Consumer	Provides perspectives and experiences related to health care use, living with diet-related health conditions and health-related social risks.	2
Non-government Organisation	Advocates for produce prescription programs and provides insight into the political landscape at the federal and state levels for their implementation and scaling	2

The objective of the workshop was to gather stakeholder insights and suggestions on the potential design, implementation, and integration of produce prescription programs into the Australian healthcare system.

The workshop comprised of an introduction by Professor Jason Wu with regards to the purpose of the workshop and overview of the Produce Prescription RCT partnership initiative, before a series of questions were posed to the Members of the TAG that were structured around three major topics:

- Topic 1: Exploring stakeholder acceptability of produce prescription
- Topic 2: What might a produce prescription program look like for individuals with type 2 diabetes in Australia?
- Topic 3: Exploring the integration of produce prescription into Australian healthcare as a ‘therapy’ for type 2 diabetes.

The workshop discussion questions were developed based on a literature review of existing produce prescription programs and Food is Medicine studies globally, especially those studies whose objective was to elicit input about design of produce prescription programs from relevant stakeholders. Specific focus was given to prior literature that provided information about survey questions and that included equivalent stakeholders to the Produce Prescription TAG. Some of the questions used in one of the studies[1] were adapted to use for this first TAG workshop. The workshop outline, including the questions asked is included in ***Appendix 1.***

Responses gathered during the workshop were audio recorded as well as collated using a web-platform called Mural. Mural is a virtual tool that enables collaboration by allowing visual brainstorming of responses to specific questions. Members provided their thoughts and feedback across all workshop questions by creating virtual 'sticky notes' in Mural. In addition, some Members provided written feedback in the Microsoft Team chat window, and, during the workshop conversation prompts were offered by the moderator (Ms Jenn Madz) to encourage the discussion and verbal responses to topics raised. Several other TAG Members who were unable to attend the workshop were sent a consultation survey, to enable them to provide written feedback to the workshop topics.

Topic 1: Exploring stakeholder acceptability of produce prescription

All TAG Members agreed that the concept of produce prescription aligned with their personal and/or organisation perspective. Most of the responses detailed alignment with organisational goals or strategies that aimed to improve and maintain the health and wellbeing of their communities served – whether through healthy eating, chronic disease prevention and/or addressing the social determinants of health.

Members were then asked to consider the potential benefits and challenges of implementing produce prescription programs into the Australian healthcare system. This triggered a range of responses, which are summarised in ***Figure 1*** below and detailed in ***Appendix 2.***

Figure 1. Potential benefits and challenges of produce prescription program implementation

BENEFITS	CHALLENGES
Improve health and other outcomes for individuals	Designing a fit-for-purpose program to the individual and context
Opportunity for healthcare innovation	Funding and governance
Decreased health expenditure	Managing operations
Create supportive food systems	Sustainability
Promote equity	Ethicality
	Unintended consquences
	e.g. additional burden on participants if program design is not streamlined

Topic 2: What might a produce prescription program look like for individuals with type 2 diabetes in Australia?

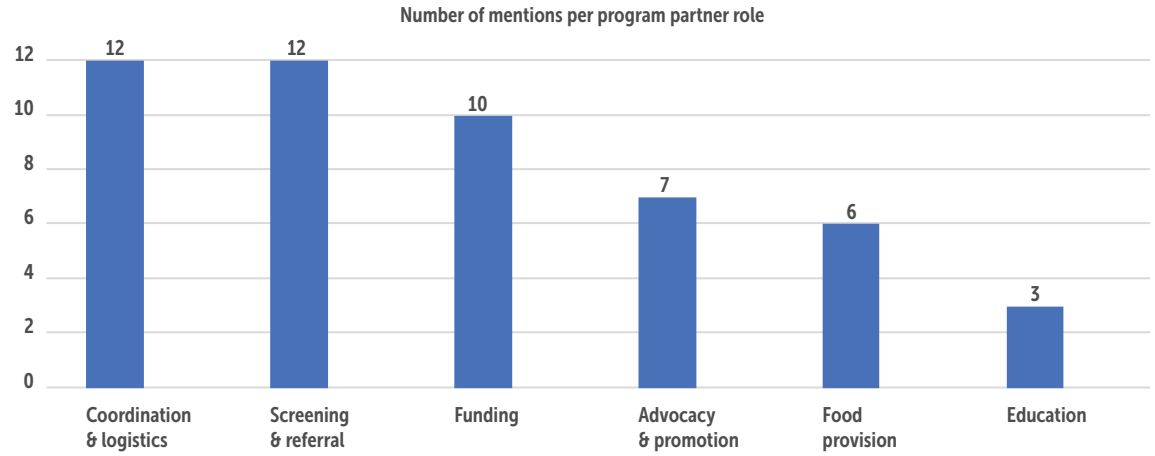
Having considered the overall acceptability of produce prescription in Australia, Members were next asked a series of questions to explore their perspectives on the potential design of a produce prescription program for individuals with type 2 diabetes in Australia, with questions relating to five program design elements: Program Partners, Target Group, Screening and Referral, Program Delivery and Monitoring and Evaluation.

A. Program Partners

Members outlined potential program partners for produce prescription from ***six main sectors:*** academia, non-government organisations, consumers and community-based organisations, government, the healthcare sector, and the corporate sector. A list of specific organisations within these sectors that were suggested during the workshop to be involved in the development and implementation of produce prescriptions is included in ***Appendix 3.***

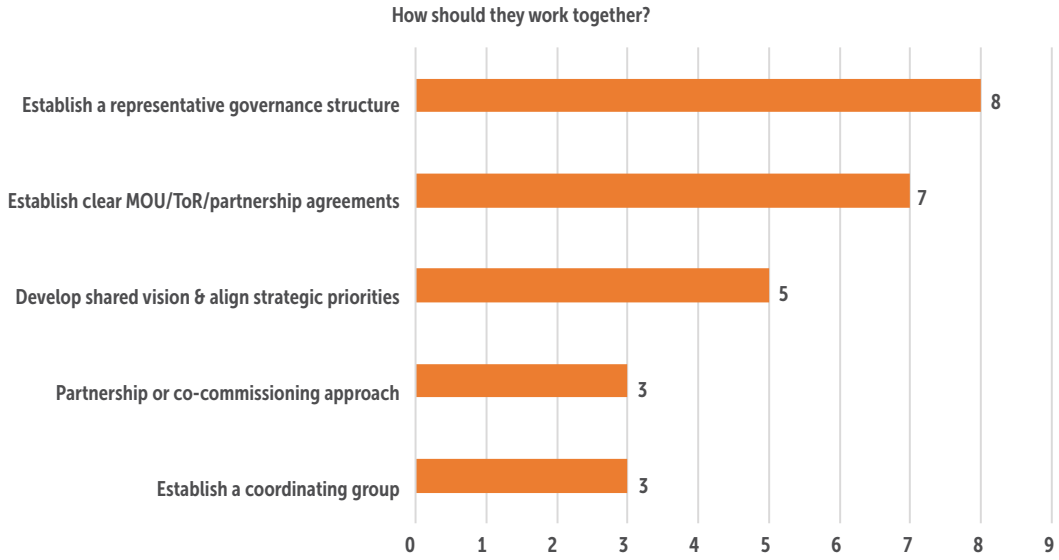
When asked about the roles that program partners should play, Members identified ***six key roles overall:*** coordination and logistics, screening and referral, funding, advocacy and promotion, food provision, and education ***(Figure 2)***. Some Members gave an indication as to which partners should be linked with which roles. These links have been incorporated for each sector listed in ***Appendix 3***, in order of prominence within the workshop responses.

Figure 2. Identified roles for program partners in a produce prescription program



Members offered a range of suggestions on how program partners should work together. The most frequently mentioned way of working was to establish a governance body that has representation from key agency partners involved and consumers. This was closely followed by establishing agreements or a memorandum of understanding between program partners (Figure 3).

Figure 3. Top 5 most frequently mentioned ways of working between program partners



B. Target Group

Some Members felt that anyone with type 2 diabetes who wanted to engage with the program should be able to, whereas others felt that the program should specifically target individuals newly diagnosed with, or sub-optimally controlled type 2 diabetes. Further to that, Members also voiced the need to include individuals with co-morbidities or complex conditions (e.g. high blood pressure, depression, obesity, malnutrition).

The majority of responses mentioned the inclusion of ***social determinants of health*** as an important criterion when determining the target group(s). For example, considering the broader needs of low-income earners, people experiencing food insecurity, pensioners, and other healthcare card holders.

Several priority population groups were identified. The most commonly identified priority populations for produce prescription were Aboriginal and Torres Strait Islander peoples, followed by pregnant women, families, and culturally and linguistically diverse communities.

C. Screening and Referral

A key characteristic of Food is Medicine strategies like produce prescription is having a mechanism to improve recipients' access to food that will support their diet-related conditions, through a healthcare provider referral.[2]

When considering who could conduct the screening and referral of patients for a produce prescription program, there was strong agreement across most Members that ***health care professionals were best placed to play this role***. While most Members agreed that both general practitioners (GP) and other health professionals could conduct the referrals, others only agreed with one or the other, or suggested that the role of referrer could be expanded across the whole multidisciplinary team. The most commonly mentioned health professions were nurse practitioners, allied health, dietitians and diabetes educators. However, to support GP and other health professionals as program referrers, Members expressed the need for:

- Quality resources, such as formalised scripts and other referral tools
- Referrer training, education and practice guidelines
- Clarity about program criteria and evidence of benefits
- Brief referral processes and clear action pathways
- Linkages into community networks/services

Discussions around how screening and referral processes would be implemented provoked a rich response from Members, covering a range of considerations across the approach to and infrastructure for screening and referrals (*Figure 4*).

Figure 4. Suggested approaches and infrastructure for produce prescription screening and referral

APPROACH

Non-stigmatising and trauma-informed approach

e.g. "Screening should be as simple and non-stigmatising as possible...It is a sensitive topic."

Simple processes for screening and referral

e.g. "Ideally the tool should be quick simple, accurate and reliable."

Simple processes for the recipient

e.g. "...there ideally would be an option for a non-referred service where people can put their hand up, identify this is their need, and not have the barrier of needing to get a referral from someone."

Patient-centred and context informed approach

e.g. "...a GP referral who knows the patient well, understands their social as well as medical context, will give you a differently considered referral to say a doc in the ED."

e.g. "The choice of tool and subsequent action pathway is dependent on the patient population and the staff resources available..."

INFRASTRUCTURE

Build electronic tools and systems

e.g. "Referral by GPs need to be a simple one pager preferably built in self populated form from software..."

e.g. "Built into eMR for diabetes management or pregnancy care - needs to be very brief

e.g."GP assessment as part of routine care for Type II diabetes - build into medical software."

Integrate into existing systems

e.g. "Needs Medicare item number for Chronic Disease Management Plan..."

e.g. "Through the MyGov or Service NSW Apps"

e.g. "DVA has supplement referral system"

e.g. "Could it be part of a health care plan - like referrals to allied, mental health"

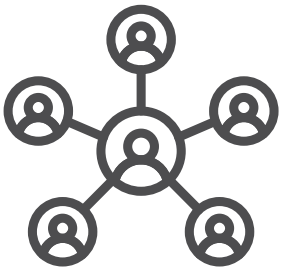
Integrated into existing practice and care

e.g. "Clinical dietitians can screen like malnutrition screening and then refer on as part of discharge papers."

e.g. "Food prescription can been seen as adjunct to care..."

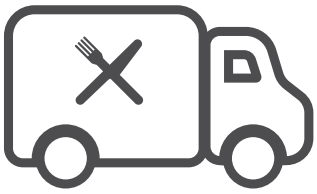
D. Program Delivery

Literature suggests that the best mechanisms for a produce prescription depends upon contextual factors such as patient population needs, food distribution networks, logistics and the program setting.[1, 3, 4] This need for a customised, place-based approach that aligned with the demands, values and needs of the local community was echoed in the responses from Members. When considering their own local health districts' context and location, Members also felt that the best way to get fresh produce to program participants would involve:



Using existing and local systems (e.g. supply chains, delivery logistics, community settings)

Offering free and co-payment options



Offering a suite of options (e.g. food hubs, home delivery, click & collect, vouchers)

TAG Members thought the most likely barriers to receiving and using the produce could be related to:

Receiving the produce	Using the produce
Challenges specific to an area's regionality, rurality or remoteness, particularly fresh produce supply chain limitations.	Food and nutrition literacy level e.g. food preparation knowledge, cooking skills
Stigma or shame associated with food relief or food provision	Food safety at home e.g. fridge access, cross-contamination, storage and cooking equipment
Limited access to personal transport	Household composition e.g. who and how many people in the household
Personal factors e.g. cultural acceptability of produce, disability/mobility limitations, working hours, no internet access	Personal factors e.g. dietary and cultural food preferences, disability/physical limitations, cognitive capacity, social and medical contexts, primary language spoken
Food safety e.g. storage facilities, safe delivery	Poor acceptability by participant if donated or low-quality food is provided
Risk of theft in certain areas	

E. Monitoring and Evaluation

When asked to consider the monitoring and evaluation of produce prescription programs for individuals with type 2 diabetes, Members identified several categories of data, measures and outcomes that would be needed, such as:

Health outcomes

- Clinical markers (e.g. HbA1c, blood lipids, mental health, weight, glucose, blood pressure)
- Patient reported outcome measures (e.g. quality of life, diabetes distress)
- Dietary assessment (e.g. diet quality, food intake and waste, food frequency questionnaires)
- Wound healing e.g. diabetes related foot disease
- Health care/plan adherence
- Emergency department presentations
- Hospital admissions
- Length of stay during hospitalisation
- Risk of obesity related health conditions

Health economics

- Cost-effectiveness analysis
- Cost-benefit analysis
- Healthcare expenditure

Program evaluation

- Process evaluation (e.g. uptake, retention, food waste, operations and logistics data, resources developed and used)
- Patient reported experience measures (e.g. satisfaction, acceptability, barriers)
- Participant behaviour changes (e.g. number of supermarket visits, fast food orders home-cooked meals, fresh food orders)
- Food quality assessment (e.g. food safety, nutritional standards, food allergen data)

Other measures

- Health and food literacy (e.g. cooking skills, nutrition knowledge)
- Food insecurity (e.g. USDA Household 18-item survey)
- Financial security
- Long-term impact on participants (e.g. shopping habits, fresh food consumption trends)
- Long-term impact family (e.g. benefits to whole family/household)
- Long-term impact on broader community (e.g. neighbourhood food environments)

While the workshop question focused on the 'what' of monitoring and evaluation, some Member responses provided insights into the 'how' i.e. the approach to monitoring and evaluation. Some Members emphasised the need to align proposed produce prescription measures with existing outcomes being measured in other initiatives at the local, state and federal level (e.g. NSW Healthy Eating Active Living Strategy, National Preventive Health Strategy) to "prepare for future comparison or scale". Others spoke about the need to "build evaluation… from the ground up" by embedding measures into program governance; to be guided by local implementation insights, and to use a collaborative approach that would allow information and sharing of learnings across different localities and settings.

No single group dominated the responses to the question of who should have primary responsibility for program monitoring and evaluation. Program monitoring and evaluation was seen by Members to be the primary responsibility of academic bodies (e.g. research institutes or universities), program implementors (e.g. healthcare providers or organisation funded to run the program), a representative governance group, or an independent experienced evaluator.

Topic 3: Exploring the integration of produce prescription as a 'therapy' for type 2 diabetes

The final part of the workshop asked Members to think about how they could see produce prescription as a 'therapy' being integrated into a model of care for type 2 diabetes, specific to their context of work (i.e. at a local / district / state level). Members were prompted to consider existing initiatives, schemes and services that they were aware of, that could facilitate the sustainability and success of produce prescription in Australia.

A range of initiatives, schemes and services were suggested as entry points for produce prescription integration (***Figure 4***). In addition, some examples of similar work in action were shared during the discussion and have been highlighted via the quotes below.

Figure 4. Existing initiatives, schemes or services that could support produce prescription integration into the Australian healthcare system

Initiatives

- MOUs with Foodbanks, Public schools
- PHN and LHD networks
- GP shared/Integrated care programs
- Chronic Disease Management plans
- HealthPathways
- MyCare Partners
- Service NSW vouchers

"...We are an Aboriginal outreach podiatry and diabetes education services...we have an MOU with Foodbank WA where we can provide eligible clients with direct access to 6-month membership to Foodbank WA. I would say between 60 and 70% of our clients are referred.
- Clinician

Schemes or Strategies

- Australian Primary Health Care 10 year plan - social prescribing
- Strengthening Medicare work
- Department of Veterans Affairs
- Aged Care
- NDIS and NDSS
- Close the Gap
- Department of Social Services
- Lumos system

"...how great would this be...if for RACF residents, this was integrated into their meal service?"
- Health Service Provider

Services

- Obesity services or specialist weight management clinics for people with severe obesity and diabetes e.g. Nepean
- Go4Fun program
- Wollondilly Lifestyle Program
- Samoan Church Diabetes Prevention Program
- Get Healthy and Get Healthy in Pregnancy
- Aboriginal community health programs
- Antenatal models of care
- Adjunct to existing care e.g. cardiac/respiratory rehab services

"One of our local Aboriginal Medical Services has a F&V program where people can get a box each week."
- Health Service Provider

Potential Funding Models

A list of potential funding models that could support implementation of produce prescription programs in NSW and Australia was provided in the background brief to guide discussions during the workshop. Responses by Members are summarised in *Table 5* below.

Table 5. Potential funding models for produce prescription in Australia

Funding model	Number of mentions	Illustrative quotes
Block funding	4	"...if to be integrated into health system would need to be block funding or part of funding for National Weighted Activity Unit." (Health Service Provider)
Hybrid/Staged funding	4	"Needs a hybrid approach level 1 – free, level 2 - co pay, and co pay could rise." (Government) "Consider a staged funding model - start with block, build to collaborative commissioning, then aim for commonwealth." (Government)
Collaborative commissioning – shared investment	3	"Seek out a collaborative model such as in Western NSW collaborative commissioning." (Government)
Private health	3	"Health insurance companies may fund this as a prevention program." (Government)
Other	3	"Additional scope of service provision would require 'new' funding source." (Government) "Including philanthropic organisation as funders (whose values and goals align with produce prescription) could support its sustainability and expansion." (Clinician) "Company Sponsorship or Donations" (Food Retailer)
National Diabetes Services Scheme (NDSS)	2	"...Through PHN space initially and ideally if a national approach eventually NDSS and MBS." (Government)
Pharmaceutical Benefits Scheme (PBS) or Medicare Benefits Schedule (MBS)	2	"If implemented in primary care - MBS/PBS would be most logical." (Health Service Provider)
Bundled funding	0	N/A

Members who provided the rationale for their selected options were primarily those that chose publicly funded models. These Members viewed Government as having "a responsibility to care for the health of its citizens" and felt other funding models (e.g. private health) would not "meet the needs of people with food insecurity". Conversely, other respondents pointed out the difficulty in funding innovation or prevention within government-funded models and highlighted the need to "define where your priority is first" which will inform the funding approach to reach different groups.

Next Steps

This first Produce Prescription TAG workshop was very much about 'opening a conversation' with those interested in produce prescription for type 2 diabetes in Australia, and to enable ideas and views to be shared regarding their acceptability, design and implementation. As produce prescription programs are not yet integrated into healthcare in Australia, the workshop topics understandably left some questions in need of further discussion. These knowledge gaps will need to be addressed in future research and workshops if produce prescriptions, and Food is Medicine strategies overall, are to move from concept to practice in Australia.

This workshop was the first of three workshops that will be carried out as part of a co-design process to develop a sustainable model and framework for implementing produce prescriptions in Australia. Findings from this workshop will also be used to inform the protocol design of the produce prescription RCT, which is due to commence in 2024. Work is also underway to summarise the findings from this first TAG workshop and broader consultation into a peer-reviewed paper.

We wish to thank all TAG Members again for their valuable contribution. In addition, we invite any other individuals or organisations interested in produce prescription in Australia to contact the Produce Prescription Research Team (***ProduceRx@georgeinstitute.org.au***) if you have any questions or comments about the workshop findings summarised in this report.

Appendices

Appendix 1: Translation Advisory Group workshop 1 outline

Activity (Time)	Description
Part 1: Welcome (5 minutes total)	
	Welcome and Acknowledgement of Country
	Overview of Produce Prescription RCT and Workshop
Part 2: Discussion (80 minutes total)	
Acceptability (10mins)	
	1. From your personal and/or organisational perspective, do produce prescriptions align with your/your organisation's goals or values? a) If yes, why b) If no, why not? 2. Broadly speaking, what do you think are the a) potential benefits of implementing produce prescription programs into the Australian healthcare system? b) potential challenges of implementing produce prescription programs into the Australian healthcare system?
Program Design (40mins)	
• **Eligibility (10mins)**	3. What group(s) of individuals with type 2 diabetes should a produce prescription program be designed for? Why? Prompts: Consider ranges and severity of health status/biomarkers and social determinants measures (e.g. food insecurity, income), access, equity
• **Program partners (10mins)**	4. Which organisations are important to have involved in a produce prescription program for Type 2 diabetes? a) What do you think each of their roles would be? b) How should they work together? Prompts: consider food vendors, healthcare, 'prescribers', nutrition education, implementing organisations, research/evaluation, insurers/funders, partnership agreements, data sharing requirements.
• **Program infrastructure (10mins)**	5. Considering your district context/location, what would be the best way (i.e. mechanism) to get fresh produce to participants in this type of program? Prompts: consider program accessibility, viability, infrastructure, technology, resources, governance. a) Can you think of any barriers participants may have in receiving the produce? b) Can you think of any barriers to participants using produce prescriptions? Prompts: consider metro vs rural/remote differences, cultural and vendor diversity, stigma
• **Monitoring and evaluation (10min)**	6. From your perspective, what kind of data, measures and outcomes would be important to capture as part of produce prescription programs, to adequately assess the impact of the program on the participants? Prompts: clinical markers, hospitalisations/healthcare use, fruit & vegetable intake, food security, participant retention/satisfaction, adherence to care plan/medical advice, participant self-efficacy, agency KPI measures 7. Who has primary responsibility for program monitoring and evaluation?
Implementation and Adoption (30mins)	

• **An integrated pathway (10min)**	Now having considered the above, we would like you to think about how you see produce prescription as a 'therapy' being integrated into a model of care for type 2 diabetes at the local / district / state level. 8. What existing initiatives/schemes/services could this 'prescription' be integrated with to improve its sustainability and success? Prompts: consider coordinated care programs, state-based integrated care programs, existing prevention/treatment services.
• **Screening and referral (10min)**	9. How would screening and referral for eligible participants to this type of program be achieved? a) Do you think GP or other health professional referrals could work? What considerations go with this? Prompts: consider what screening and referral options are currently available, staffing and/or technology requirements, what standardised tools could be used
• **Funding (10min)**	10. From your perspective, what potential funding models would support implementation of produce prescription programs in NSW and Australia? Prompts: Some potential funding models to consider include - Block funding - Collaborative commissioning – shared investment - National Diabetes Services Scheme (NDSS) - The Medical Benefits Schedule (MBS) - The Pharmaceutical Benefits Scheme (PBS) - Bundled funding 11. Can you think of any challenges to covering the costs of a produce prescription program? Prompts: Standard cost drivers include cost per service, technological set-up (e.g. POS, EMR, distribution), admin/implementation costs, vendor, other nutrition support (e.g. education) and evaluation costs.
Part 3: Conclude (10 mins)	
• **Final thoughts (5min)**	12. Is there anything else that you feel is important to consider for sustainable produce prescription program implementation in NSW/Australia? Prompts: consider what legal and/or governance items are important, what policy or strategies to align with, what longer term resources and patient supports are needed
• **Wrap up & next steps (5 mins)**	

Appendix 2: Potential benefits and challenges of produce prescription implementation in Australia

Potential Benefits	
For individuals	Improve diet quality, especially fruit and vegetable consumption. Decrease rates of lifestyle-related chronic disease. Improve self-management of lifestyle-related chronic disease. Improve healthcare adherence. Improve access to dietetic services. Improve health outcomes – for diabetes and more broadly. Enhance social aspects associated with food arriving. Decrease loneliness.
For healthcare sector and professionals	Push the paradigm of healthcare – from a traditional focus on episodic care and treatment, to a new focus on prevention, longer term interventions and upstream factors affecting health. Clinical services and models of care innovation – an opportunity to use a novel intervention to meet a gap in services and/or as an adjunct to clinical care. Helps with shared-decision making between healthcare professionals and client/patients. Decreased expenditure on health care e.g. medications, hospitalisations, surgery etc. Potentially cost effective as opposed to medication.
Create supportive systems	Improve cooking skills and eating patterns that could benefit the broader family. Create an easier ecosystem for people to choose diet/food intake that are healthier for them. Improved access to healthy food. Improved food security. Benefits for Australian fruit and vegetable growers.
Promote equity	An opportunity for more consumers to have equitable access to good health. Promotes equitable access to and consumption of fruit and vegetables.

Potential Challenges	
Designing a fit for purpose program – for recipients	Matching prescription to cultural norms around food, and cultural appropriateness. Accommodating various food allergies and intolerances and/or dietary preferences. Varying levels of financial capacity, time, motivation, food literacy, cooking skills, transportation access and physical mobility. Specific patient/family prescription needs. People having appropriate cooking and storage facilities – potential issues around food safety. Actual uptake/adherence by patients.
Designing a fit for purpose program – for the implementation context	Diverse food security landscape across Australia. Outer metropolitan, rural, regional and remote areas – challenges related to food storage, transport, supply/delivery chains, availability of fresh produce, resources and support. Differences in policy and program approaches across regionals and State and Territories.
Governance	Who "owns" the program? How do you make the produce prescription evidence based and locally appropriate? How to define the foods that are suitable to ensure dietary health is improved and benefits the whole household (rather than passed onto a family member)? How to implement programs in a way that allows for meaningful place-based locally focussed solutions and ways of working? How do you prevent over service versus service gaps?

Potential Challenges	
Funding	Funding of food supplies, program infrastructure, operational costs, and program resources. Seasonality changes to cost of goods. Ongoing funding, support, resources and infrastructure. Funding innovation is challenging within the government context. Identifying how it is funded within the health system. How to navigate the complexity of government funding, combined with industry/ charities potentially delivering it?
Managing operations and logistics	Program coordination - How do you manage produce prescription implementation on such a broad scale? - Who implements the program and at what level? - How to integrate this with other services? Referral processes - identifying who the referring clinician is? Pairing up with a diabetes specialist or dietitian - the obvious choice but a poorly resourced profession within the public healthcare system. Managing seasonality of produce - how to ensure availability and quality of produce provided? Engaging with busy primary care, training GPs, finding time to do it.
Ethicality	How to identify people who are eligible / need support / would benefit most from the program? How to define transparent criteria for accessing the program – is it means tested? Aboriginal and Torres Strait Islander people have a history of receiving food rations as part of colonisation - access and distribution should consider this. Challenging to ensure equitable and appropriate access. Equity is extraordinarily challenging.
Sustainability	How to create a sustainable solution across different implementation contexts? What happens after the trial? Continuing use, adherence and behaviour change after initial enthusiasm - creating permanent change is challenging. Expansion of current service provision scope will require sponsorship, funding and governance. Acceptance by health services. Data collection that builds evidence of cost effectiveness and program value is necessary to promote acceptance by health services, funders and general public.
Unintended consequences	Added burden onto patients if the design is not streamline. Many households/clients that received this program may have an inherent accessibility problem to food that are beyond healthcare system. Short-term solution and pilot program (that maybe limited to 1 to 2 years) will be unlikely to be sustainable and may create a dependency issue that would worsen the patients' or households' that participate with this program.

Appendix 3: Program partners and their potential role(s) in a produce prescription program for type 2 diabetes

Academia - Advocacy & promotion, Evaluation, Education
- Universities
- Research institutes/units
- TAFE nutrition and catering educators

Health economics
- Returned and Services League of Australia
- Lions Clubs Australia
- Clinical/Professional peak bodies (e.g. Australian Diabetes Educators Association, Dietitians Australia, Royal Australian College of General Practitioners, Rural Doctors Network)
- Hort Innovation
- Food charities/services (e.g. FareShare, OzHarvest, Meals on Wheels)

Consumers and Community-based organisations - Advocacy & promotion, Screening & referral
- Carers
- Patient support groups (e.g. Carers WA, Helping Minds)
- Local clubs (e.g. sporting clubs Police Citizens Youth Clubs, Probus Clubs Australia)
- Local community groups (e.g. churches)

Government - Funding, Coordination & logistics
- Local government/councils
- State/Territory governments
- The Commonwealth
- Agency for Clinical Innovation diabetes taskforce
- Department of Veteran's Affairs

Healthcare Sector - Screening & referral, Education, Advocacy & promotion, Evaluation, Funding
- Aboriginal Community Controlled Health Organisations
- WA Primary Health Alliance
- Primary Health Networks
- Local Health Districts
- Community Health Centres
- General Practitioners
- Other health professionals (e.g. social workers, dietitians, diabetes educators, registered nurses, clinical groups)
- Health service/care providers across all levels of care
- Private practice nurses/midwives/dietitians
- Private health insurers

Corporate Sector - Food provision, Coordination & logistics
- Logistics companies
- Food transport services
- Major & minor supermarkets (e.g. Woolworths, Coles, IGA)
- Local food providers (e.g. local vendors, markets)
- Fruit & vegetable growers
- Meal kit delivery services
- Information technology companies

References

1. Auvinen, A., M. Simock, and A. Moran, Integrating Produce Prescriptions into the Healthcare System: Perspectives from Key Stakeholders. Int J Environ Res Public Health, 2022. 19(17). 10.3390/ijerph191711010
2. National Produce Prescription Collaborative. What is a PRx? 2023 [cited 2023 16 October]; Available from: https://nppc.health/.
3. Garfield, K., et al., Mainstreaming Produce Prescriptions: A Policy Strategy Report. 2021, The Center for Health Law and Policy Innovation of Harvard Law School.
4. Stevenson, L.D., et al., Implementing a Produce Prescription Program in Partnership With a Community Coalition. Health Promot Pract, 2022: p. 15248399221081406. 10.1177/15248399221081406

This page intentionally left blank

This page intentionally left blank

Produce Prescription for Type 2 Diabetes in Australia

A summary report based on the Translation Advisory Group Stage 1 Workshop

December 2023

produce PRESCRIPTION

The George Institute for Global Health

www.georgeinstitute.org

PP SR D151223