Research Report

Health and transport practitioner perspectives on implementing workplace travel plans aiming to improve health: a qualitative study from Australia

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Author contributions:

NP lead the work, and CR and LMW are joint senior authors. Specific contributions are specified in the Methods.
Abstract

Background to this report

This research report expands on a related journal article by including practical examples for action within break-out boxes in the results under some of the topic areas. It also expands on the discussion by summarising some of the barriers to implementing successful travel plans from the literature. The purpose of the report was to retain some of these practical examples for action made by participants since they may be useful to practitioners. This research report is referred to in the article submitted for publication from which it can be accessed via a hyperlink.

Objective

We investigated health and transport practitioners’ perspectives on implementing workplace travel plans, and aimed to describe the perceived elements of effective workplace travel plans, barriers and enablers to workplace travel planning, their experiences of working with the other profession on travel plan implementation, and their recommendations for workplace travel planning.

Materials and Methods

Fourteen health and ten transport practitioners who had prior involvement in workplace travel plan programs were purposefully selected from workplaces in Australia. We conducted twenty in-depth interviews, and data were subject to framework analysis.
Results
Perceived essential elements of effective workplace travel plans included parking management; leadership, organisational commitment and governance; skills and other resources including funds being allocated to strong strategies to encourage alternatives to private motor vehicle use and a dedicated travel plan coordinator; and, pre-conditions including supportive transport infrastructure in the surrounding area. Recommendations for promoting travel plans included supportive government policy, focusing on business benefits and working at different scales of implementation (e.g. single large worksites, business precincts and businesses within regions where supportive transport infrastructure exists). Health and transport practitioner perspectives differed, with transport practitioners believing that parking management is the key action for managing overall travel demand at a work site.

Conclusions
Health practitioners implementing travel plans may require training including key elements of effective workplace travel plans and concepts of travel demand management, as well as support from transport planners on parking management strategies. Promoting an understanding of the shared skills of transport and health practitioners relating to travel behaviour change may assist further collaboration. For take-up by organisations to be of sufficient scale to create meaningful population level reductions in driving and increases in active travel, promotion and travel plans should be focused on the priorities of the organisations. Supportive government policy is also required.
Introduction

Workplace travel plans that promote active forms of transport (such as walking, cycling and public transport) as alternatives to driving private motor vehicles to work are site-based delivery mechanisms for transport demand management options.[1] They are also referred to as transportation demand management plans in North America and mobility management plans in Europe, and employ a mix of strategies including policy (e.g. parking policy, public transport discount schemes), infrastructure (e.g. end of trip facilities) and behaviour change (e.g. referral to personal journey planning at staff induction, cycling and walking programs). Workplace travel plans could have important health benefits resulting from decreases in the proportion of employees using relatively sedentary forms of travel to work (driving private motor vehicles) and increases in employee’s choosing physically active modes of travel to work.[2-4]

In some jurisdictions internationally, travel plans can be required through the land use planning and approvals process for new and expanded buildings typically occupied by medium or large organisations.[5-8] However, the ad-hoc system of support for implementation of travel plans that are required by these mechanisms has been criticised.[7, 9] The Australian national TravelSmart program and federal government funded Healthy Worker Initiatives in some states have both prompted population health professionals to support implementation of travel plans, although a review of the status of the national TravelSmart program in 2012 showed the level of support was mixed across Australian States and Territories.[10] Hospitals have also implemented travel...
plans in response to global Green Hospitals and Healthy Hospitals movements, or local sustainability initiatives.

We developed a workplace travel plan for a large outer-suburban hospital in Sydney, Australia, [11] validated survey measures to assess it's main outcomes [12] and assessed the effectiveness of the four-year program.[3] In keeping with good practice for evaluating complex health promotion programs, such as those recommended in Medical Research Council guidelines,[13] we included qualitative research reported in this paper to share the learnings from this experience as well as the learnings of other practitioners who had implemented comprehensive workplace travel plan programs.

Qualitative research has shown developers and owners of sites that are required to develop travel plans generally have a positive orientation to the concept and can develop them well.[14, 15] There are published ‘best practice’ cases where workplace travel plans have achieved large impacts on staff active travel and reduced driving to work.[2, 16, 17] What makes these travel plans effective has been described in reviews from the perspectives of ‘experts’ [16, 18] and quality check lists for implementation exist.[19] However, experts agree that travel plans are not being taken up by sufficient numbers of organisations, and improved support for organisations implementing travel plans is needed to achieve positive population level impacts on physical activity and traffic congestion, even in countries which have trialed supporting their implementation. 
Only one qualitative paper has focused on aspects of implementation, and this was for residential travel plans.[14]

Given there have been recent Australian policy initiatives where health practitioners have supported implementation of workplace travel plans, and since the perspectives of health and transport practitioners who have implemented travel plans aiming to improve health have never been documented, the purpose of our study is to describe these perspectives to inform policy and programs which support successful implementation of travel plans aiming to increase active travel to work. The specific research questions of this qualitative study are described in Table 1.

**Table 1. Research questions addressed in the present study**

<table>
<thead>
<tr>
<th>Research question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What do health and transport practitioners who have supported workplace travel plans describe as the essential elements of what makes implementation work, not work and why?</td>
</tr>
<tr>
<td>2. What are the orientations of health and transport practitioners who have supported travel plans toward them as a mechanism for increasing active travel to work?</td>
</tr>
<tr>
<td>3. How do health and transport practitioners describe experiences of working together to support travel plan implementation?</td>
</tr>
<tr>
<td>4. What do health and transport practitioners who have supported implementation of travel plans believe is the future for travel planning?</td>
</tr>
<tr>
<td>5. Do these perspectives of health and transport practitioners who have been involved in supporting implementation of workplace travel plans vary?</td>
</tr>
</tbody>
</table>
Materials and Methods

The Consolidated Criteria for Reporting Qualitative Research (COREQ) were used to guide the research methods and analysis of results.[21]

Methodological approach

The methodology for this research is guided by phenomenological interpretive approaches, to examine the essential elements of the experience of implementing travel plans from the perspectives of health and transport practitioners who have been involved in supporting their implementation. Objectivity in this study meant ‘bracketing off’ the research team’s views and recognising that the subjective views of participants are their perceived reality, regardless of whether they occur objectively. This enhances the relevance of findings in this study to real world policy and practice provided important context is described.[22]

Context of interviewees and interviewer

Participants’ experience with travel plans, whether they were health or transport practitioners and whether they were primarily involved with implementation of travel plans or making decisions around supporting their implementation are summarised in Table 2. Participants were selected from New South Wales (NSW) (15), Western Australia (7) and Victoria (2) to ensure a range of Australian experiences.
Table 2. Interview participants’ professional background and their experience with supporting implementation of travel plans

<table>
<thead>
<tr>
<th>Interview, [Code]</th>
<th>Professional background</th>
<th>Health</th>
<th>Transport</th>
<th>Implementer</th>
<th>Decision-maker</th>
<th>Experience *</th>
<th>Scale b</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 [HI1]</td>
<td>Health Promotion.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>M</td>
<td>None prior, M</td>
<td>A</td>
</tr>
<tr>
<td>2 [TI2]</td>
<td>Sustainability, Consultancy.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>H</td>
<td>None prior, M</td>
<td>A-D</td>
</tr>
<tr>
<td>3 [HD3]</td>
<td>Hospital Executive.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>None prior, L</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>4 [HD4]</td>
<td>Health Promotion.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>None prior, M</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>5 [HI5]</td>
<td>Health Promotion.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>None prior, L</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>6 [HI6]</td>
<td>Health Promotion.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>None prior, L</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>7 [HD7]</td>
<td>Health Promotion.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>None prior, L</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>8 [HI8]</td>
<td>Health Promotion.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>None prior, L</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>11 [HI11]</td>
<td>Health Promotion, Planning.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>M</td>
<td>A,C</td>
<td></td>
</tr>
<tr>
<td>12 [TI12]</td>
<td>Sustainability.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>None prior, M</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>14 [HI14]</td>
<td>Health Promotion.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>H</td>
<td>A,C</td>
<td></td>
</tr>
<tr>
<td>16 [TI16]</td>
<td>Parking Management.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>None prior, M</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>17 [HI17]</td>
<td>Health Promotion.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>None prior, L</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>19 [TI19]</td>
<td>Planning, Consultancy.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>None prior, M</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>20 [TD20]</td>
<td>Planning, Consultancy.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>H</td>
<td>A-D</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 12 8 11 9

* Experience supporting travel plans – None = no experience supporting travel plans prior to the one they supported at or close to the time of being interviewed; L = low, <2 years; M = moderate, 2-5 years; H = high, > 5 years.

b Scale of travel plan implementation supported – A = single site; B = precinct level Transport Management Association; C = multi-site or health service level; D = systematic and State/large jurisdiction level support.
The interviewer (NP) had over five years’ experience implementing workplace travel plans. He was not working with any of the participants at the time of the interviews.

**Participant selection method for qualitative interviews**

Twenty-four participants were purposively selected to provide the perspectives of two sub-groups – transport practitioners and health practitioners involved in the implementation of workplace travel plans aiming to improve the health of employees. This sample size considered that the nature of the topic was clear, the data provided by this purposive sample was likely to be high quality and it is generally accepted that 20-30 in-depth interviews provides enough information to explore a topic in depth.[23] None of the 24 invited interviewees declined to participate and four were not interviewed since the research team were satisfied saturation of themes had been reached prior to their scheduled interviews. Table 2 shows participant details.

The study was approved by the South Western Sydney Local Health District Human Research Ethics Committee. Participants provided written consent to participate.

**Methods for data collection and analysis**
**In-depth interview questions**

A set of interview probes were formulated based on the research questions and organised into four topic areas, with prompts in each area (Table 3). A pilot interview was conducted to check that the probes were understood and elicited the types of information that addressed the research questions.

**Table 3. Summary of interview prompts and probes for health and transport implementers and decision-makers**

| The interview consisted of six sections. |
| **Background**             | What led to your involvement in travel plans? |
|                           | What is your experience relating to travel plans? |
|                           | What is your current role with respect to travel plans? |

**What works, what does not and why?**
Are you able to share some of the results you achieved? Typically, in your view what things did the organisation(s) you worked with do well? What did they not do well? Probe: Were there specific actions that were not completed? Why do you think this was the case?

**Orientation towards workplace travel plans**
What do you think of travel plans as a mechanism for increasing active travel to work?

**Health and transport practitioners working together**
Did a transport/health professional support the implementation of the workplace travel plan(s) you were involved with? If yes, probe: What was the model for working with them? How were they involved in implementation? Further probe: What was it like to work with a transport practitioner on the implementation of a workplace travel plan? Further probes: Did the model for working together work well? Is there anything you would do differently?

**The future for travel planning**
What do you think the future directions could be for the travel plan(s) you have been involved in implementing? Prompt: How about workplace travel planning generally? Probes: How about at a state level? Are workplace travel plans a strategy that justifies further investment by health/transport?

**Open prompt**
Is there anything else you would like to add?
**Interview data collection**

In depth interviews were conducted by one interviewer (NP). The interviewer had prior experience in conducting interviews, focus groups and observation methods guided via one-year of formal mentoring relationships with experienced qualitative researchers in an academic institution initially and as part of his employment in health and non-health settings.

Where possible, interviews were conducted face to face in a private meeting room at the interviewees place of work. In some instances, they were conducted over telephone or Skype and recorded. The interviewer transcribed the recordings after the interviews, using transcription software (F4transkript v5.60.3) to ensure word for word accuracy. Some participants checked the data syntheses to ensure they maintained anonymity.

**Interview data coding and analysis**

Framework analysis was chosen for its relevance to research intended to inform policy.[24] The steps for framework and thematic analysis are described briefly here and in detail elsewhere.[22, 24].

1. Familiarisation - two investigators (NP, CR) read the transcripts and field notes (NP repeatedly), recording initial impressions they presented to each other.

2. Thematic framework - themes were identified and a coding scheme was developed by the same two investigators.
3. Indexing - codes were applied to the whole data set in a systematic way by the two investigators who checked for discrepancies in coding before agreeing which code would be applied. The third investigator (LMW) checked these codes to ensure they reflected the data accurately.

4. Charting – the lead investigator rearranged summaries of the data by code and divided into health and transport sub-groups with a check box indicating implementer or decision maker status in tabular formats in a spreadsheet package with page references to the original transcripts; this enabled investigators to view the data across participants and down themes as shown in the supplementary file (Editorial team please insert a link to the supplementary file here)

5. Mapping and Interpretation – the charts were used to explore the meaning of the data, and look for similarities and differences in the discussion from health and transport sub-groups as well as implementer- and decision maker sub-groups. The mapping and interpretation step involved further classification of the data, collapsing some into combined themes, creating explanatory accounts by looking for links or connections in the data and attachments to sub-groups. Finally, higher level explanations were developed after assessing the implicit and explicit meanings within the data and drawing on other empirical research findings, assessing links to theoretical frameworks and by considering wider explanations.
To increase accuracy and credibility of data analysis emerging theory was checked for deviant cases. Enough context was provided for readers to judge the information presented and the original charting of the synthesis of the data is provided in a supplementary file which readers can examine. (Editor, please also insert link to supplementary file here)

Results

The participants were categorised as health or transport decision-makers and implementers. Their professional backgrounds and experience supporting implementation of workplace travel plans are detailed in Table 2.

Topic areas and key themes

This section presents results of the analysis and interpretation of the interview data as key themes identified with respect to each of the four research questions and categorised within five main topic areas. Similarities and differences between health and transport practitioners’ perspectives are highlighted throughout.
Topic 1 – Parking

The largest volume of discussion was on the topic of parking. The volume and depth was greater amongst transport practitioners.

Travel demand management and parking

Parking was often referred to explicitly as a central component of site level travel demand management in workplace travel planning, mostly by transport practitioners. Talking about key learnings from supporting implementation of travel plans, a transport decision-maker states: "I think the key thing is not to consider things in isolation. If you don’t do parking management, you know, forget your behavior change, it’s not going to work". [TD9] In contrast two health decision makers felt that their experience demonstrated you can still get small but meaningful change without this “key” action. [HD4, HD15]

Parking management is a challenging action to implement in travel plans

Responses highlighted practical issues like requiring long lead times, being more difficult in sites where free parking has existed or it is in employment contracts, health facilities having a high proportion of staff who are shift workers and challenges for
health leadership addressing union perceptions that parking is “an essential service” for employees. [TD9, HD3] Participants often spoke about parking being considered a right instead of a privilege by employees and unions, and something human resource managers felt necessary to attract employees. One health decision-maker felt this perception was the main barrier to successful travel plan implementation:

“..I think the main barrier is.. the overriding mindset that we have to accommodate cars for everybody.. a travel plan.. starts to challenge that paradigm.. and that’s the thing that developers or hospitals and organisations don’t do well because they meet the perception.. if you build the infrastructure pretty much for anything if it’s planned well enough, people will use it.. if you build big car parks then people will drive..” [HD15]

Enablers to implementing parking policy

Health and transport practitioners both discussed enablers to implementing parking policy, with transport practitioners expressing control of the issue. When discussing the Western Australian experience of creating and implementing mandatory parking policy for all health campuses which caps the number of parking spaces at a site and specifies criteria which prioritises parking for employees who need it, one decision-maker stated:

“All the arguments that it’s all too hard, etc. are rubbish.” Later stating, ”..you have to present the other elements of the behaviour change.. strategies. You have to present a complete package.” [TD9] This implies that strategies to encourage alternative forms of travel to car driving offset parking management strategies, making the package
acceptable to employees. Enablers to parking policy participants mentioned are presented in Table 4.

Table 4. Enablers for parking policy actions in workplace travel plans

<table>
<thead>
<tr>
<th>Code a</th>
<th>Enabler</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI1,</td>
<td>Loss of parking spaces at inner city hospital sites to accommodate more services forcing hospital management to address parking issues.</td>
</tr>
<tr>
<td>T112, T116</td>
<td></td>
</tr>
<tr>
<td>HD3</td>
<td>NSW Ministry of Health parking policy currently being an impediment to promoting active travel, but also an opportunity to advocate for changes that will create a supportive policy framework in the future.</td>
</tr>
<tr>
<td>HD15</td>
<td>Framing travel plans as a solution to parking problems rather than stating parking is being reduced.</td>
</tr>
<tr>
<td>TD9</td>
<td>Presenting strategies to discourage driving as a package with strategies that encourage active travel.</td>
</tr>
<tr>
<td>TD9,</td>
<td>Pricing parking at its true cost, capping spaces and running it as a business being the solution to making all transport at a site efficient.</td>
</tr>
<tr>
<td>TD13</td>
<td>Running parking as a business where the true costs of supplying parking are accounted for in order for it to be priced appropriately to make a profit, and requiring this in approvals for expansion.</td>
</tr>
<tr>
<td>TD9</td>
<td>Framing travel plans as a solution to parking problems rather than stating parking is being reduced.</td>
</tr>
<tr>
<td>TD2, TD3, TD4</td>
<td></td>
</tr>
<tr>
<td>TI2</td>
<td>Parking policy including a prioritisation scheme, with eligible employees being able to cash out their parking and use it to fund alternative transport.</td>
</tr>
<tr>
<td>TD9, TD13</td>
<td>Fringe benefits tax being triggered at sites in some instances where employees are being provided parking for free or at discounted rates.</td>
</tr>
<tr>
<td>TD9,</td>
<td>In central locations where parking levies exist, parking must be priced and funds used for travel demand management strategies at a regional level.</td>
</tr>
<tr>
<td>TD10</td>
<td>Parking &quot;cash out&quot; programs (refers to an off the shelf package) incentivise employees not driving whilst helping employees to understand the true cost of providing parking.</td>
</tr>
<tr>
<td>TD13</td>
<td>Easier at new sites, difficult when free parking existed previously.</td>
</tr>
</tbody>
</table>

a Interview participant code from column one of Table 2.
Topic 2 - Barriers and enablers to travel planning

Leadership, organisational commitment and governance

A common point for discussion was that whilst leadership in an organisation implementing a travel plan needs to be both top down and bottom up, top down leadership is critical to getting contested actions implemented. There was passionate discussion of leadership (or its absence) at state government level on policy actions to support travel plans. Discussion about organisational commitment often referenced specific actions which either demonstrate commitment or a lack thereof (e.g. building actions into operations like new staff induction) and a lack of commitment was cited as a common source of implementation failure. Good governance for the travel plan was seen as critical and documenting the actions in the travel plan itself was spoken of as an important mechanism for reporting progress and re-gaining commitment.

Skills and other resources

A mix of discussion occurred under this theme. The types of skills required to support workplace travel plan implementation were spoken about. Two health practitioners felt that whilst the skill sets of health promotion professionals matched those required to supporting common actions in workplace travel plans, some would need training in the content areas of active travel and travel planning. [HI1, HI8] One transport practitioner
who was a decision-maker felt that travel demand management and travel behaviour change were concepts that people in local government responsible for supporting travel plans needed to be trained in. [TD9] Common discussion about resources included that it would be ideal to have parking revenue fund actions in travel plans and the importance of adequate funds for strong encouragement strategies. Resourcing a permanent and dedicated coordination position was the most common suggestion under this theme. One transport decision maker stated that this was a key learning, 

"..yes if it's not someone's job, in time it risks not getting done." [TD13]

**Pre-conditions for successful travel plan implementation**

Whilst there was some discussion about operations being suitable (e.g. organisations being able to allocate parking revenue to travel plan actions), most discussion related to transport infrastructure. At a site level this was in reference to end of trip facilities and in the surrounding area this focused on public transport access and levels of service as well as a connected and complete walking and cycling network.

"..and the real ticket for the higher sustainable transport use is to have the infrastructure supporting operations in place.." [TD20]
Topic 3 - Workplace travel planning and active travel

Most practitioners believed evidence was gathering to indicate that travel plans are an effective strategy for increasing active travel to work, although responses often focused on the challenge of selling active travel.

Physical activity by stealth – the challenge of selling active travel plans

Participants understood that increasing active travel to work is not the main reason a business would choose to develop a travel plan, but increased employee physical activity is a serendipitous benefit of developing one. In the context of state/national programs which include support for businesses developing travel plans delivered via government agencies including health, participants felt that recognising the motivations of organisations considering implementing a travel plan helped gain their commitment.

One transport decision-maker stated:

".. health is just not even on the radar for people doing a travel plan. It’s about .. parking pressure, or staff retention.. So unless you are able to draw those dots together through something that starts as cost, but turns out as a health benefit.."

[TD20]
There was also a feeling that there was some work to do, within health and other
government agencies at all levels, selling active travel and travel planning since “..it’s no
one’s core business.” [HD18]

Topic 4 - Health and Transport working together

This topic produced contrasting responses between health and transport practitioners.

A different level of understanding of each other’s skill sets

Health practitioners clearly described the skills transport practitioners apply when
supporting implementation of travel plans and acknowledged their expertise was
needed for particular actions (e.g. addressing parking). Two experienced health
promotion practitioners who had worked with transport practitioners to support travel
plan implementation stated explicitly that transport practitioners did not understand their
skill sets: “Um, I don’t necessarily think that the Transport people understand how well
that Health does behavior change. And so .. they don’t see health as, as strong .. a
collaborator as health is... They really do share some common skills but they just don’t
know”. [HD18] Transport practitioners recalled experiences of implementing travel plans
for health facilities where gaining end-user clinical health staff input was valuable since
it ensured their needs were met. Two also recalled experiences working with health
bureaucrats to develop parking policy for health facilities, which was made difficulty by union involvement.

Collaboration

Most discussion relating to collaboration was from health practitioners. Experiences were mostly positive and participants felt more collaboration would be beneficial. Two health practitioners suggested collaboration with local government is an essential action in travel plans. One health decision-maker believed the concept of integrated land use and transport planning was bringing the disciplines of transport and planning closer together, making it easier for health to collaborate since historically urban planners had ties with public health. [HD15] Another health decision-maker stated:

"..There’s.. bits and pieces of engagement around between transport and health. I think that could be really formalised with some dedicated action, ..that’s feeding into state plan delivery targets and can be jointly funded for benefit across both agencies. It.. will require time and that's one of the challenges.” [HD18]
Box 1. Some suggestions by participants to enhance collaboration

- Something systemic was needed to promote this understanding, and provided examples such as including information on the health promotion profession in transport planners courses, which is currently occurring in one university level Planning course in NSW.

- Another strategy mentioned was to engage with engineers and transport planners via workshops on demand side strategies involving key stakeholders currently supporting these strategies from state government, local government, health promotion and environment as part of continuing education credit points for their professional associations.

**Topic 5 - The future for workplace travel planning**

**Policy**

When discussing the future for workplace travel planning both health and transport practitioners spoke about policy. Overwhelmingly, participants felt that policy requiring development of travel plans was a necessary “trigger” for their development, and that improved strategies for supporting their implementation were needed. Specific examples of these suggested improvements are included in the full report of this study.
Box 2. Specific examples of policy action referred to by participants

Mandatory policy requiring the development of travel plans dominated this discussion and was referred to in different contexts including:

- that the NSW for parking in health facilities should consider active travel and travel planning;
- the WA policy for parking in health facilities which requires travel demand management strategies being a model for other states; and,
- in jurisdictions travel plans can be required through the land use planning and approvals process for new and expanded buildings it needs to be supported more effectively where it exists and expanded to other jurisdictions where it is not.

Work at different scales and implementation support

When discussing the future of workplace travel planning there was a large amount of discussion from all categories of participants about working at different scales (e.g. regional, state, etc.), and this discussion was often intertwined with talk about how implementation at different scales could be improved, where this work was already occurring, or supported well. The broad range of scales and the types of implementation support suggested are included in a full report of this study (Editorial team please insert link to supplementary file 2 here – Report, Long version). A common suggestion was to focus recruitment and implementation support strategies for businesses implementing travel plans in regions where there were plans for significant upgrades to transport
infrastructure. One participant concluded their feedback on the future for travel planning by stating: “It’s a golden opportunity.. extend the reach and .. benefits of the Premier’s vision of all of this infrastructure change.. with behaviour change programs.” [HD18]

Box 3. Examples of the different scales of workplace travel plan implementation

- state level implementation;
- focussing on implementation at multiple sites within specific regions or major centres where they are likely to have most impact;
- health facilities within or across whole local health districts in NSW or the whole state in WA;
- forming Transport Management Associations in business parks or regions;
- with developers who manage the leases for several tenants for a site;
- individual sites;
- with small and medium enterprises in less formal ways of supporting staff travel choices; and,
- small and medium enterprises utilising the pooled resources of local Transport Management Associations or groups of businesses who pool resources (e.g. paying larger employers at their site a fee for use of their carpooling program.)
Box 4. Types of implementation support referred to by participants

- upskilling local government to improve their understanding of the concepts of travel demand management and travel behaviour change for supporting travel plans required at a local level, leaving the state Transport body to be more involved in the larger scale projects that effect whole regions;
- co-funding agreements between health and transport to support systematic implementation at a state level;
- providing a sliding scale of financial incentives to businesses based on size;
- training service providers to support state level implementation or creating an expert support agency; and,
- training workshops for health promotion staff, local government staff and other stakeholders who support travel plan implementation to be run by state level transport bodies (it was noted these existed previously but the participant had not seen or heard of them since changes in government).
Discussion

Travel demand management and parking

Most transport practitioners described parking as an essential component of managing travel demand at a site, whilst only two health practitioners described it as a key action. Many health practitioners promoting active travel and supporting travel plans would not routinely be exposed to concepts of management of travel supply and demand in their training. In highly simplified terms, supply side strategies for managing transport have traditionally emphasised planning for a single mode (motor vehicles) and planning has been characterised by a ‘predict and provide’ approach to providing infrastructure (car parking, roads) where growth is predicted and infrastructure is built to meet that future need. The demand focused tradition of transport planning emphasises multi-modality and managing existing resources efficiently.

It is also possible that transport practitioners emphasised the importance of parking policy for managing travel demand since the concept of ‘induced traffic’ is well understood in transport circles, and evidence suggests more traffic is generated as a result of supplying more parking and road infrastructure, since driving becomes convenient.[25] Recognising the adverse consequences of this induced traffic has been an impetus for change in approaches to policy influencing transport supply and demand,
since it provides a strong rationale for the ‘predict and provide’ approach being unsustainable.[26]

Enablers to parking policy and managing travel demand

The approach of presenting a package of transport choices described by practitioners in this study is consistent with recent best practice travel planning. Most transport practitioners and some health decision-makers suggested transport management strategies should not be considered ‘in isolation’. Packaged approaches usually combine ‘carrots and sticks’: where ‘carrots’ encourage alternatives to driving private motor vehicles and ‘sticks’, which discourage driving, are introduced simultaneously to increase their acceptability. Published literature suggests the most successful travel plans have adopted this approach.[2, 16, 17] Another approach some transport planners have considered is ‘phasing’ in transport supply and demand so demand side strategies are timed to complement supply of new transport infrastructure (particularly multi-modal networks).[27] Understanding these concepts and how they can be translated to large scale implementation is critical to non-transport practitioners and policy makers being effective in achieving policy goals such as population level increases in active travel, large reductions in transport-related carbon emissions, decreased local road congestion or decreased parking pressure at sites since the best available evidence for travel behaviour change suggests that not considering these concepts will achieve modest changes at best.[28]
Some health decision-makers felt that their experience with implementing travel plans had shown small but meaningful increases in active travel to work can be achieved without addressing parking. This belief may stem from principles of translating empirical research through to meaningful population level health gains, where small impacts across large populations are important.[29] However, to achieve large population reach organisational travel plans need to be adopted by many organisations, which requires consideration of what motivates most organisations to develop travel plans and what they would define as meaningful change.[30] A growing organisation in a constrained space (e.g. a metropolitan hospital) may be motivated to commit to implementing a travel plan if it could avoid supplying another expensive multi-storey car park in future, which would require large reductions in staff driving to work that the evidence to date suggests can only be achieved by travel plans which include parking management actions.[2, 16, 17]

Leadership, organisational commitment and governance were described as essential elements of what makes travel plans effective. This is consistent with the literature on successful travel plan implementation.[20] Skills and other resources were also described as enablers and a dedicated coordination position was a common response, which has also been described by others as a key success factor.[31]
Barriers to successful travel plan implementation

One of the research questions was to understand barriers to effective travel planning and why. Much of the discussion related this research question related to a lack of the characteristics that would make travel plans work, which are described above.

Summaries of barriers and implementation challenges for travel planning described in the literature are a mix of macro level systems issues and micro site and organisational level issues. Macro systems issues include problems with the mechanism for regulation requiring travel plans via the planning system versus small take up where implementation is voluntary,[7, 14] a lack of supportive government policy,[32] under-development of the travel planning industry itself and non-acceptance by transport practitioners and government policy makers as a legitimate transport planning mechanism.[20, 32] Micro site/organisational level issues include travel plans being non-core business for organisations and insufficient resources being allocated.[20]

Transport and health practitioners in this study did refer to a lack of supportive policy and issues with regulatory planning requirements (or in some cases no regulatory mechanism) as barriers to successful travel plan implementation, and also described site-level organisational and resourcing issues in detail, as well as pre-conditions for travel planning success including walking, cycling and public transport infrastructure surrounding a site. These systems issues, site level issues and pre-conditions for travel planning success are important considerations for travel planning.
Travel plans as a mechanism for increasing active travel to work

Consistent with a growing body of literature on their effectiveness, there was consensus among health and transport practitioners that travel plans were effective for increasing active travel to work.[2, 3, 16, 17] However, discussion reflected the difficulty of getting more organisations to adopt them which has also been acknowledged in the literature on travel planning.[20] The inter-related themes participants discussed of travel plans achieving increases in employee physical activity levels by stealth, and how active travel is marketed both have implications for strategies to increase the take up of travel plans by organisations since they need to be sold to organisations as a solution for issues that are important to them. Whilst health may support travel plans to increase active travel and local government to decrease local traffic congestion, processes which encourage or require businesses to develop travel plans should focus on language that appeals to most organisations, and provide hard evidence or case studies of how they achieve these desired benefits for organisations. This may include improved site access for patients and customers, reduced transport or parking related costs, increased parking profits, increased business efficiency and improved staff satisfaction.

Working together to support travel plan implementation
Health, or more specifically health promotion, practitioners’ comments reflected the belief that their skills are highly aligned to the skills required for travel behaviour change but they felt transport practitioners did not understand or appreciate this. Core competencies for health promotion, such as communication and partnership building, do in fact align well with the new skills required for planning, implementing and monitoring travel demand management strategies and supporting sustainable travel behaviour.[33, 34] Transport experts have described skills including marketing, communication and business management being important for travel demand management in contrast to engineering and operations skills required for supplying transport infrastructure.[27] Consequently, different people may be required in the processes of managing travel demand. Promoting an understanding of these shared skilled sets may assist with potential collaboration between health promotion professionals and transport planners.

The future: recommendations for travel planning

Participants felt strong government policy support, including mandatory requirements for travel plans for some organisations, was important for the future of travel planning. This discussion was strongly influenced by the policy context in participants’ home states. Some participants from NSW discussed the need for better support of the regulatory mechanism requiring travel plans to be developed as a condition of planning consent.[7] In Western Australia, where this regulatory mechanism did not exist at the time of these interviews, participants felt that whilst this regulatory requirement can result in a tick-box
approach to developing travel plans it should still be adopted in that State with more thought given to how implementation and monitoring is supported. Whilst the literature shows that where the regulatory requirement exists it is the main reason businesses adopt travel plans,[1] it does not necessarily result in widespread adoption or effective implementation without suitable accountability measures.[7] Given the potential large benefits to transport systems and population health the issue of how implementation can be supported effectively deserves further applied intervention research and this could be informed by implementation theory and planning enforcement theory,[14] as well as considering pre-conditions for successful travel plan implementation described in this study and other literature.[16, 20]

In Western Australia, the Access and Parking Strategy for Health Campuses in the Perth Metropolitan Area mandates that with few exemptions, all health facilities adopt travel plans.[35] This policy states that: “Each health campus will develop a travel plan to meet the access needs of patients, visitors and employees. Revenue raised from parking charges may be used to fund the identified travel plan initiatives.” It specifies how the overall number of parking spaces at a site should be limited, and includes information to assist development of parking prioritisation systems which ensure staff and patients who need access to parking receive priority. Two participants referred to this policy as a model for other States to adopt. Indeed, in NSW some health decision-makers in this study referred to the current State level parking policy for health facilities as an opportunity for creating a supportive policy framework for reducing staff driving to work and increasing staff active travel.
Work at different scales was another prominent theme referred to by participants talking about the future for travel plans. Complementing behaviour change with new infrastructure projects is currently receiving research attention. Several studies have focused on new cycleways or busways, and two of these have attempted to measure the effect of behaviour change programs on their use.[36-39] Some very new research has also focused on the effect of transport networks on active travel.[40] There is great potential to also measure the impacts of complementary travel demand management initiatives, including workplace travel plans, on the use of transport infrastructure and networks at a regional scale.

**Similarities and differences in the perspectives of health and transport practitioners**

There were some notable differences in the perspectives of health and transport practitioners on implementing workplace travel plans. Differences already discussed above include the importance of parking management actions in travel plans as a way of managing overall travel demand at a site being discussed in a lot of detail mostly by transport practitioners; a couple of health decision-makers felt that their experience demonstrated you can still get small but meaningful change without parking management actions in travel plans; and, a different level of understanding of each
other’s skill sets, where health practitioners felt their skills relating to behaviour change were not well understood by transport practitioners.

Two differences not discussed above include transport practitioners expressing control of the issue of parking management, and most discussion relating to collaboration between health and transport being from health practitioners. The sense of control of the issue of parking management expressed by transport practitioners may relate to many of these practitioners having the training and skills required to develop parking management plans, but responses were also influenced by context.

Most discussion relating to collaboration being generated by health practitioners may also have been influenced by context. Despite purposively sampling transport practitioners who had worked with health practitioners on implementing travel plans, transport practitioners did not refer to actions in travel plans being implemented by health practitioners (e.g. health promotion officers), and instead mostly referred to staff in health facilities they had implemented travel plans in being consulted whilst developing the plans, which is good practice. For some of the respondents this can be explained by them not having had the experience of truly collaborating with health practitioners on implementing travel plan actions. Where this type of experience was mentioned by two transport decision-makers they both stated the experience was positive and there should be more collaboration between health promotion practitioners and transport practitioners on the implementation of travel plans and other travel
behaviour change initiatives. It may also be explained since developing partnerships is a core competency of health promotion practice, resulting in the health promotion practitioners interviewed being more likely to discuss this as part of their way of supporting travel plan implementation.[33]

Limitations and strengths

Limitations of the research include that responses under certain topics were influenced by the context of the experiences of the participants at that point in time. The two team members conducting the analysis felt that information provided needs to be framed in the context of the participants’ stage of development of workplace travel plans as an industry. For many health practitioners in NSW, workplace travel planning is a relatively new concept. It has received relatively little support from state transport agencies, although some support is only now commencing in Sydney under the Travel Choices program.[41] Travel plan resources and cases have been promoted by the Premier’s Council for Active Living website,[42] and have recently received some support via the inclusion of travel planning in the NSW Get Healthy at Work program.[43] However, since health departments in many jurisdictions are not the lead agency for supporting implementation of workplace travel plans the perspectives of health practitioners presented in this study are likely to be relevant to the situation in Australia generally. As is recommended in qualitative studies, some context has been described in methods to assist the reader interpreting the findings.[21]
Strengths of the current study include using framework analysis to facilitate transparent and rigorous interrogation of the data. This analysis method was developed specifically for policy-relevant research and it has been used to produce original comparisons of health and transport practitioners’ perspectives to inform inter-disciplinary policy and practice.

Conclusions

Health practitioners supporting travel plan implementation may require further training on key elements of effective workplace travel plans and concepts of travel supply and demand management. Promoting an understanding of the shared skills sets transport planners and health promotion practitioners have relating to travel behaviour change may assist further collaboration on support of travel plans and other travel behaviour change strategies. For take-up of travel plans by organisations to be of sufficient scale to achieve health and transport policy goals practitioners believe promotion and travel plans themselves should be re-oriented to focus on the priorities of the organisations rather than the policy objectives of government agencies (which will be achieved by stealth). Supportive government policy is also required and specific policy examples included the Western Australian Access and Parking Strategy for Health Campuses in
the Perth Metropolitan Area being a model for other States and Territories to consider.

A practical recommendation is to focus enhanced support efforts for organisations implementing travel plans in areas where upgrades to surrounding transport infrastructure are occurring. A research opportunity exists to test the combined effect of travel demand management strategies including travel plans with upgrades to transport infrastructure on traffic and active travel at a regional level.

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