

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Journal of Transport & Health

journal homepage: www.elsevier.com/locate/jth

Te Ara Mua –Future Streets: Knowledge exchange and the highs and lows of researcher-practitioner collaboration to design active travel infrastructure

Karen Witten^{a,*}, Penelope Carroll^a, Octavia Calder-Dawe^a, Melody Smith^b, Adrian Field^c, Jamie Hosking^b, the Future Streets team

^a Massey University, PO Box 6137, Wellesley Street, Auckland, New Zealand

^b University of Auckland, Private Bag 92019, Auckland 1142, New Zealand

^c Dovetail Consulting Ltd, PO Box 78-146, Grey Lynn, Auckland 1245, New Zealand

ARTICLE INFO

Keywords:

Collaboration
Participatory design
Knowledge exchange
Infrastructure
Active travel

ABSTRACT

Transforming vehicle-focused street infrastructure to support a shift to active travel modes can pose a complex interdisciplinary challenge requiring innovation and collaboration between residents, researchers and transport design and policy practitioners. Te Ara Mua-Future Streets is a street redesign intervention study that aims to slow traffic, change driver behaviour and make walking and cycling easier and safer in Māngere, a suburban neighbourhood in Auckland, New Zealand. It is a collaborative project between a research team, local community and the city's transport agency. Community engagement, evidence-based design innovation and outcome evaluation are primarily the responsibility of the research team while responsibility for infrastructure funding, procurement and delivery lies with Auckland Transport. Notwithstanding a shared commitment to the project's vision of street design innovation for health gain, the collaboration and implementation process has been challenging. Drawing on analyses of interviews conducted with researchers and transport agency personnel at two time points, the paper documents the collaborative process – factors that threatened to derail the design and delivery of innovative street design and those that ultimately enabled construction of a non-business-as-usual, neighbourhood scale intervention. Differences in the professional norms and practices of transport engineers and researchers, contrasting organisational cultures and approaches to risk, and lack of organisational readiness and capacity challenged the collaboration. Sharing insights on factors that had jeopardised the collaborative processes became a catalyst for change, and, coupled with the determination of individual researchers and engineers, enabled the collaboration to move forward to complete the intervention and identify mechanisms to facilitate knowledge exchange in future transport and health, researcher-practitioner collaborations.

1. Introduction

A mode shift from car to active travel is associated with multiple benefits: to population health by increasing levels of physical activity; to air quality by reducing carbon and other emissions; and to economic productivity by reducing traffic congestion. Within

* Correspondence to: SHORE & Whariki Research Centre, Massey University, PO Box 6137 Wellesley Street, Auckland, New Zealand.

E-mail addresses: k.witten@massey.ac.nz (K. Witten), p.a.carroll@massey.ac.nz (P. Carroll), o.calder-dawe@massey.ac.nz (O. Calder-Dawe), melody.smith@auckland.ac.nz (M. Smith), adrian@dovetailnz.com (A. Field), jamie.hosking@auckland.ac.nz (J. Hosking).

<https://doi.org/10.1016/j.jth.2018.03.001>

Received 3 October 2017; Received in revised form 26 January 2018; Accepted 1 March 2018

2214-1405/ © 2018 Elsevier Ltd. All rights reserved.

transport networks that were designed to prioritise car travel, infrastructure changes are often needed to support the active travel (e.g., walking and cycling) needs of local residents. Multisectoral collaboration between public health and transport researchers and practitioners provides a fertile environment for developing and testing infrastructure changes to support a mode shift to active travel. (Handy and Davis, 2016; Pilkington et al., 2016).

Te Ara Mua - Future Streets is a neighbourhood-scale, street redesign intervention study with an overarching aim of providing new knowledge on the health impacts of investment in active travel infrastructure. The research goal is to quantify the safety, health and economic impacts of redesigning streets to slow traffic, improve safe driving practice and make streets safer, easier and more appealing for walking and cycling. The intervention is located in Māngere in Auckland, New Zealand, a low-density suburban neighbourhood built largely as a state (government) housing area in the 1940s-1960s. The street redesign was initiated by the Future Streets research team and developed as a partnership project with Auckland's transport agency, Auckland Transport, Māngere community residents and the Māngere Local Board (the political body representing local residents). A community participatory process as well as best-practice evidence informed the design of the street intervention. Construction was funded by local and national agencies,¹ implemented by Auckland Transport, and completed in July 2017. An official launch of the Future Streets intervention was celebrated by community members and representatives of local, city and national government. The types of street treatments delivered are illustrated in the before and after images in Fig. 1a-c.

Now the new infrastructure is complete, and follow up measurement underway, we revisit the protracted, and at times difficult, design negotiation and development process that took place between researchers and transport engineers/planners. This paper presents a case study of research and practice interacting *in vivo* (Oliver et al., 2014); an exploration of the 'realpolitik' of multi-sectoral collaboration (Greenhalgh, 2010). It reports on professional and organisational friction that intermittently threatened to derail the collaboration during its first two years and the changes which occurred to support the project to completion. The analysis of the Future Streets collaborative process we present draws from interviews conducted with key actors in the project (research team members and transport agency representatives) at two time points. Community actor perspectives will be discussed in a subsequent paper. The analysis is informed by literature on knowledge transfer and collaboration.

1.1. Collaboration and knowledge exchange

Notions of a linear pipeline along which research-based evidence is transferred to end users have been superseded by models of knowledge transfer as a dynamic and iterative process produced through interaction and exchange between researchers, practitioners and decision-makers (Ward et al., 2012); and where research-based knowledge is likely to be one knowledge source amongst many that inform the 'messy' and negotiated process of policy or practice decision-making (Davies et al., 2008; Gagliardi et al., 2016; Oliver, et al., 2014). It is widely accepted that research use is context-dependent. Where action is a desired endpoint of knowledge exchange, end users play a pivotal role by sharing their knowledge and experience of 'implementation-relevant dimensions' of the local context (Contandriopoulos et al., 2010, p.467). As Marsden (2011) observe, the strategic fit of proposed solutions to local context is crucial to their consideration and adoption.

Reviewing various models of knowledge transfer, Damschroder et al. (2009) conclude that characteristics of individuals, organisational settings and the wider policy context influence whether or not collaborations are formed to instigate change and in turn effect change. Trusting relationships, established over time between individuals and organisations, are a touchstone for effective collaborations (Politis et al., 2017). Such relationships help create both momentum for change and resilience in the face of impediments (Contandriopoulos, et al., 2010; Greenhalgh et al., 2004; Greenhalgh and Wieringa, 2011; Jagosh et al., 2012; Nutley et al., 2007). Other commonly noted features of effective researcher-practitioner collaborations include an alignment of goals and timelines, respect for the diverse sources of knowledge parties bring to a collaboration and recognition that participants may work in organisations with differing values and cultures (Contandriopoulos, et al., 2010; Davies, et al., 2008; Oliver, et al., 2014; Sibbald et al., 2014).

When conditions for an effective collaboration are met, Davies et al. (2008) argue that knowledge transfer can become an interactive and ongoing social process. As partners define problems, build coalitions and negotiate solutions, established ways of thinking and business-as-usual practices can be challenged (Contandriopoulos, et al., 2010). This depiction of knowledge use has similarities to McDonald and Viehbeck (2007)'s notion of 'communities of practice' in which shared desires to improve a common practice precipitate knowledge exchange between parties and solution-focused dialogue.

While knowledge exchange via interactive partnerships is heralded as the way forward (Davies, et al., 2008), case studies illustrating such collaboration in action are rare (Contandriopoulos, et al., 2010; Ward, et al., 2012). More common are descriptions of barriers and enablers to researcher-decision-maker partnerships, and calls for strategies to bridge the worlds of research and policy/practice (Gagliardi, et al., 2016; Sibbald, et al., 2014). In a scoping review of researcher-decision-maker collaborations in health care, Gagliardi et al. (2016) suggest that to understand what works for effective knowledge exchange requires 'systematically tracking the evolution of partnership formation' to 'pin-point the activities or strategies that move the partnership from the formation stage into a more functional and active stage' (p.10). Ward et al. (2012) attempted to do this in health care organisations by locating a 'knowledge broker' whose role was to work as an intermediary to facilitate, observe and record the process of knowledge exchange. Their findings support a fluid and dynamic model of knowledge exchange wherein problem definition 'was open to continuous revision and evolution over time' (p.302). However, the diversity of contextual factors and influences on knowledge exchange across Ward et al.'s case

¹ Auckland Transport, New Zealand Transport Agency, Māngere Otahuhu Local Board, Auckland Council.

Download English Version:

<https://daneshyari.com/en/article/7486848>

Download Persian Version:

<https://daneshyari.com/article/7486848>

[Daneshyari.com](https://daneshyari.com)