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## Editorial

### Walking and working with others



#### 1. Networking

I am writing this while the UK and USA political leadership are becoming increasingly isolationist. So it was a pleasure to attend the inaugural meeting of Red de Movilidad por Bienestar y Salud en Latinoamérica, the Latin American branch of the Transport and Health Science Group. MoBiSaL was named at a meeting in January in Havana, Cuba, attended by representatives from Chile, Costa Rica, Cuba and the UK. The network currently has 60 members from nine countries. To join or find out more about the network, email [RedMoBiSaL@gmail.com](mailto:RedMoBiSaL@gmail.com).

The number of events where people from a range of disciplines, professions, and organisational types can meet to network, share experiences and learn from each other has been increasing exponentially since the first International Conference on Transport and Health (ICTH) was held in London in 2015 (Mindell, 2015). ICTH-2019 will be in Melbourne from 6<sup>th</sup> to 8<sup>th</sup> November 2019 (<https://www.tphlink.com/ictth-2019—melbourne.html>). Abstracts can be submitted from 6<sup>th</sup> March to 8<sup>th</sup> May 2019 on any relevant topic (see <https://www.tphlink.com/abstract-submission.html> for further information). As usual, accepted abstracts that are presented will be published in a supplement of this journal (<https://tinyurl.com/abstract-supplement>). Now is also a good time to start asking your organisation or department if they may be interested in sponsoring some aspect of the conference or awards, and to apply for funding.

These themes of networking and working continued at two conferences in February 2019. At TALES, The Active Living and Environment Symposium in Dunedin, New Zealand (<https://www.otago.ac.nz/active-living-2019/index.html>) politicians, practitioners from the private and public sectors, and researchers all debated active travel, its barriers and facilitators, and the importance and feasibility of policies and other interventions. A similar mix of people attended the Active Living Research (ALR) conference in Charleston, SC, USA (<http://www.alr-conference.com/>). The discussions were enthusiastic, respectful, and evidence-based – just as this journal tries to be. Selected papers from the ALR conferences are being published in special issues of this journal (e.g. Lyn and Sallis, 2018).

In this issue, Nielsen and Haustein (2019, Editor's Choice) emphasise the importance of enough resources for cross-sectional partnerships. This was a key feature of the wide-ranging campaign in Denmark to increase cycling, using local activities and a smart phone app. Together, these increased cycling substantially with an estimated 21 million additional cycling trips taken because of the campaign.

#### 2. Walking, walkability, and physical activity

A mobile phone app was also an important component of a walking school bus service led by paid volunteers in increasing walking to school in primary school children in Spain (Pérez-Martín et al., 2018). The app allowed parents to know their child had arrived safely - and was also used to monitor participation. Carver et al (this issue) found that, for children aged 5-12 years in Melbourne, Australia, infrastructure that provided good walkability around schools and campaigns targeting the whole household to target age-appropriate travel behaviours were the factors most associated with active travel to school.

Many walkability models, which generally describe the potential for making journeys as pedestrians, include residential density, connectedness, and the variety of potential destinations and sometimes public transport access in the assessment (e.g. Dhanani et al 2017; Stockton et al, 2016), although the built environment features have been found to be better predictors of walking in some places (Adams et al, 2015). Connectedness has been measured in many ways, including junction density (Ellis et al, 2016), space syntax (Dhanani et al, 2017), and comparing networks using roads or footpaths (Cruise et al, 2017).

Huang and colleagues (this issue) used a combination of two objective and one self-reported measure to assess walking by a large sample of adults in Seattle, USA. They confirmed the association of higher residential density with actual walking but also found that job density was important, presumably as commute destinations. They defined the home neighbourhood as within 0.5mile (0.8km) or

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a 10minute walk of the participant's home, also used by [Hillsdon et al \(2015\)](#), whereas others have used 500m network buffers ([Hajna et al, 2015](#)) and my colleagues and I used one mile (1.6km, or a 20 minute walk, [Mindell et al, 2017](#)). Even with the neighbourhood defined in their more limited extent, more than half the walking trips occurred in the participants' own home neighbourhood.

Walkability is also used to describe how easy it is to walk, referring to the available infrastructure. In the US Virgin Islands (USVI), volunteer auditors assessed a random sample of 1,114 public streets using a modified version of the Microscale Audit of Pedestrian Streetscapes tool ([Kurka et al, 2016](#)). Inter-observer reliability was found to be good for most items in the audit tool ([Ussery et al, this issue](#)). In 2012, [Kaczynski and Glover \(2019, this issue\)](#) had shown in Waterloo, Canada that both walkability and perceptions of neighbourhood social connectedness were important for encouraging walking.

### 3. The health imperative for active travel

In the UK, it has been estimated that physical inactivity costs society £7.4bn (US\$9.7bn) annually, ([Public Health England, 2014](#)). In 2016, 34% of men and 42% of women aged 19+ years reported physical activity levels below the UK guidelines (of 150minutes moderate activity weekly); the proportion of adults meeting the recommended levels decreased with age ([Scholes 2017](#)). A study of older men (aged 71-92 years) in Great Britain without pre-existing cardiovascular disease found that each additional half hour of light physical activity, as recorded by accelerometers, reduced all-cause mortality by 17% (95% CI 10-23%), even after adjustment for sedentary behaviour and moderate to vigorous activity. Accumulating at least 150 minutes of objectively measured moderate to vigorous intensity physical activity per week reduced mortality by 41% (19-57%) regardless of the duration of each episode of activity. Importantly, they found no evidence that sporadic activity was less beneficial than activity episodes lasting at least 10 minutes' duration ([Jefferis et al, 2018](#)).

In November 2018, the 2<sup>nd</sup> edition of the Physical Activity Guidelines for Americans was published ([Piercy et al, 2018](#)). This extends the recommended amount of moderate intensity physical activity for adults, changing from at least 150minutes per week to advising 150-300 minutes per week. This evidence-based recommendation is exemplified by a USA cohort study of older people, which found that the benefits of walking, which were larger with greater walking levels, comparing 150 or 300 minute thresholds with less weekly walking, and were independent of other moderate or vigorous intensity physical activity ([Patel et al, 2018](#)). Patel and colleagues also found that any walking, below the 150 minute target, was still associated with lower mortality compared with people who were sedentary. It is useful to know that walking can provide sufficient activity for health benefits, even in older people, who generally walk more slowly ([Chandra and Bharti, 2013](#); [Duim et al, 2017](#); [Webb et al, 2017](#)).

### 4. Injuries

With increased walking, there can be an increase in pedestrian injury. The importance of pedestrian falls as a category of road travel injury is being increasingly recognised (e.g. [Methorst et al, 2017](#)). After reviewing the published literature, [Elvik and Bjørnskau \(2019\)](#) report in this issue that 97% of the 6309 injured pedestrians recorded in Oslo, Norway, were injured in falls in which no other road user was involved. As with other road travel injuries ([Feleke et al, 2018](#)), the risk of falling (per million km walked) showed a J-shaped pattern with age; was higher among women; and twice as high in the presence of snow or ice ([Elvik and Bjørnskau, 2019](#)). When trying anti-slip devices to reduce pedestrian falls, it is important to consider not only anti-slip properties but also the effects of the device on balance ([Gard et al, 2018](#)).

However, road travel injuries, as currently defined, involve at least one vehicle. [Ma et al \(2019, this issue\)](#) found that an Emergency Medical Services (EMS) response time of less than 5.5minutes was associated with the highest survival odds after road travel collisions. They postulate that the improved survival among those not reached within 17 minutes was due to reverse causality through appropriate triage (i.e. where the telephone dispatchers identified the person was not seriously injured, the EMS were sent with a lower priority).

### 5. Prioritising and supporting active travel

The English National Institute for Health and Care Excellence (NICE) has recommended that upgraded and new roads and planning policies and interventions should prioritise walking, cycling, and public transport over personal motorised vehicles ([NICE, 2018](#)). It also recommended greater use of health impact assessment (HIA) to assess proposals. At a time when some are worried that the past decade's focus on population health in the USA is increasingly individual-focused ([Lantz, 2018](#)), this journal and those working across disciplines to integrate transport and health in policies and local interventions echo Lantz's call to remain 'upstream', dealing with broader determinants of health and the environment (built, natural, legislative, fiscal and social) in which people make their decisions. Another example of an upstream focus is the National Public Health Assessment Model in the USA ([Schoner et al, 2018](#)), a platform for professionals to conduct a rapid HIA.

I was recently given a guided tour of the intervention area of Te Ara Mua – Future Streets in Mangere, Auckland, New Zealand. This project used co-design by local community members, most of whom are poor and from indigenous and other minority ethnic groups, as well as transport planners and the researchers to develop changes to local infrastructure and reclassification of roads to arterials, feeder routes, and local streets, using the concept of 'self-explaining roads' ([Macmillan et al, 2018](#); [Witten et al, 2018](#)). Their approach to evaluation was underpinned by the theoretical basis of the applied ecological framework or natural experiment developed by [Ogilvie et al \(2011\)](#) in the UK, itself based on the work by [Saelens et al \(2003\)](#). Meanwhile, [Vich et al \(this issue\)](#) found

that not only trees but also large, open blue and green spaces are significantly and positively associated with more walking.

Blanchette and colleagues (this issue) assessed the propensity of local government staff in Quebec, Canada to improve the local environment to facilitate active travel. While investment of time and resources were important, they suggest that greater support from public health networks and improving the staff's competencies could increase their perceptions of control and thus involvement in policies to encourage active travel, particularly in rural communities. For older people living in rural areas, a review of qualitative studies found that walking and public transport could be very useful travel modes but only where the facilities and services were adequate (Graham et al, 2018).

Unhealthy behavioural risk factors tend to cluster in the same individuals (Kroesen, 2019; Scholes, 2018; Schuit et al, 2002). Using data from 2,000 Dutch longitudinal panel members, Kroesen found that active travel (or its absence) were important elements of healthy (or unhealthy) lifestyles. Habits formed in childhood tend to track through to adulthood (Telama, 2009). Encouraging active travel among children is thus important for their health in both the short- and long-term. While a school travel programme in Canada had positive effects on adolescents' and parents' attitudes, impacts on travel mode were non-significant (Buttazzoni et al, 2019, this issue). Barnett et al (2019, this issue) found higher frequencies of active travel overall and to school among adolescents in Hong Kong than most studies elsewhere have reported. Key factors increasing active travel in their study were peers' social support from peers, parental active travel, and, as one would expect, destinations including schools being within walking distance from home. It probably helps that Hong Kong, despite its hilliness and main roads, has ample walking provision, often completely separated from motor traffic. Perhaps weather is also a factor, as Larouche et al (this issue) point out that (in New Brunswick, Canada), interventions are needed to maintain physical activity levels in winter as active school travel is lower then.

## 6. Commuting and wellbeing

Ettema and colleagues (2016) reviewed commuting and wellbeing, considering a range of countries and travel modes. Active travel was consistently associated with higher satisfaction than motorised travel; public transport can be a good alternative to car use if overcrowding, accessibility, safety and cleanliness are adequate. Similarly, Ye and Titheridge (2017) had also found satisfaction with travel depended on the mode, congestion, and service features of public transport. In this issue, Gimenez-Nadal and Molina (2019) report that in the USA, more time spent commuting was associated not only with higher levels of fatigue and stress but with more sadness and fatigue during childcare when not at work. Perhaps this fatigue is unsurprising, given that an earlier American study had found that each additional hour spent commuting was associated with 15 minutes less sleep (Petrov et al, 2018). A longitudinal study in Scotland found that satisfaction with usual travel mode increased over time more slowly for those using a car rather than other modes (Olsen et al, 2017). Smith (2017) had found that in Portland, Oregon, USA, commuting wellbeing (the short-term wellbeing associated with travel) was greatest in those who walked or cycled. A longitudinal study in the UK found that more time spent commuting was associated with reduced wellbeing for drivers but increased wellbeing for those who walked (Martin et al, 2014). Yet we should not forget that not only travel mode affects subsequent wellbeing and health, but health status can also affect which travel options are feasible (Mattisson et al, 2018).

## 7. Access and Attitudes

A study of UK citizens aged 60+ living in rural areas found that those with access to a car were around three times more likely to participate in formal activities although informal activity, such as seeing friends, was more common in those without car access. However, age and health were more important factors affecting wellbeing than participation in activities (Shergold, 2019). In Korea, the number of cancer patients living in rural areas who accessed outpatient services in Seoul increased significantly after a high-speed train was introduced in the region (Choi et al, this issue).

An analysis of the Karachi Household Survey by Hoor-Ul-Ain (2019, this issue), found that around two-thirds of participants considered public buses unreliable, unsafe, overcrowded, and uncomfortable. More worryingly, more than half the women who responded felt insecure and faced sexual harassment on buses. Some of the challenges are similar to those experienced by people with impaired mental capacity, particularly overcrowding, unreliability, and discrimination by others. A second study in this issue examining people's attitudes looked at perceptions of people with intellectual impairments to autonomous vehicles (Bennett et al, 2019, this issue). These were affected by general anxiety, the extent of their impairment, prior knowledge of driverless vehicles, locus of control and gender.

## 8. Methodology and protocols

We encourage publication of studies making methodological advances, so welcome Aldred and Croft's (2019, this issue) paper describing a method for evaluating changes in active travel associated with small schemes using an intercept survey to complement information from traffic counts. We have also added an additional category to our article types, 'protocols'. To be considered for publication, this should not be solely the protocol itself, which could merely be placed on the study's own website. It should include information on how the protocol was developed and lessons that others can learn from the process.

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