12 February 2016

General Manager, Planning and Environment
Hunter & Central Coast
PO Box 1226
Newcastle NSW 2300

Dear Sir/Madam,

The Hunter New England and Central Coast (HNECC) Primary Health Network (PHN) welcomes the opportunity to provide a response to the Draft Hunter Regional Plan and Draft Plan for Growing Hunter City.

HNECCs vision is for 'Healthy People and Healthy Communities'. We aim to deliver innovative, locally relevant solutions that measurably improve population health outcomes. To achieve this we analyse the health and access needs of communities in the region, particularly focussing on populations at risk of poorer health outcomes and health inequalities.

Some of the current and predicted challenges we face in improving the health of communities in the Hunter region, which are pertinent to urban design, include: an aged and ageing population; health workforce shortages; high rates of physical inactivity, overweight and obesity; and high prevalence of chronic disease such as diabetes, heart disease and respiratory disease.

Attempts from within the health sector to prevent chronic diseases due to sedentary lifestyles have been met with only limited success. Obesity and diabetes have increased markedly, and while heart disease has declined due to the reduction in smoking this trend may be reversed as the obese generations move into older age. Extended periods of time spent sitting at work, at play and during travel is becoming a threat to health. The best efforts of doctors, dietitians and exercise physiologists to change diet and exercise patterns have only small impacts that frequently do not last. Health practitioners are starting to look beyond the health sector for ways to support healthy life choices for the whole population, not just those who turn up sick at the clinic.

The recent public health media campaign to ''make healthy normal'' is on the right track, aiming to shift personal and cultural norms towards food and activity choices that will maintain health over the long term. On the physical activity side of the equation there is a powerful role that town planning and urban design can play in assisting or inhibiting the efforts to make adequate activity a normal part of everyday life. The research literature shows that this occurs through three main pathways: mixed use urban design that reduces sprawl and the need to travel long distances; provision of cycling and walking facilities to boost active transport; and maintaining access to greenspace.

HNECC submit the following recommendations for your consideration which are supported by the discussion and literature below:

Recommendations

1. There should be a target to reduce vkt/p (vehicle kilometres travelled per person) progressively over time, with the intention of using modern urban design principles to assist people to access their important locations such as work, school and shops within a reduced travel distance through compact urban design. This should be reported against each two years

2. Rapidly construct a cycling network at a high standard of safety, so that cycling becomes a safe transport option for adult and child urban trips up to 10 Km distance. The initial target should be a cycling mode share of 5% for adults and 20% for school children, with a regular reporting mechanism assessing progress against this target

3. Ensure the provision of high-quality pedestrian infrastructure and housing suitable for the elderly so that the projected accessibility and health needs of an ageing population are achieved for individual communities.

Discussion

Urban sprawl, commuting time and health

The amount of time adults spend sitting down is associated with obesity, markers of poor metabolic health such as reduced insulin sensitivity, and increased cardiovascular risk(1). These associations are significant even after adjustment for leisure time physical activity, so playing sport on the weekend or going for an evening walk does not fully remove the adverse impact of an eight hour day sitting at work. Long commute distances come on top of other sitting time through the day. Research conducted over the last decade has documented a pernicious effect of commuting travel time on obesity and other health markers. The effect of commuting on health has been shown for adults in multiple locations including Atlanta USA(2), Sweden, and Sydney(3). In Texas, adults commuting 25 to 32 Km had a 52% increased chance of obesity and a 33% reduced chance of meeting the standard for cardio-respiratory fitness compared to those commuting 0-8 Km after adjustment for confounders(4).

Similar results have been shown for children in a range of locations. These associations persist after adjustment for socioeconomic status so it is not just that poorer people have to drive further to reach residences they can afford. Whether the outcome is BMI, fat mass, or cardiorespiratory fitness there is an adverse association with increas**ed commuting time among drivers**(5)**.** The NSW household travel survey 2010 shows an average trip to work time in the Hunter of 25 minutes, which is better than the 34 minutes for Sydney. Pushing it lower would still yield benefits. This is a compelling reason for regional planning to adopt a goal to reduce commuting distances, and to monitor vehicle Kilometres per person per year with the target to push this lower over time. While the health outcomes justify this objective, there would be economic and environmental co-benefits. In practical terms this means locating the 60,000 new dwellings within 5 km of the nine regional centres mentioned on page 11, Direction 1.1, rather than expanding Medowie or Lochinvar.

Active Travel

Weekly gross energy expenditure of 4Mj is recommended to reduce all cause and cardiovascular mortality. This can be achieved by walking 1.9Km in 22 minutes twice a day, or cycling at 16Km/hr for 11 minutes twice a day, for 5 days a week. Cohort studies in European cities have documented a 28% reduction in all cause mortality in commuter cyclists compared to non-cyclists over 20 years follow up, even after adjusting for confounders including leisure time physical activity.(6) This can be interpreted that while all exercise is good exercise, people's sports and leisure activity will wax and wane but their commuting behaviour is likely to continue for decades. A 28% reduction in all cause mortality is better than any medical treatment ever devised. Australian research on this topic analysed the NSW health survey using a cross sectional design, whilst this is weaker evidence it also showed better health in active commuters.(7)

Active travel as documented in the NSW Household Travel Survey 2012 currently comprises mode share of 11.9% for walking and 1.6% for cycling across Newcastle, so it is not making a substantial contribution to community health. This can change however when the environmental conditions are right. Wickham is well served by a safe off road cycleway, and at the 2011 census showed a mode share for trips to work of 5.5% for cycling. The neighbourhood environmental factors associated with adoption of cycling have been studied in people moving to new residential suburbs of Perth, WA. The RESIDE study examined transport activity in 1427 people before and after relocation, and showed that of the 1289 non cyclists 5% started riding for transport. Uptake of transport cycling was associated with increased residential density, and the number of recreational destinations within a 1.6 Km network buffer(8). Substantial mode shift to cycling is possible over time, but safety is the paramount barrier and improvement to safety by provision of separated road space is a precondition. Respondents to the Newcastle City Council's Newcastle Voice survey show that 67% of non-cyclists would like to ride more but are held back by not feeling safe on the road.

The travel habits of school children are especially important as travel habits have been shown to track from childhood to adulthood(9). In 2002 Merom studied families with children aged 5 to 12 by telephone interview of a random NSW sample. She showed that only 22% of children used active transport for all 10 school trips per week, and 37% of children made at least 5 active trips per week. Active transport was associated with shorter trip distance, older age, male sex, and parental active transport to work. It was inhibited by perception of an unsafe road environment. That the active travel of children was associated with active travel by parents is important, as an adult who has accompanied children to school on foot or bicycle is much more likely to proceed to their work the same way. While the design of school networks and broader suburban cycling networks are different, this finding supports tackling child and adult cycling needs simultaneously to exploit available synergies.
In practical terms this means moving forward to construction of the CycleSafe Network proposal that community members have developed over the last year, as well as paying special attention to creating a 1km safe walking and cycling radius around each school.

Greenspace

There is a substantial association between health and access to public open space or "greenspace" that has been documented in many locations around the world. The association is both with physical and mental health, and is not all mediated by physical activity. Having access to parks not only helps people be more active, but it helps them feel better psychologically. Importantly it has been shown in the UK that access to greenspace reduces the socioeconomic gradient in cardiovascular disease, so while being poor is bad for heart health, being poor in an area with good parkland is less of a burden. This effect was not due to better air quality, as that was adjusted for statistically.(10)

In Adelaide people who perceived their neighbourhood as highly green had 1.37 times higher odds of good physical health, and 1.60 times the odds of better mental health, after adjustment for sociodemographic variables(11). In Perth it was shown that although proximate parks encouraged use generally, having good access to larger public open space is associated with higher levels of walking, and this was enhanced by parks that had attractive features such as trees, water areas and birdlife.(12) The average park size in that study was 6.2Ha.

The Hunter city plan notes that (direction 1.4) the majority of Hunter residents live within 800m of greenspace. This makes an important contribution to health, and if the evidence from the UK applies here, greenspace availability may assist in reducing the socioeconomic gradient in health that is so resistant to efforts of the healthcare system. As well as proximity, the quality of urban greenspace enhances its use. We applaud inclusion of the CycleSafe Network proposal in the Hunter City plan, but believe it belongs in direction 1.3 to enhance city wide transport rather than with the parks and gardens section of the plan.

Urban sprawl, access and provision of health services for an ageing population

The proportion of the population aged 65 years and over in the Hunter region is projected to increase. This will see a significant impact on the health needs of the community. As reported by NSW Planning and Environment, by 2031 particularly high rates will be seen in the LGAs of Great Lakes, Gloucester, Dungog, and Port Stephens with 41%, 40%, 28%, and 27% of the population aged 65 years and over respectively. Consultation conducted with community service providers and NGOs across the Hunter region in 2014 identified that older people in the community were experiencing difficulties accessing health services, with limited transport seen as a significant barrier. This is particularly a problem for older people who are medically unfit to drive, if they live in low density suburbs with poor access to services.

A growing concern for the ageing population is driving cessation as a result of increased disability and poorer health, and the impact this has on mobility and independence for this group. Mobility limitations can affect an individual's health through a number of pathways including: isolation and loss of social ties which can lead to depression and other adverse mental health outcomes and a lack of access to resources such as fresh foods and healthcare. Mobility alternatives to the private vehicle are required to help seniors maintain their independence as the individual transitions away from driving. There is no one mobility solution to make independent living possible, but a range of public, private and personal mobility options is feasible. In all cases, patterns of land use will affect the acceptability and viability of

transit alternatives. Personal vehicles that do not require driving licences, such as powered wheelchairs and scooters, offer seniors independent mobility for local trips and will become increasingly viable. A high-quality pedestrian infrastructure will support this mode of transport, along with encouraging active transport where practicable.

An ageing population also highlights a need for increased emphasis on home and community care services, including a range of supported accommodation options. Housing is a potential major area of involvement for more aged and community care organisations. The care of older people needs to be viewed from a whole-of-community perspective incorporating urban design, accessible services such as transport and supportive communities. People will move from hospital to residential care or home and sometimes back again. Planning for aged and community care service delivery and infrastructure and a range of housing types of appropriate densities, location and suitability, that support older people remaining at home, should be a routine and required aspect in all urban developments and redevelopments.

Thank you for your time in considering these points for promoting and planning for healthy environments, healthy lifestyles and community well-being in the Hunter region. Please feel free to contact me on RNankervis@hneccphn.com.au should you require any additional information.

Yours sincerely

Richard Nankervis
Chief Executive
Hunter New England and Central Coast PHN

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