An evidence-based journey towards democratic streets

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The premise for democratic streets

• Streets are an important part of the landscape of everyday life. People rely on them for such daily activities as travel, shopping, and interactions with friends and relatives. Much social life and learning occurs along streets.
Empirical research, historical analysis, and some demonstration projects began to show that good streets are democratic streets – streets that have meaning for people, invite access for all, encourage use and participation, are loved, and are well cared for by their users.
“It has been acknowledged that a large gulf remains between what we know and what we practise. Hence a task, if not the main task, is to improve knowledge transfer.”

Evidence in local government

“The successes of the evidence-based healthcare movement have been much trumpeted... Strikingly, local government work on the determinants of health appears to be one arena in which this paradigm was largely absent.”

The bounded reality triad of local govt

- Pragmatism/Business As Usual
- Politics/Ideology
- Scientific Evidence
Some insights on recent practice

“I have never considered research as a method of looking at a particular road safety issue. Whilst aware that obviously research was being undertaken, and from time to time hearing about it, I have never given it much credence [or] seriously looked at it as any more than general information”

Hewson, P. 2007 Evidence-based practice in road casualty reduction, Injury Prevention, 3;291-292
Evidence hierarchy

- Establish causality (bias --)
- Generate hypotheses (bias ++)
- Expert opinions
- Cross-sectional studies and case studies
- Uncontrolled longitudinal studies
- Controlled longitudinal studies
- Randomised controlled studies

"It is shown that ..."
"It is likely that ...
"There are signs that ...
"Experts are of the opinion that ..."
20mph speed limits: Building and using an evidence base

- Designed pilot with qualitative and quantitative measurements
- Reviewed 20mph literature internationally for health and other impacts
- Commissioned primary research to support programme
- Bid for research funding ie NIHR
- Built links with key researchers in the field and policy experts internationally
- Have a clear evidence audit trail of rationale for policy and practice decisions
Road Danger Reduction

- Knowledge Transfer Partnership funded with Bristol City Council and UWE (ph) – 9 months
- Investigate potential for shift from casualty reduction (ie to reduce danger at source)
- Modelled on Vision Zero (SE) & Sustainable Safety (NT)
- Key aspect: speed – 20mph for residential streets to reduce violence from traffic
Who Gets Hurt?

• And who gets hurt the most?

- In 2012, 50 pedestrians, 29 cyclists, 34 motorcyclists, 20 car occupants were killed or seriously injured on Bristol’s roads.

- In the period 2008 to 2010, the 25 most deprived Super Output Areas in Bristol had 21% of KSI casualties.

- The 25 least deprived Super Output Areas had 5% of KSI casualties.
20mph Speed Limit Pilot Areas

Information about the 20mph speed limit and its benefits

Bristol City Council's Cycling City project, in partnership with the Active Bristol programme are proposing to introduce pilot 20mph speed limits across two residential areas at Inner East Bristol and Inner South Bristol.

Pilot area maps

- Inner East Bristol Pilot Area
  Wards affected: Ashley, Easton, Eastville, Lawrence Hill, St George West

- Inner South Bristol Pilot Area
  Wards affected: Bedminster, Lawrence Hill, Southville, Windmill Hill

Objectives

The primary objective is to make walking and cycling around these areas safe and more attractive thereby
The prevention paradox and population strategies applied to transport

- Interventions addressing a large number of people who are at a small risk may be more effective in reducing injury and illness than interventions addressing small numbers at high risk.

Theoretical distribution of the exposure to risk of road death and injury, showing a reduction in the average exposure for the entire continuum of risk (dotted line).
A Safe Systems Approach to
Road Safety in Bristol
A Ten Year Plan
Reducing Road Danger in Bristol

• **Vision:** *Bristol should be a city safe for a 10 year old to walk independently to school*

• **A Safe System Approach:**
  - life & health should not be sacrificed for mobility
  - human error should not lead to death or serious injury
  - vulnerable road users should not be exposed to forces which are likely to result in serious injury
  - road users need to be encouraged to behave with care and avoid unsafe violations

• **We aim for**
  - Safer Roads
  - Safer Speeds
  - Safer Road Users
  - Safer Vehicles
Safer Speeds

- 20 mph Speed limits – city wide roll out completed Sept 2015

- Safety cameras
  - reactivated from 2014

- Community Speed Watch
  - joint promotion and coordination

Being there – co-located/embedded

A review of the evidence for effectiveness of centre-line removal to reduce vehicle speeds in signs-only 20mph and 30mph speed limits

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20mph speed limits: attitudes and behaviours compared for GB, Bristol, established 20mph cities and towns, and non-20mph cities and towns

Professors Alan Tapp and Clive Nancarrow
Jan 2014

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Can social marketing make 20 mph the new norm?

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\textsuperscript{a}This paper reports the findings of a study that explored the possible role for social marketing in supporting compliance with 20 mph signs-only speed limits. The study, completed in July 2012, involved a review of the literature, the re-visiting of case studies of existing and planned 20 mph signs-only schemes, mainly within Great Britain, and a qualitative research project with the citizens of Bristol, England.

A key finding was the mismatch between people’s apparent support for 20 mph limits and their actual compliance with these limits.
Safety Essential Evidence

142: Kinetic Energy Management, Haddon’s Matrix, and Road Safety

121: School based driver education for the prevention of crashes: Evidence and policy

118: Car manufacturers and global

117: Can society address social
Some final thoughts…
Proposition: Increase the importance of robust evidence as standard

• The primacy of an evidence-based approach – the power of the science of the prevention paradox
• Should not all transport departments have someone trained in evidence reviews... to ensure managers and politicians have the best available evidence?
• Upskilling, next generations, and translational research are all needing much greater emphasis
• Thank you

• adrian.davis@bristol.gov.uk
• www.travelwest.info/evidence
  • www.pteg.net
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