



Knowledge Exchange Seminar Series (KESS)

...is a forum that encourages debate on a wide range of research findings, with the overall aim of promoting evidence-based policy and law-making within Northern Ireland



The importance of doing regular physical activity to health, society and the economy: Time for a major re-think

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Summary of Benefits of Physical Activity

Strong evidence of reduced rates of:

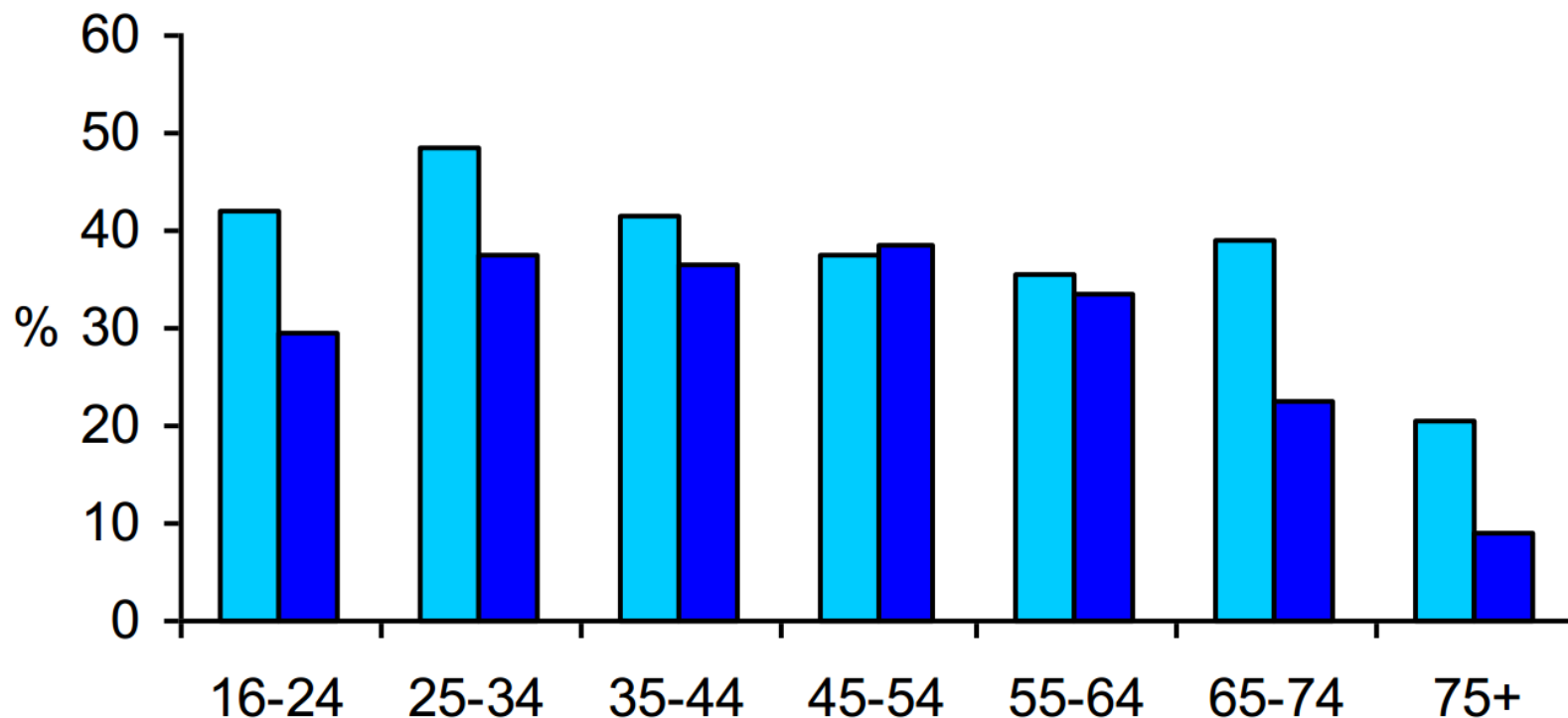
- All-cause mortality
- Coronary heart disease
- High blood pressure
- Stroke
- Metabolic syndrome
- Type 2 diabetes
- Breast cancer
- Colon cancer
- Depression
- Falling

Strong evidence of:

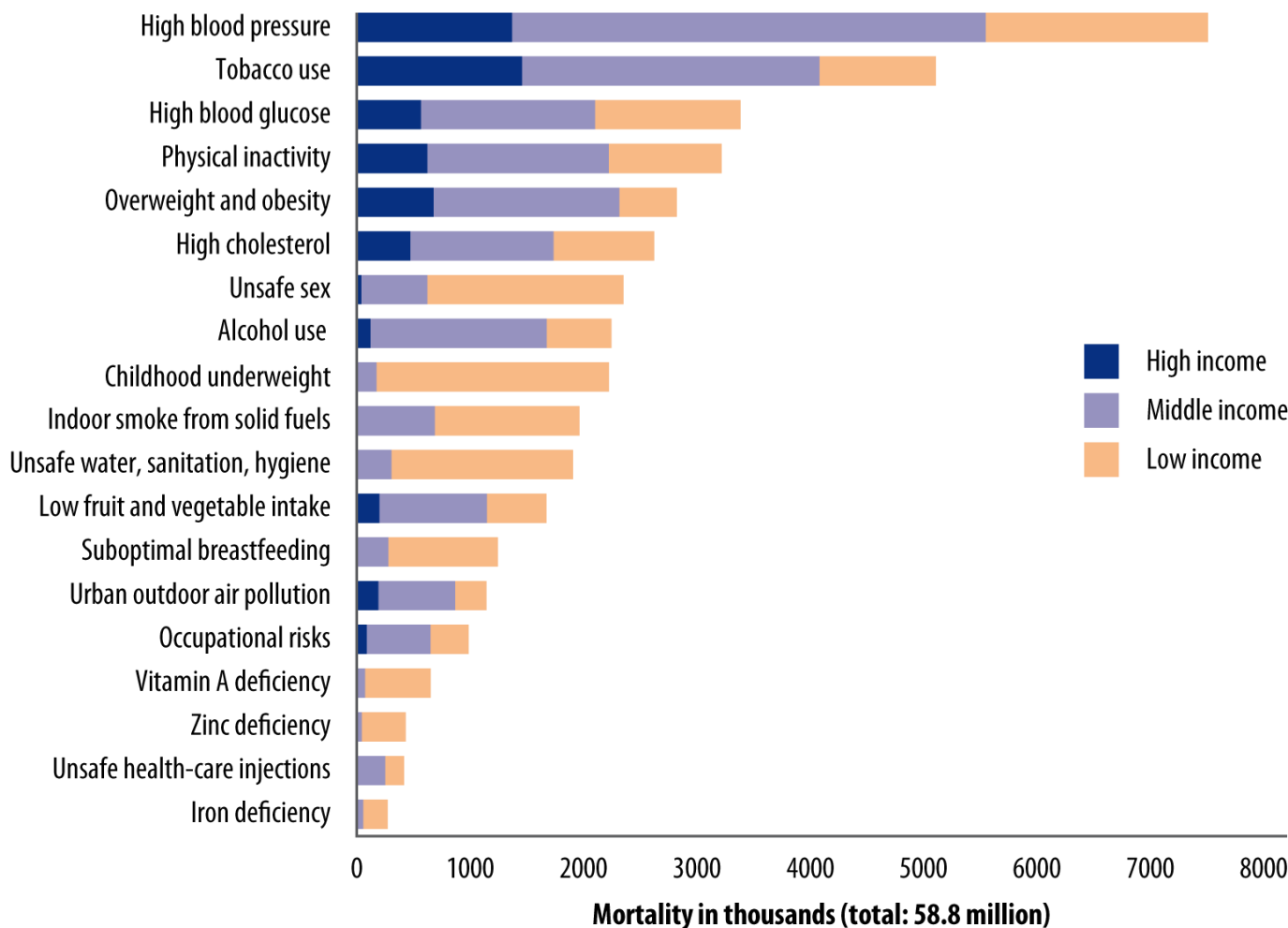
- Increased cardiorespiratory and muscular fitness
- Healthier body mass and composition
- Improved bone health
- Increased functional health
- Improved cognitive function

Economic cost of inactivity £1bn per year

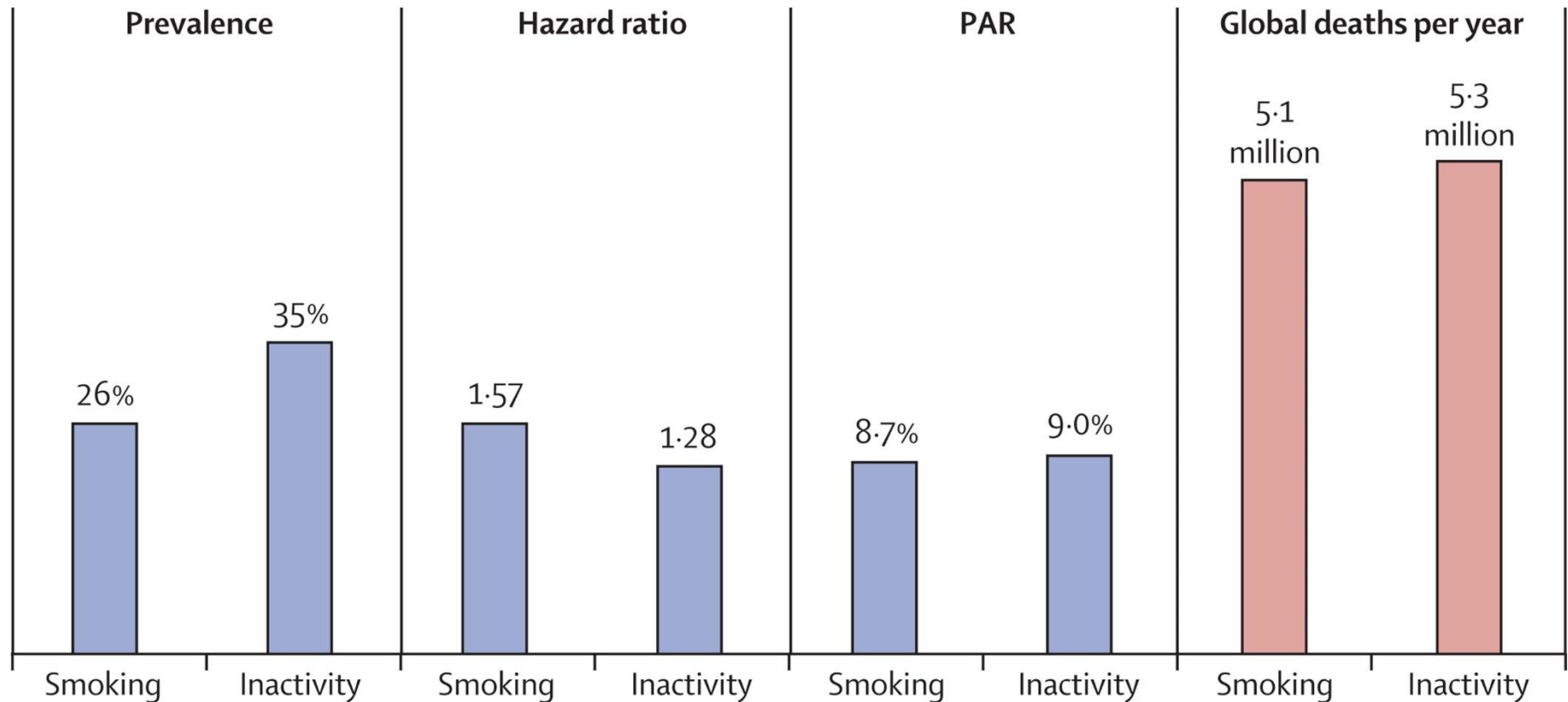
Figure 8: Respondents meeting the recommended physical activity levels by age and sex



Deaths attributed to 19 leading factors, by country income level



Comparison of global burden between smoking and physical inactivity



Why are people inactive?

People

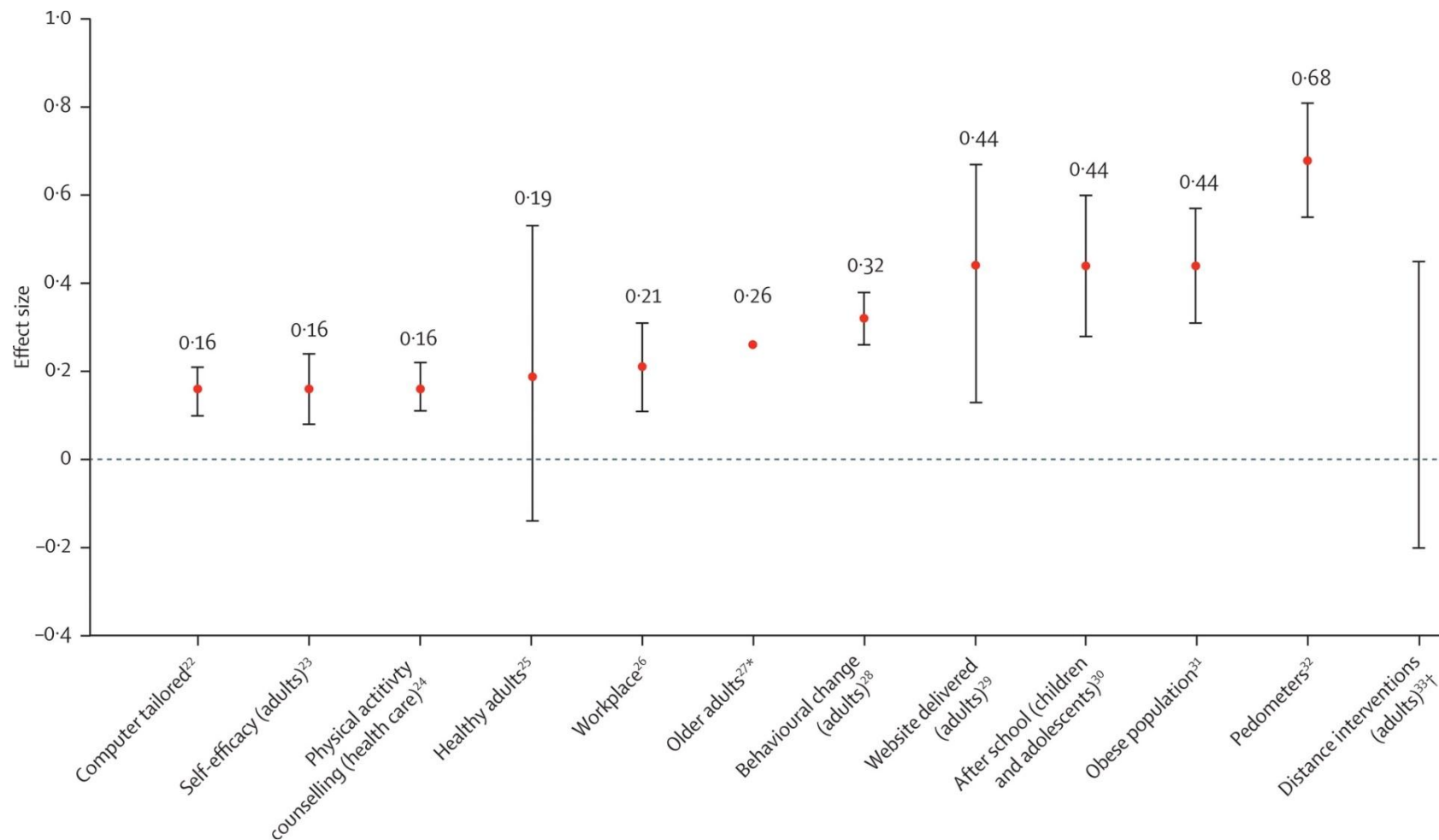
Biology

Psychology

Social/cultural factors



Effectiveness of Physical Activity Interventions



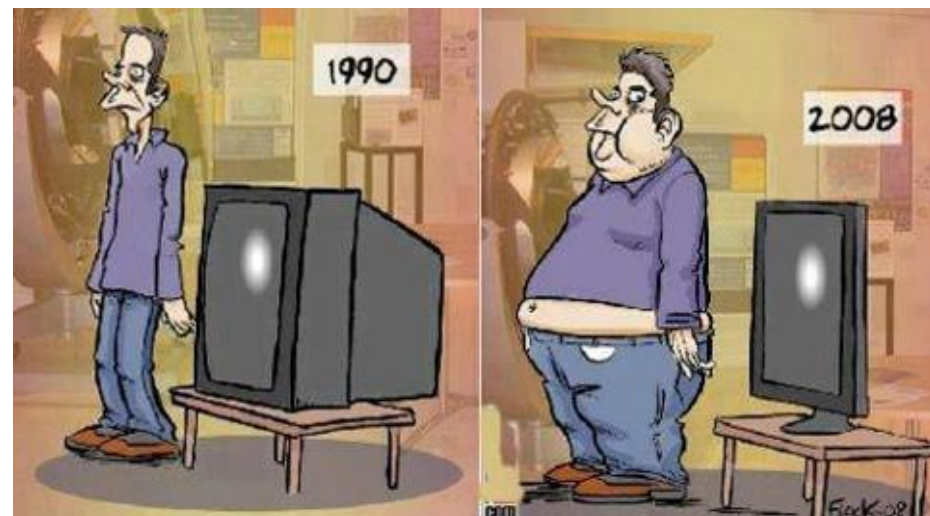
Why are people less active?

People

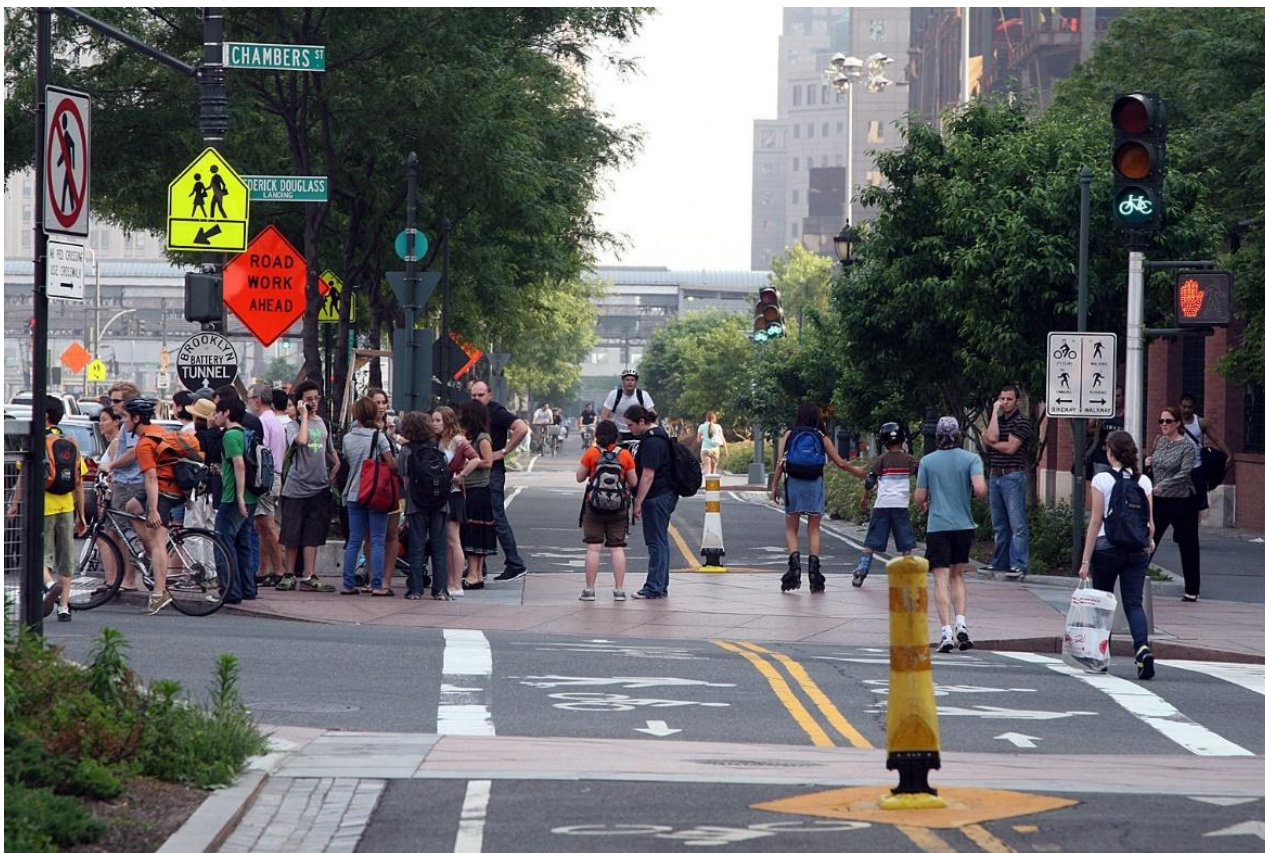
- Biology
- Psychology
- Social/cultural factors

Environment

- Reliance on cars
- Computers at work
- Electronic entertainment



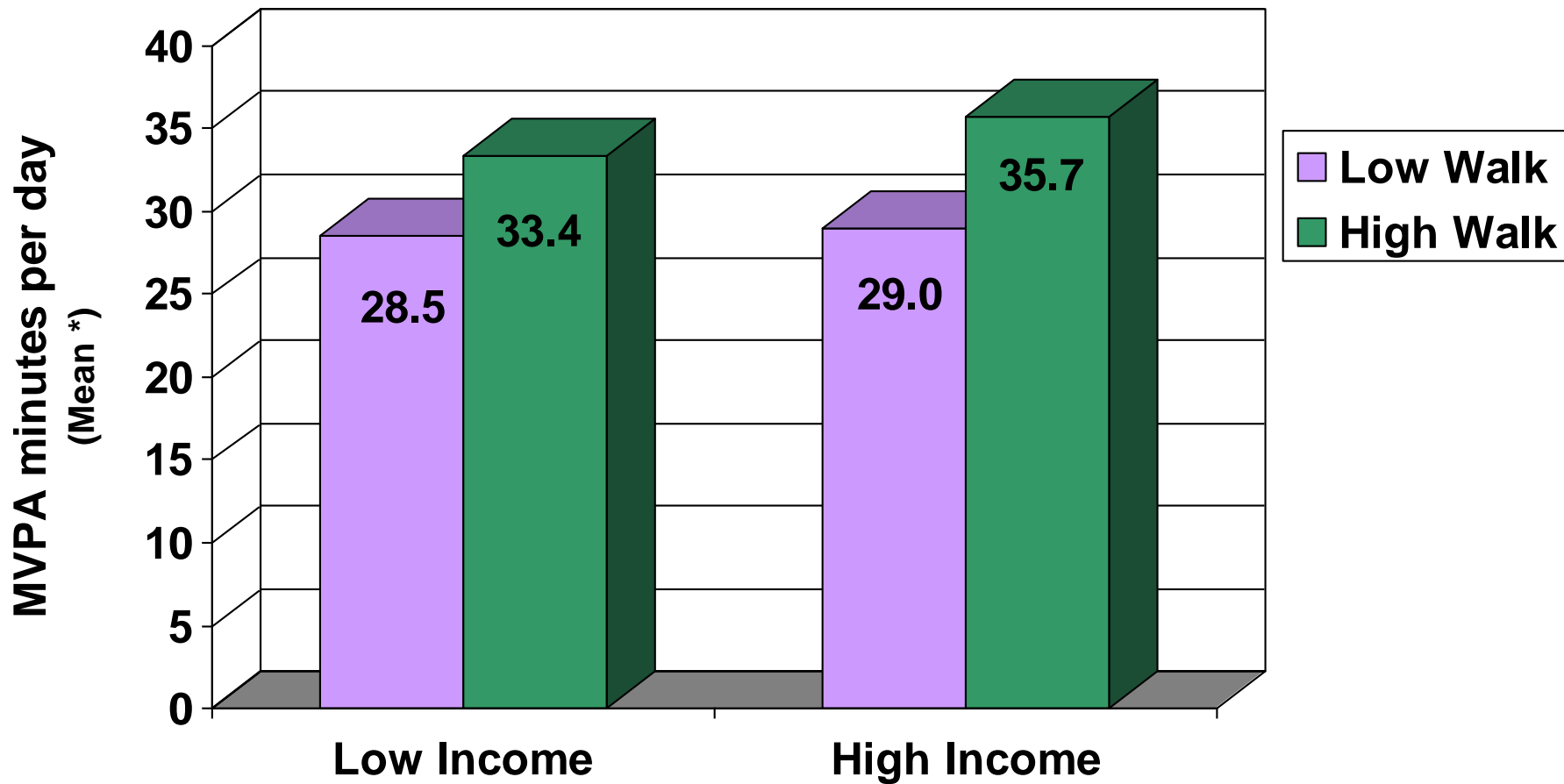
‘Walkability’



- Residential Density
- Intersection Density

- Land Use Mix
- Net Retail Area

Accelerometer-based MVPA Min/day in Walkability-by-Income Quadrants



THE ROLE OF

Communities

IN PROMOTING PHYSICAL ACTIVITY

WALKABLE COMMUNITIES

People who live in walkable neighborhoods are

2 times

as likely to get enough physical activity as those who don't.

JOINT USE

The number of children who are physically active outside is

84%

higher when schoolyards are kept open for public play.

TRAILS

People who live near trails are

50%

more likely to meet physical activity guidelines.

RECREATIONAL FACILITIES

Teens who live in poor or mostly minority neighborhoods are

50%

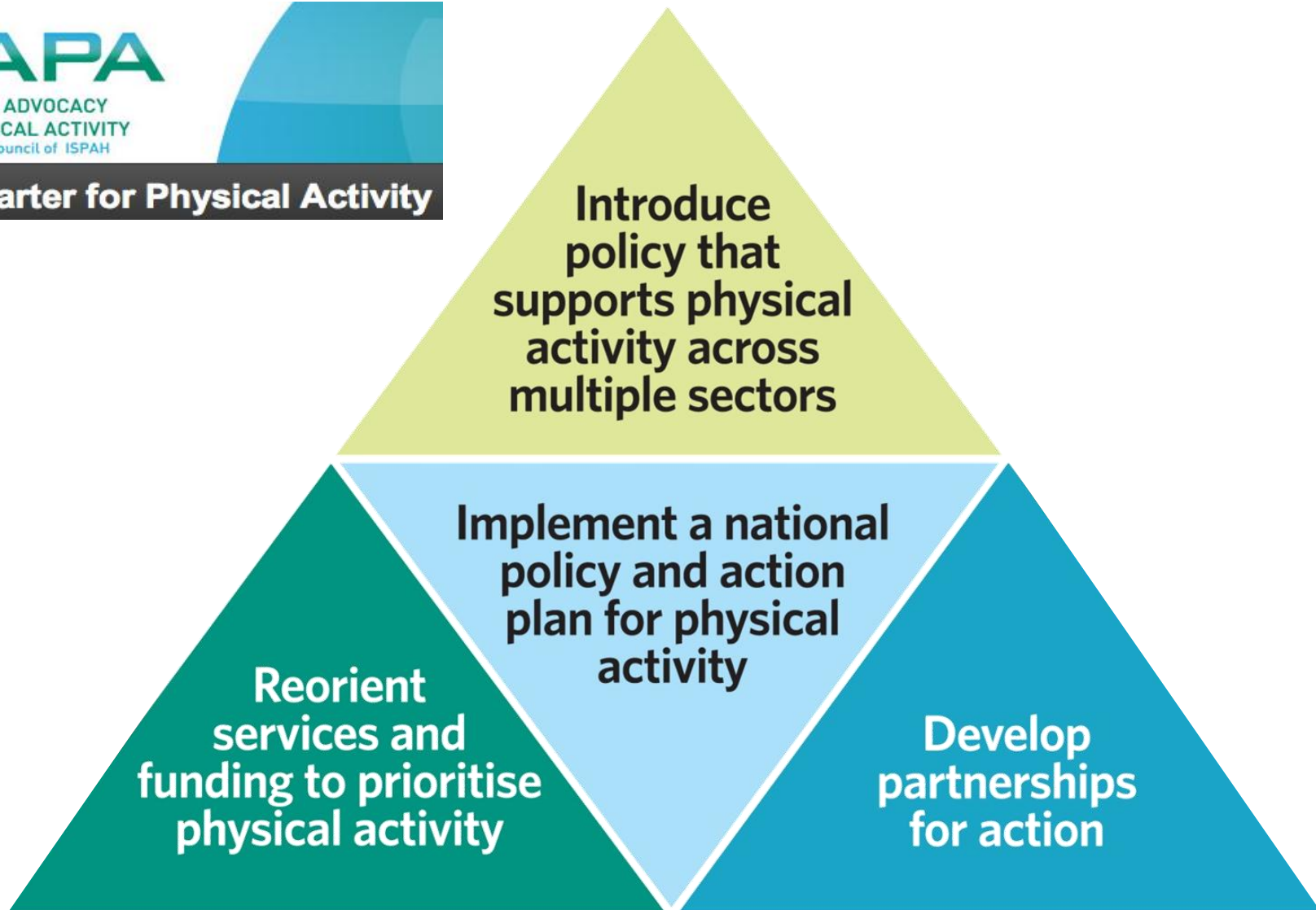
less likely to have a recreational facility near home.

Active Living Research

www.activelivingresearch.org

Sources: TRAILS: Huston S, Evenson K, Bors P, et al. "Neighborhood Environment, Access to Places for Activity, and Leisure-Time Physical Activity in a Diverse North Carolina Population." American Journal of Health Promotion, 18(1): 58-69, September/October, 2003. WALKABLE COMMUNITIES: Frank LD, Schmid TL, Sallis JF, Chapman J, Saelens BE. Linking objectively measured physical activity with objectively measured urban form. Findings from SMARTAQ. American Journal of Preventive Medicine 2005; 28(2S2):117-125. JOINT USE: Farley T, Meriwether R, Baker E, Watkins L, Johnson C, Webber L. Safe play spaces to promote physical activity in inner-city children: Results from a pilot study of an environmental intervention. Am J Pub Health. 2007;97:1625-1631. RECREATIONAL FACILITIES: Gordon-Larsen P, Nelson MC, Page P, Popkin BM. "Inequality in the Built Environment Underlies Key Health Disparities in Physical Activity and Obesity." Pediatrics, 117(2): 417-424, 2006.

Toronto Charter for Physical Activity



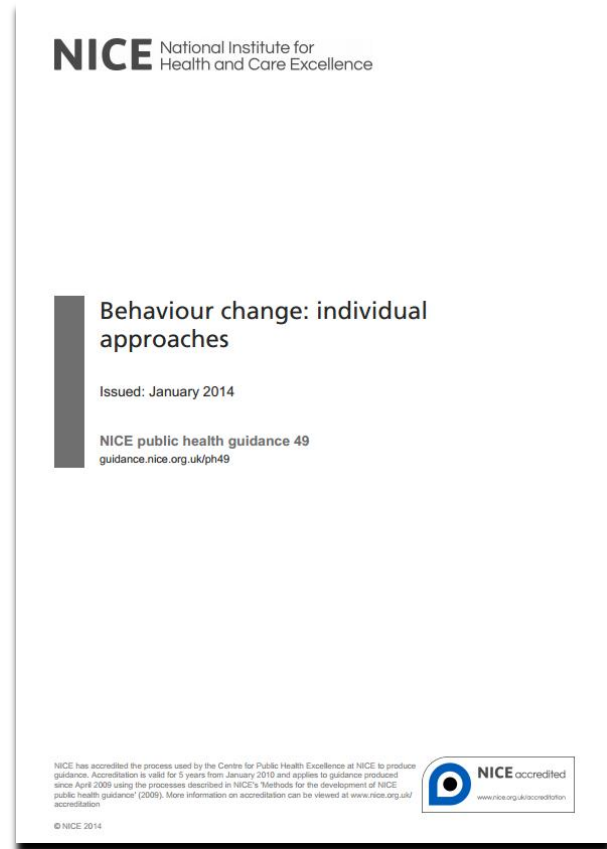
Novel interventions to encourage a maintained behaviour change



Individual level approaches

Active “ingredients”

- Self-monitoring
- Goal setting
- Social support



The PAL Scheme

The Physical Activity Loyalty Card Scheme



Physical Activity Loyalty Cards for Behavior Change A Quasi-Experimental Study

Ruth F. Hunter, PhD, Mark A. Tully, PhD, Michael Davis, MSc,
Michael Stevenson, BSc, Frank Kee, MD



Knowledge Exchange Seminar Series (KESS)



Free Sandwich
125 points



Free Class Pass
200 points

STRAND
BELFAST

Free Cinema Pass
250 points

Dundonald International
Ice Bowl

Free session of Tenpin
Bowling, Ice Skating or
Indiana Land
250 points



Complete 30 minutes of
physical activity



Collect 30 points



Keep getting active and
earning points



Earn rewards



£5 Voucher
250 points



£10 Voucher
500 points

STRAND
BELFAST

2 Free Cinema
Passes
500 points



£10 Voucher
500 points



£10 Voucher for 3G
Pitch
750 points



5 Free Class Passes
1000 points



£20 Voucher
1000 points



Free Personal Training
Session
1250 points



10 Free Class
Passes
1400 points



Free Gym Membership
for you and a guest
1400 points

Cinema vouchers
Sandwich vouchers
Gym passes
Decathlon/Ice Bowl
Beauty vouchers



Healthy environments and sustainability

Physical and social environments ?

Life-course approaches

e.g. sustainable independent living for older people

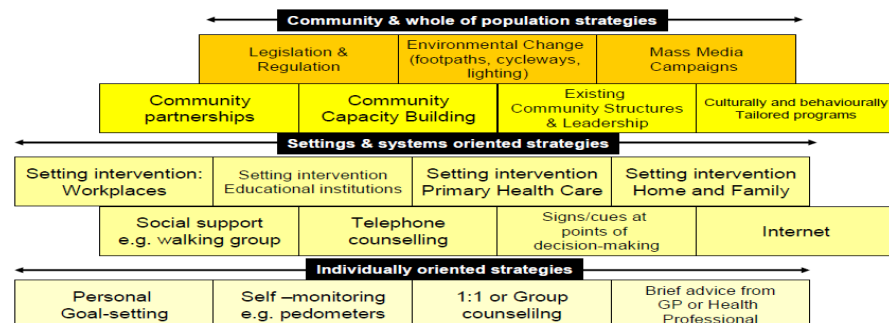
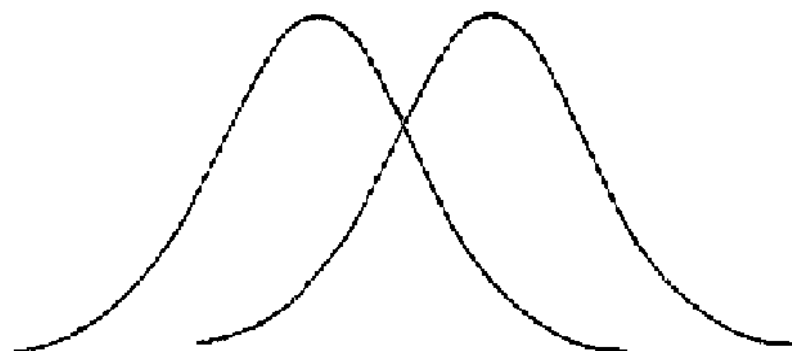


Since everything is connected, changes in one part of a complex system feed through to other parts



“The futility of isolated initiatives...” Foresight: Tackling Obesity. 2007

The Population and Systems Approach



Physical Activity and the Built Environment

- A 9km linear park, a wildlife corridor
- Connecting 124Ha of open space
- 43 new bridges
- 16 kms of foot and cycle paths
- 5 kms of clean rivers
- 6 tourism and heritage trails
- A civic square



www.communitygreenway.co.uk

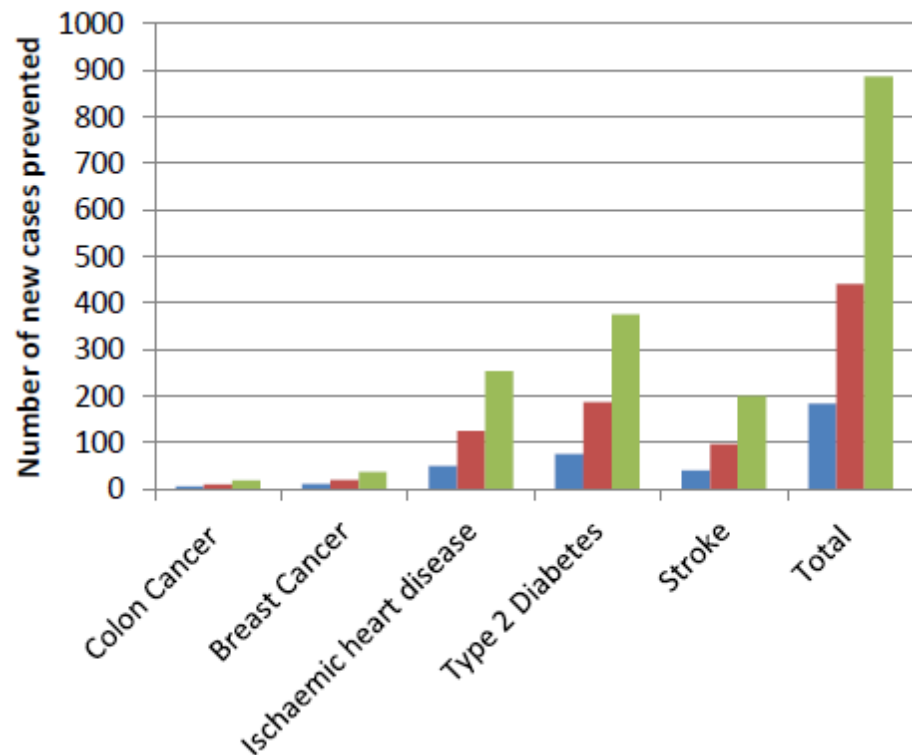
PARC Study

- Natural experiment
- £1.2 million funding
- Before and after household survey (1200 x 2)
- Regional comparison survey (SportNI)
- Network and social capital analysis
- Process evaluation
- Economic and behavioural economics analysis

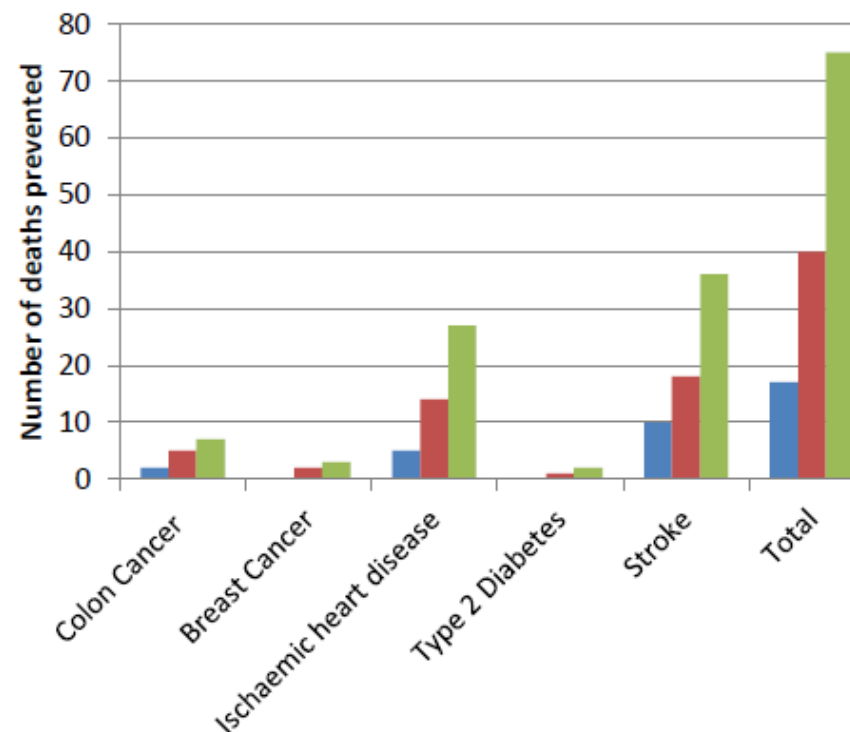
Aim:

- Assess the impact of a range of interventions designed to promote activity;
- Determine the role of the built environment in promoting physical activity;
- Establish the role of individual, community and organisational networks;
- Examine the cost effectiveness of these approaches.

Number of new chronic diseases prevented over 40 years, if 2%, 5% or 10% of those currently inactive in the Greenway population, become active



Number of deaths prevented from chronic diseases over 40 years, if 2%, 5% or 10% of those currently inactive in the Greenway population, become active



Greening of vacant lots



BEFORE: Corner lot



AFTER

- 4,436 vacant lots totalling over 7.8 million square feet

Vacant lot greening was associated with:

- consistent reductions in gun assaults
- consistent reductions in vandalism
- residents' reporting less stress
- residents' reporting more exercise

Summary

- Physical inactivity – major public health concern
- Proven benefits
- Need for novel interventions
- Need to move beyond individual level approaches
- Integration into policies

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Northern Ireland
Assembly



Queen's University
Belfast



The Open University



University of
ULSTER

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