

Making a Difference:

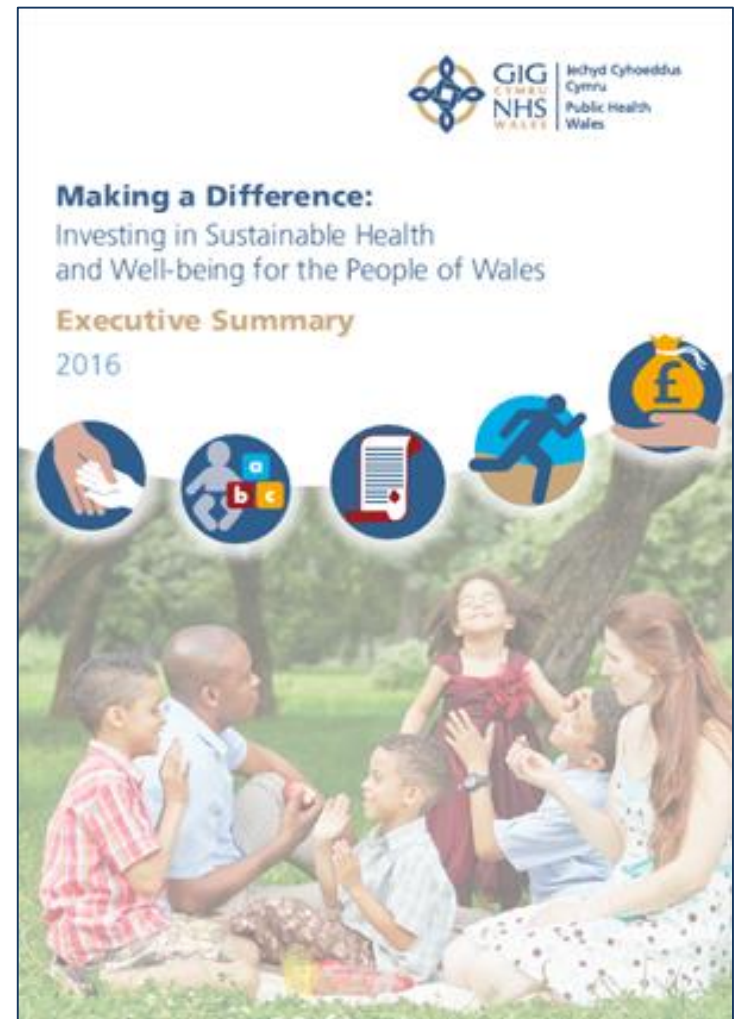
Investing in Sustainable Health
and Well-being for the People of Wales

Reducing health risks associated with road
traffic air pollution in Wales

Charlotte Grey, PHW

Making a Difference

The 'Making a Difference: Investing in Sustainable Health and Well-being for the People of Wales' report (July 2016) offers research evidence and expert opinion in support of preventing ill health and reducing inequalities to achieve a sustainable economy, thriving society and optimum health and well-being for the present and future generations in Wales.



Why?

Accelerating the Momentum

Challenges

- Demographic
- Globalisation
- **Inequalities**
- Health and care
- **Sustainability**

Evidence

- Effectiveness
- Cost-effectiveness
- **ROI / 'Best buys'**
- **Wider societal benefits**
- **Economic growth**

Innovation

- Science
- Technology
- Management
- Social

Immediate pressures on the public sector +

Future perspective - future generations - long term sustainability

Life course approach & ROI perspective

Communication and Advocacy

Wales is the right place: Enabling legislation & policy

Well-being of Future Generations (Wales) Act 2015

Environment (Wales) Act 2016

Social Services and Well-being (Wales) Act 2014

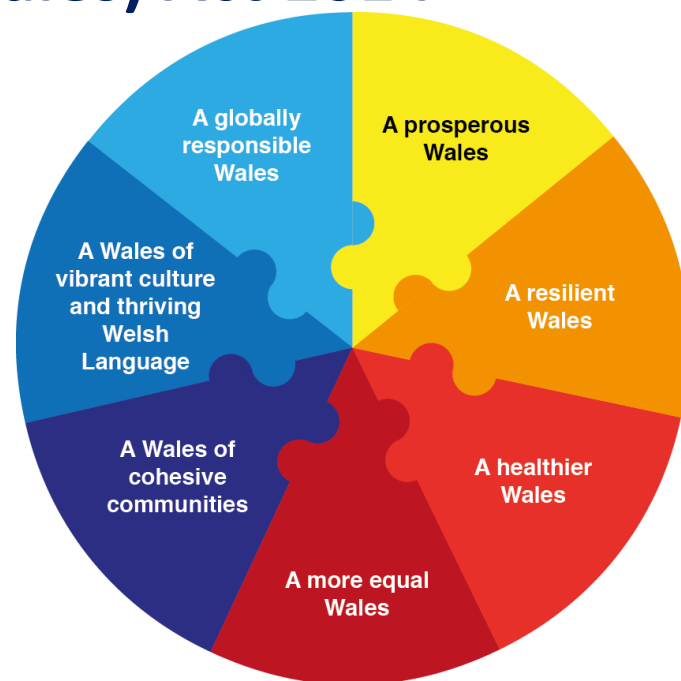
Active Travel (Wales) Act 2013

Public Health (Wales) Act 2017

- Health Impact Assessment

Wales Act (2017)

- Roads: speed limits



Enabling principles

1 Prevention

Invest in preventive interventions which are based on evidence and offer value for money. This report has highlighted potential 'solutions' and approaches in some key public health areas.

2 Long-term view

Adopt a long-term investment and prioritisation framework (on national and local level) to protect, improve and promote the health and well-being of people and communities in Wales.

3 Integration

Utilise Health Impact Assessment across Welsh Government, Local Government and the public sector in order to consider the impact of any decision and intervention on health, well-being and inequalities, i.e. assessing the potential influences of policies, plans and projects in different non health sectors.

4 Collaboration and 'systems working'

Working in partnership and synergy across sectors on national and local level, including governmental, public, private and third sector organisations.

5 Involvement and 'co-production'

Ensure communities and people in Wales are given a voice, involved in decisions about their health and well-being and listened to through 'knowledge forums' to facilitate the engagement of the public, professionals, policy makers and academic experts.

6 Minimise and mitigate harms to health

Ensure impacts on health, well-being and equity are known and harms are minimised and mitigated through adopting a 'Health in All Policies' approach across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts, to improve population health and health equity.

7 Reduce variation and address the greatest population health need first

Ensure a 'Proportionate Universalism' approach, i.e. all decisions and interventions which benefit health and well-being are implemented for all people but delivered at scale proportionate to need.

Report Development and Format

- **Informed by:**
 - Available recent ‘high level’ research evidence
 - Professional guidance and experts recommendations
 - Welsh priorities & policy context
- Focusing **both on the present and the future** for Wales
- **Wide target audience:** decision-makers / policy-makers
- **Not** an exhaustive or comprehensive public health review
- **Format:** Executive Summary, Supporting Evidence, Infographics
- **3 priority areas** for action where challenges and health needs are growing and cost-effective preventative interventions exist

Enabling legislation

Sustainable Development Principle

Prevention

Long-term view

Integration

Collaboration

Involvement

Building resilience across the life-course and settings

Co-production

Only do what is needed

Only do what only you can do

Prudent Healthcare Principles

Greatest need first

Reduce variation

Use evidence

Do no harm

Addressing wider economic, social and environmental determinants of health

Addressing harmful behaviours and protecting health

Systems Working

10 thematic areas (under 3 priorities)

- **10 evidence based thematic areas** – defined by:
 - Cross sector
 - Potential to achieve health, social, economic benefits for Welsh population
 - Size of the problem, Welsh context, available solutions (cost effective, or brings wider economic and social return on investment)
- Succinct, accessible for the different audiences



GIG
CYMRU
NHS
WALES

Iechyd Cyhoeddus
Cymru
Public Health
Wales

3 Priority themes, 10 public health areas

A. Building resilience across the life course and settings

1. Ensuring a good start in life for all
2. Promoting mental well-being and preventing mental ill health
3. Preventing violence and abuse

B. Addressing harmful behaviours and protecting health

4. Reducing the prevalence of smoking
5. Reducing the prevalence of alcohol and substance misuse
6. Promoting physical activity
7. Promoting a healthy diet and preventing obesity
8. Protection from disease and early identification

C. Addressing wider economic, social and environmental determinants of health

9. Reducing economic and social inequalities and mitigating austerity
10. Ensuring safe and health promoting natural and built environments

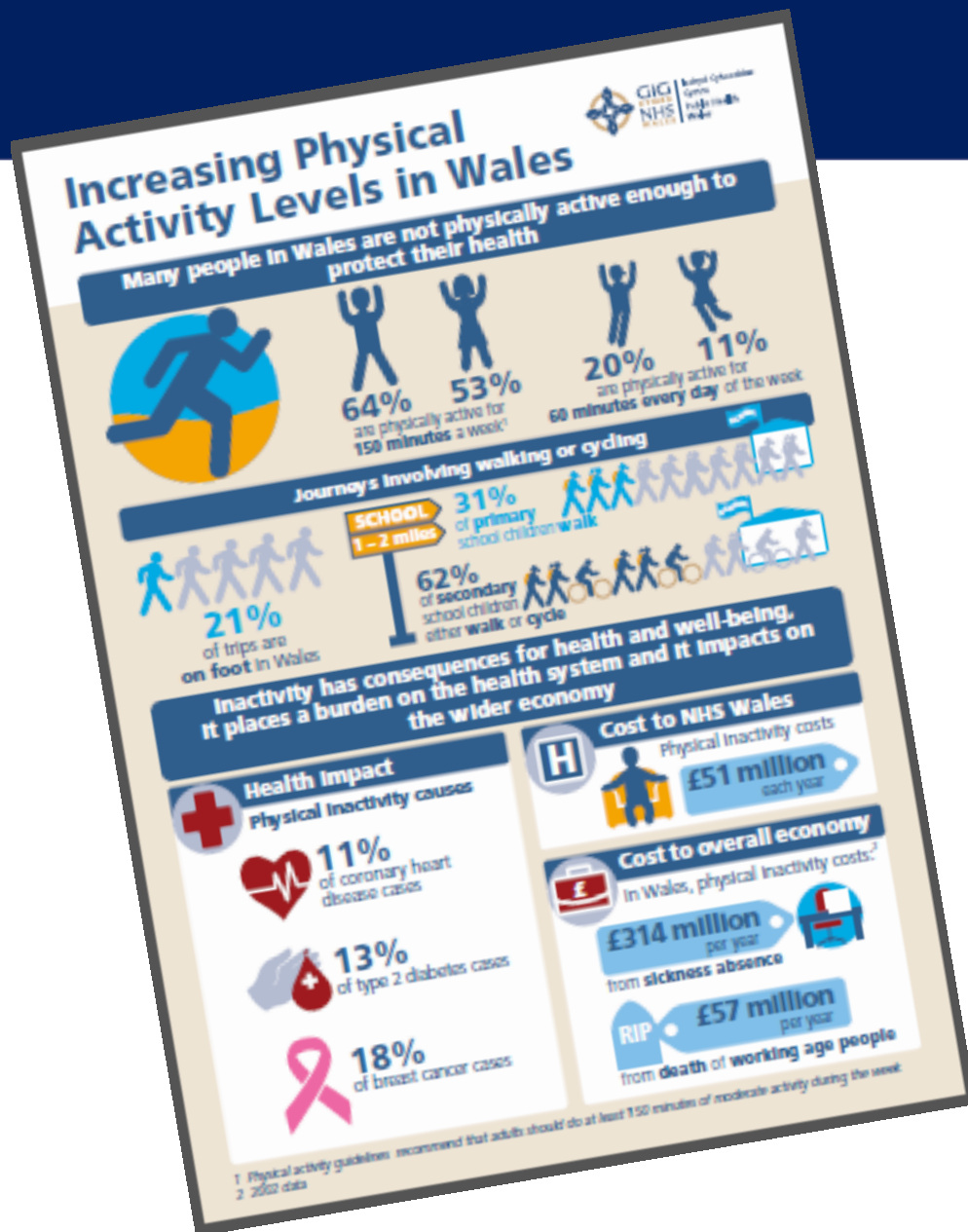
These areas are interrelated and interdependent, sharing common determinants and solutions.

Key Messages



- **Economic, social and natural environment** in which we grow up, live and work is a major determinant of our health and well-being and that of our children – directly and indirectly
- **Strong evidence to support a preventative approach**
Prevention offers good value for money
It brings short and long-term benefits far beyond the health system, across communities, society and the economy
- **Wales is in a unique position to make a difference**

Infographics (1)



Consistent structure
Wales focussed

- The issue
 - Statistics for Wales
 - Consequences, including the health impact, cost to the NHS, cost to the economy



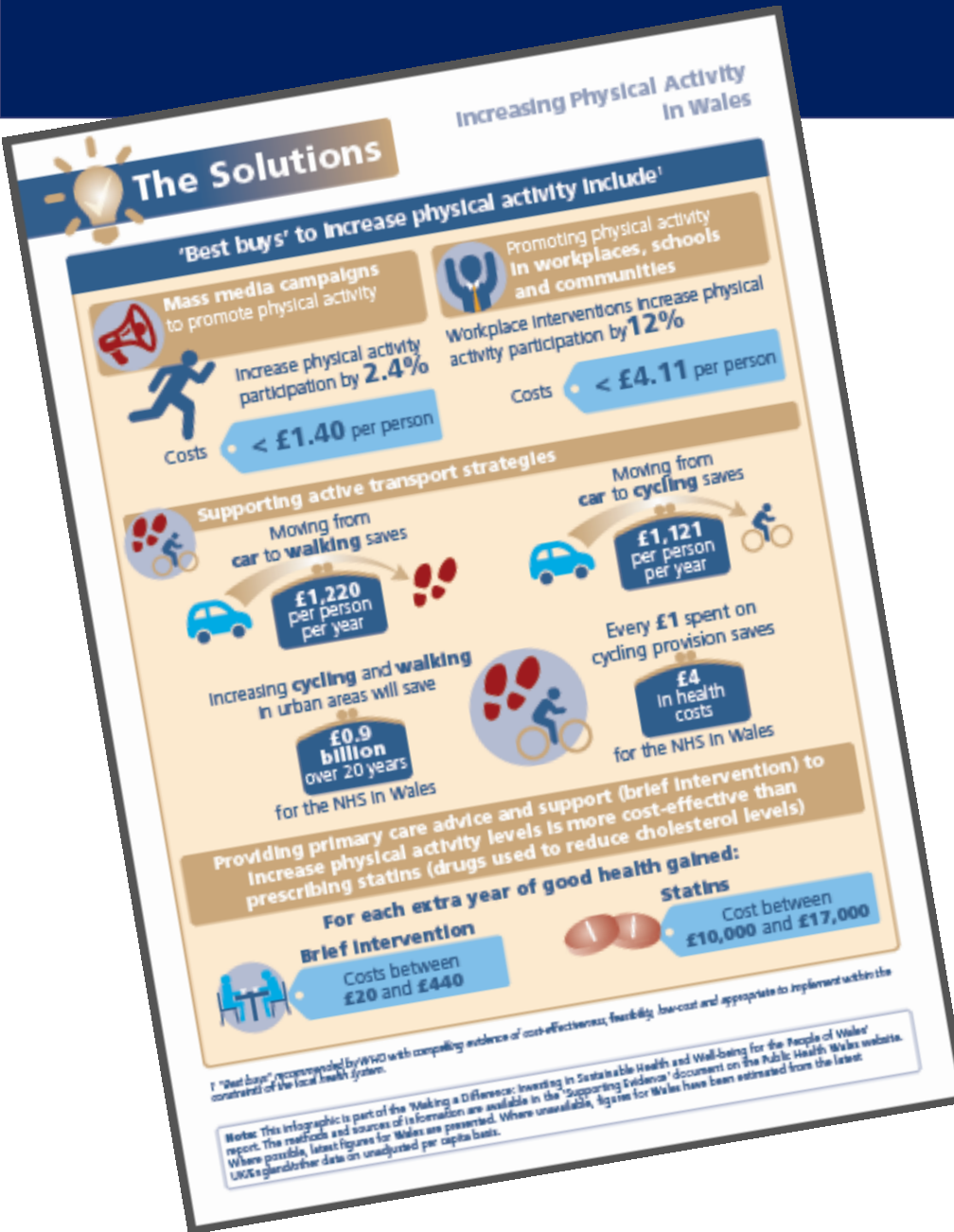
GIG
CYMRU
NHS
WALES

Iechyd Cyhoeddus
Cymru
Public Health
Wales

Infographics (2)

The solutions

- “Best buys”
 - recommended by WHO with compelling evidence of cost-effectiveness, feasibility, low-cost and appropriate to implement within the constraints of the local health system
- Tailored to Welsh context



GIG
CYMRU
NHS
WALES

Iechyd Cyhoeddus
Cymru
Public Health
Wales

Supporting sustainable development in Wales

Public bodies and Public Services Boards can benefit from the approach taken in the report

- Advocacy underway at local level to inform local work



Where next?

Public Health Wales

- **Considering additional topics**
- Inform ways of working
- Inform the development of our strategic plan

Welsh Government

- Keen to take forward

WHO EURO

- **Support delivery of European equivalent**

European equivalent: WHO HEN report 51



HEALTH EVIDENCE NETWORK SYNTHESIS REPORT 51

Investment for health and well-being: a review of the social return on investment from public health policies to support implementing the Sustainable Development Goals by building on Health 2020

Mariana Dyakova | Christoph Hamelmann | Mark A. Bellis | Elodie Besnier
Charlotte N.B. Grey | Kathryn Ashton | Anna Schwappach | Christine Clar

- Overall annual economic cost of health impacts and mortality from air pollution, including estimates for morbidity costs, stood at \$1.6 trillion
- Air pollution generated by road traffic was responsible for 54% of the economic cost of the health impacts



Air pollution
health impacts cost
€1.2 trillion
per year
in the WHO European Region



GIG
CYMRU
NHS
WALES

Iechyd Cyhoeddus
Cymru
Public Health
Wales

Additional Topics... (Wales)

Extending Making a Difference



**Reducing health risks associated with
road traffic air pollution in Wales**

Reduce road traffic-related air pollution, risks and inequalities

Draws on research evidence and expert opinion to identify action.

Exposure to air pollutants requires action by public authorities at the local, regional, national, and international levels.

A multi-sectoral approach is needed to develop and effectively implement long term policies and strategies to reduce air pollutants.

Why Air Pollution?

Largest contributor to environmental burden of disease

Road traffic emissions frequently accounting for more than 64% of air pollution at urban monitoring sites

Air pollutants of primary public health concern being particulate matter (PM) and nitrogen oxides (NO_x ; NO_2).

Health Impacts

Public Health Wales estimates that each year in Wales 1,604 deaths are attributed to PM_{2.5} exposure and 1,108 deaths to NO₂ exposure.

Regulators have declared 40 Air Quality Management Areas where statutory (safe) levels of pollutants are likely to be breached.

Air pollution disproportionately affects vulnerable groups (children, older people, people with underlying health problems), and those exposed to higher levels because of where they live or commute. People in Wales living in areas of high deprivation and high PM₁₀ pollution have 2.4 times greater risk of respiratory death.

Interventions to reduce emissions

Improve air quality and prevent a range of health conditions and deaths.

A number of actions in combination, each producing a small benefit, are likely to act cumulatively to produce significant change.

The cost effectiveness of interventions are likely dependent on the characteristics of local settings.

Interventions can help tackle health inequalities, but may disproportionately disadvantage these groups if unintended consequences are not identified and managed.



GIG
CYMRU
NHS
WALES

Iechyd Cyhoeddus
Cymru
Public Health
Wales

Adaptation/Mitigation

Adaptation measures include actions to reduce emitted levels of pollutants through policy drivers for change in practice, e.g. regulations and enforcement of Clean Air Zones (and constituent interventions).

Mitigation measures include actions to prevent exposure to pollutants through strategies to include air pollution in planning decisions, better health-centered communication, and encouraging environmental behavior change at individual and corporate level.



GIG
CYMRU
NHS
WALES

Iechyd Cyhoeddus
Cymru
Public Health
Wales

Everybody has a role to play in reducing air pollution.

The solution is a number of actions, with smaller benefits, that in combination produce significant change

In high population areas, speed management zones on major roads and motorways have a return of £51 for every £1 invested

Clean Air Zones are a package of interventions that require a joined up multi-sectoral approach. For example, in populated areas, upgrading vehicles to higher emissions standards provide a return of £2 for every £1 spent

**Reducing speed limits from 30 to 20mph would prevent (each year) :
117 deaths from PM_{2.5}; 6-10 lives from accidents**

Car clubs are 'quick win': A return of £13 for every £1 invested; they encourage the use of public and active transport

Active urban travel is a 'best buy': Saving the NHS £0.9 billion over 20 years; return of £8 for every £1 invested

Using active travel to link communities to areas of economic activity has a return of £10 for every £1 invested

Preventing idling in large taxi ranks has a return of £4.12 for every £1 invested

Corporate low emission travel plans, such as cycle to work schemes, have a return of £6 for every £1 spent

Conclusion

Air pollution from road traffic is an increasing problem that is everybody's business.

The solutions are shown to be cost effective, and it is likely that a combination of **adaptive** and **mitigative** measures (tailored to meet the needs and characteristics of Wales) will have the greatest impact.

This work could support the understanding of effective approaches by Public Service Boards, and other public sector organisations and multiagency partnerships both within Wales, the UK and internationally.