

*Making the case for investing in
prevention and promotion: a cross-
sectoral perspective*

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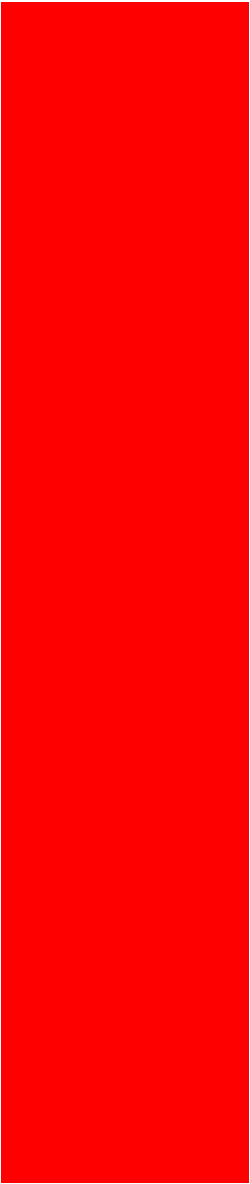
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Structure

- Why think about the economic case for prevention and promotion?
- What do we know about the economic case for health promoting interventions?
- What mechanisms can be used to help in the prioritisation of cost effective health promoting interventions?
- How can we co-ordinate actions across sectors and stakeholders?
- Some concluding thoughts

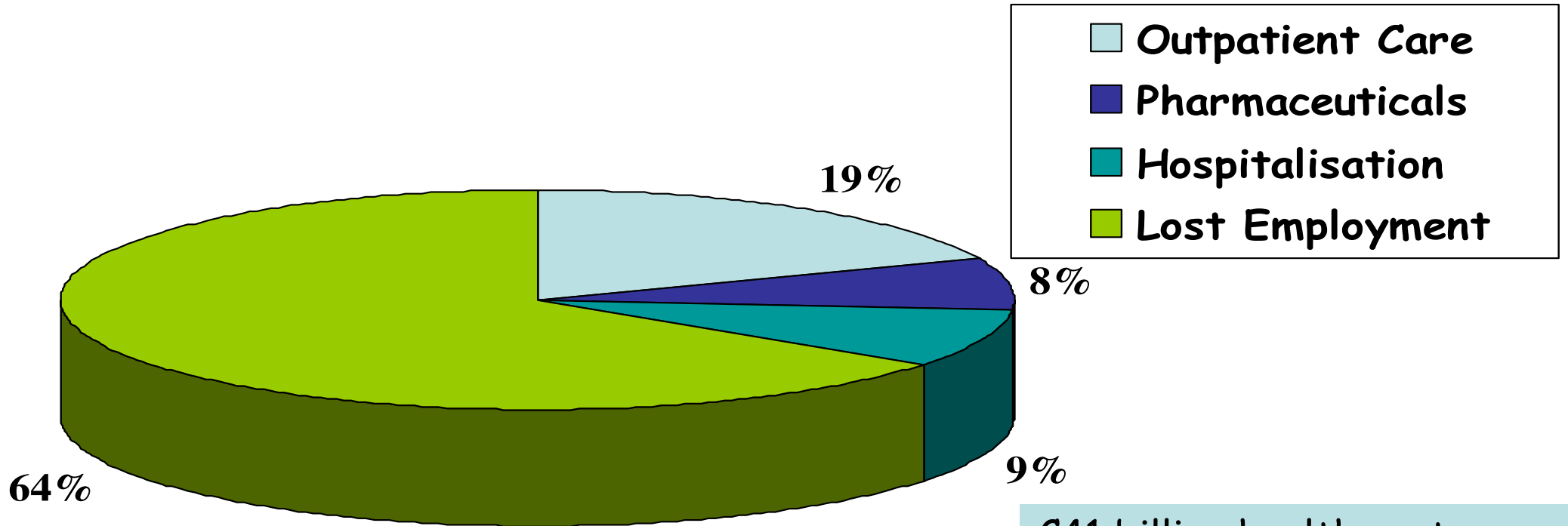


Why think about
the economic case
for investment?



The costs of poor health are substantial and impact on many sectors

Depression: costs to EU economy



€41 billion health system costs

€77 billion lost employment costs

Potential economic benefits of preventing health problems in Germany

| Risk factor | Attributable deaths (2002) | <u>Per capita</u> econ. benefit of 25% reduction |
|--------------------------------|----------------------------|--|
| Tobacco | 61548 | € 950,- |
| High blood pressure | 39780 | € 594,- |
| High cholesterol | 29124 | € 428,- |
| High BMI | 25556 | € 374,- |
| Alcohol | 16845 | € 243,- |
| Physical inactivity | 13749 | € 198,- |
| Low fruit and vegetable intake | 10603 | € 152,- |

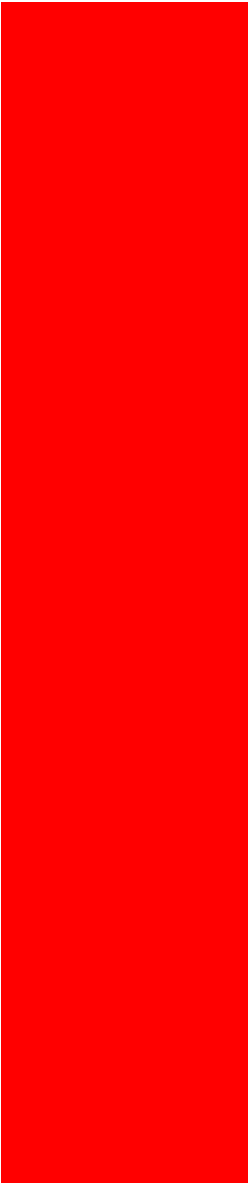
Renewed interest

- Growing recognition of the importance of prevention/promotion services
 - Wanless
 - Nuffield
 - US Surgeon General
 - US Surgeon General
 - WHO

Review for Ministry of Finance in England (Wanless review) argued little economic evaluation in public health available

Challenges

- **Measuring effectiveness**
 - Often long time between intervention and outcome
 - Attribution challenging
 - Need to take account of context / impact on behaviour
 - Many outcomes - not just health impacts
- **Measuring cost effectiveness**
 - Incorporating multiple outcomes
 - No formal requirements to assess cost effectiveness of many public health interventions
 - Time preference - interventions with benefit now may be preferred to those with benefit in future



What do we know
about the economic
case for action?

Systematic Review

- Review commissioned by the Welsh Assembly Government Health Promotion Division
- To examine and summarise economic evaluation frameworks used internationally
- To examine the level of public health interventions to which these methods of economic evaluation have been applied.

Tools to aid priority setting

Some sources of evidence:

Cochrane Collaboration - Public Health Interventions

www.cochrane.org

Campbell Collaboration - Housing, Education, Environment

<http://www.campbellcollaboration.org/>

US CDC and US Task Force on Community Preventive Services <http://www.thecommunityguide.org/>

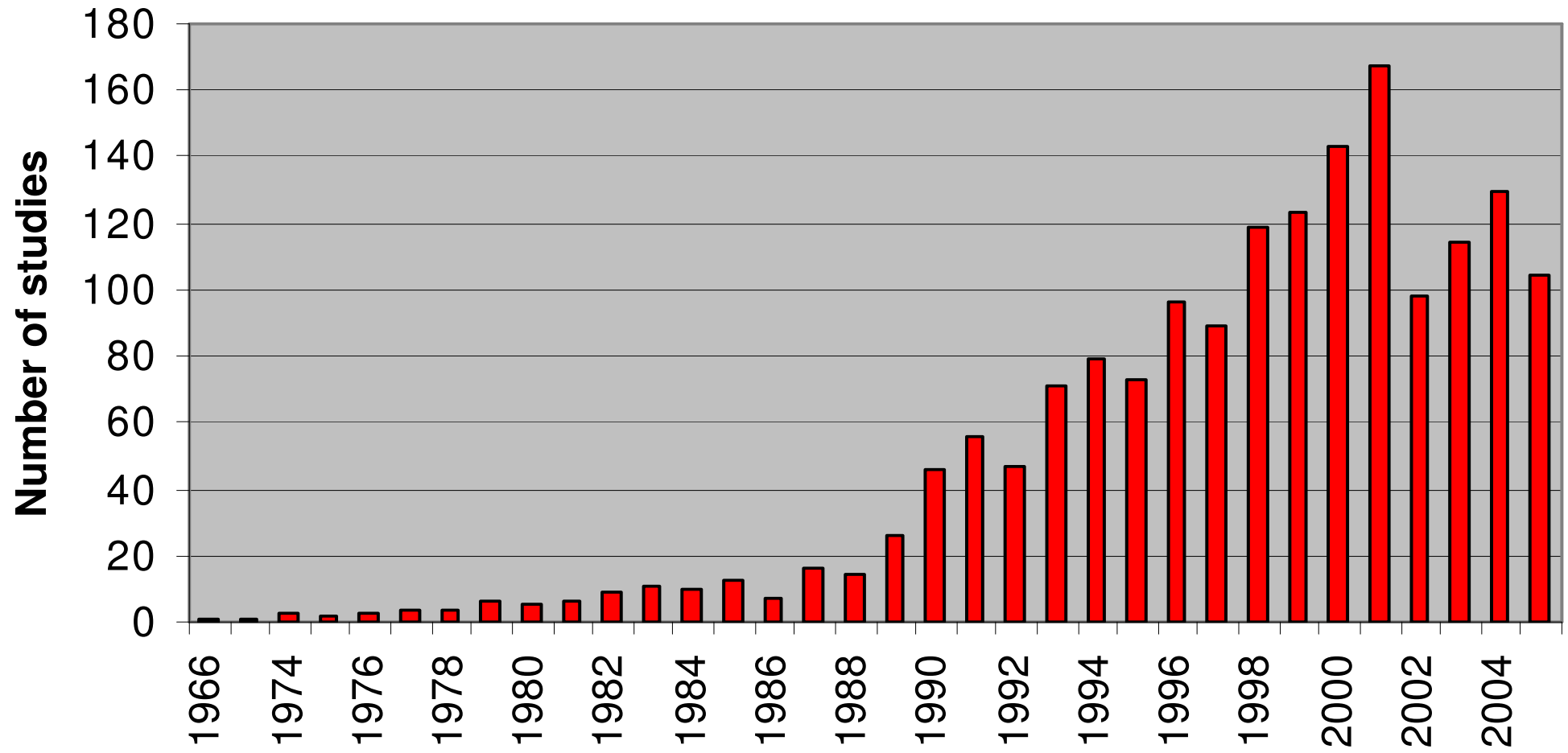
England - NICE Public Health Interventions Programme

www.nice.org.uk

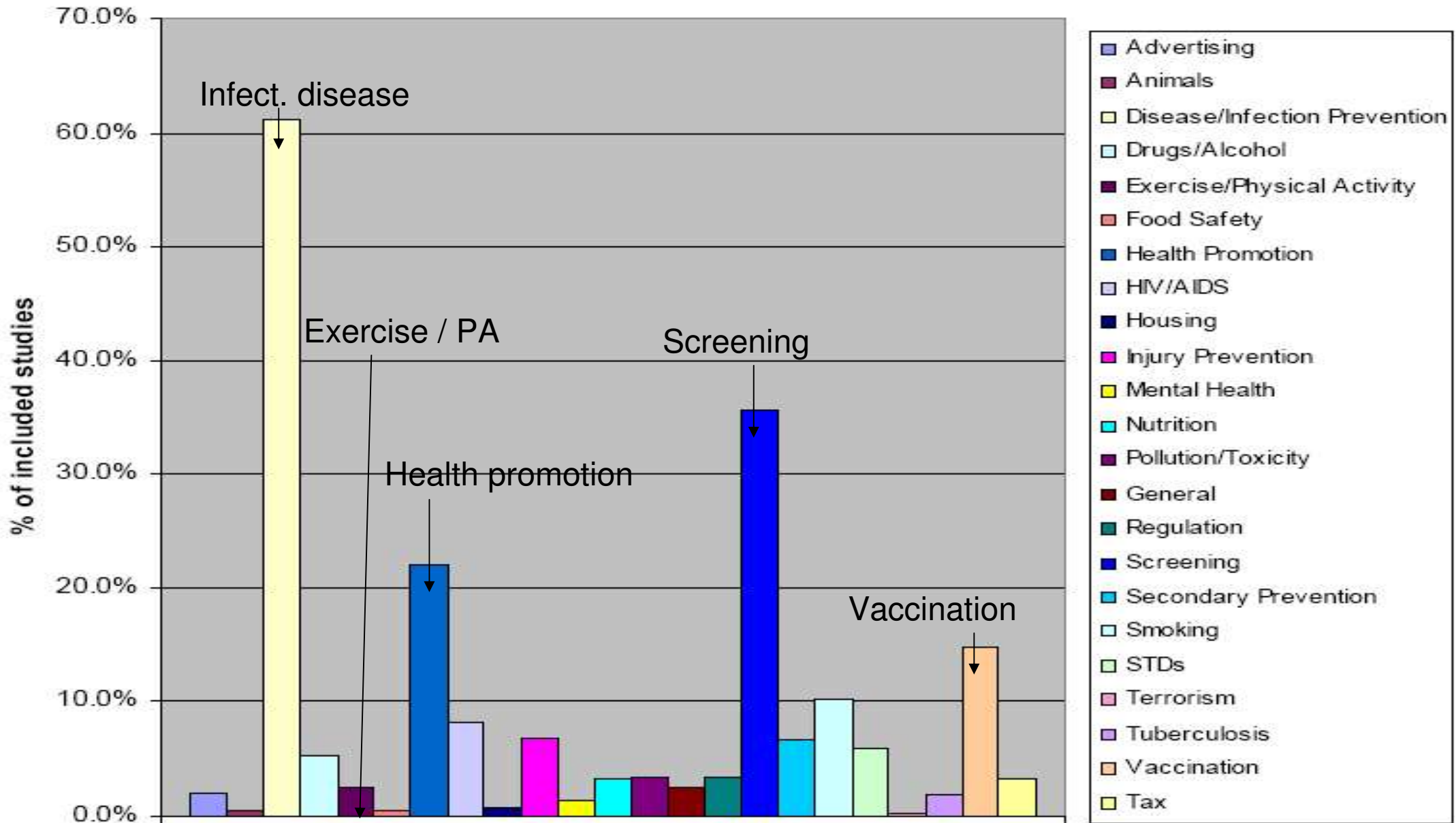
WHO Health Evidence Network - <http://www.euro.who.int/HEN>

Publication of cost effectiveness studies

Included studies per year



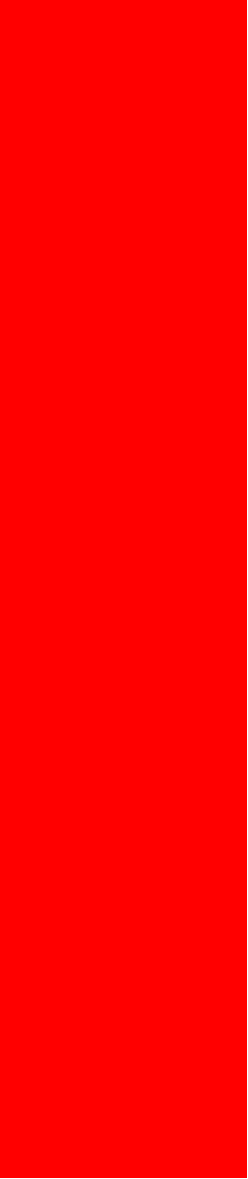
Cost Effective Public Health Actions



Source: McDaid & Needle 2007

Emerging Trends

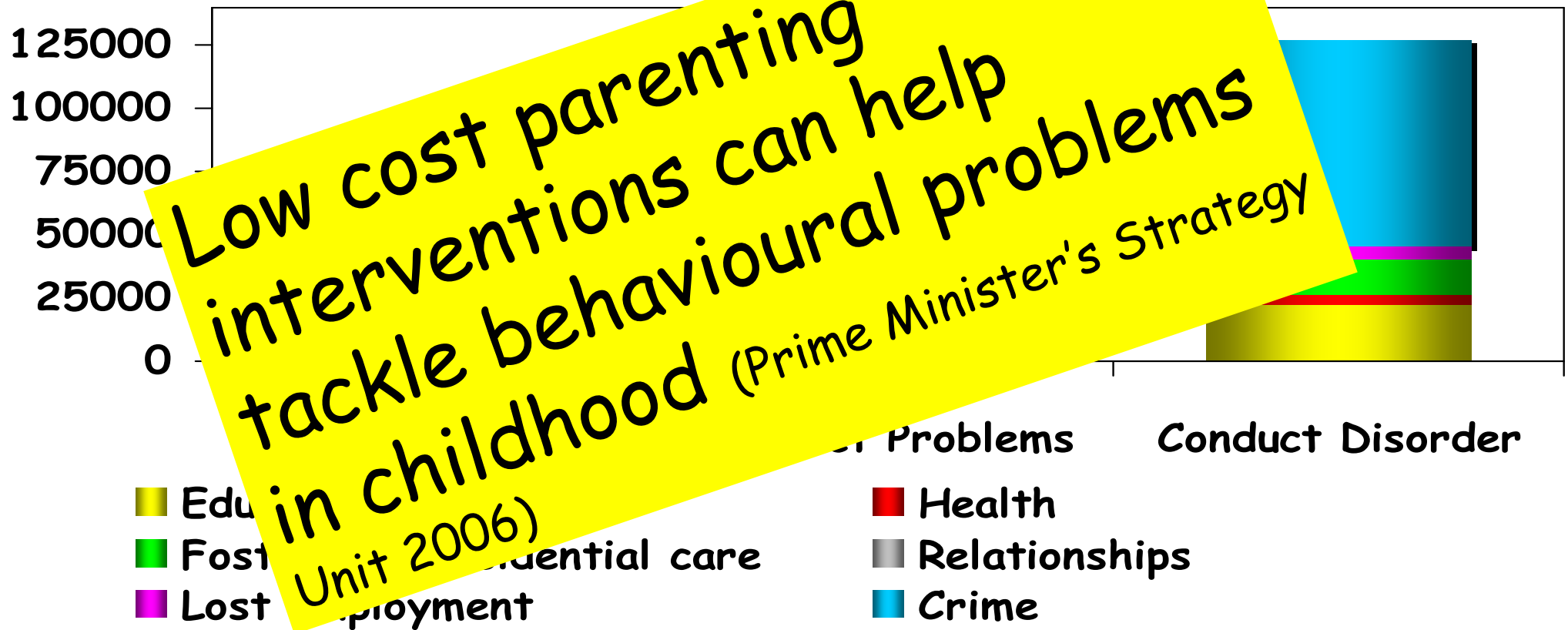
- We know quite a lot - economic studies found in most areas of public health and use is growing but...
-US dominated (50% of research)
- Wide range of cost effective (and low cost) interventions including taxation policy and regulation
- Much requires inter-sectoral collaboration



**Some illustrative
examples**

Early Years Interventions can be effective and cost effective

Mean total costs age 10 to age 28 for children with different behavioural problems

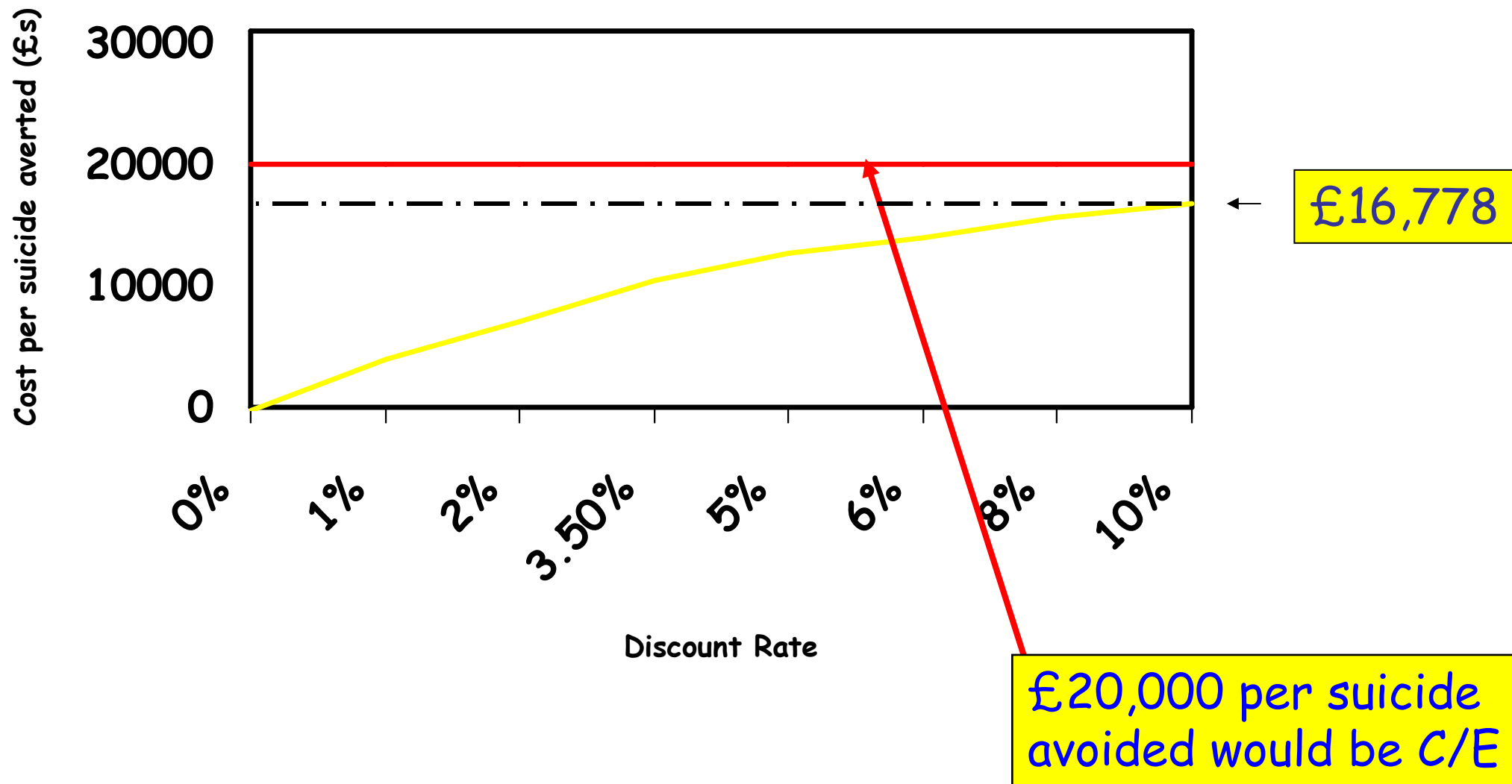


Low cost parenting interventions can help tackle behavioural problems in childhood (Prime Minister's Strategy Unit 2006)

Suicide Prevention is cost effective

- National universal strategies in Scotland & England
- Targeted strategies for ethnic minorities
- CBT and indicate potentially highly cost effective (and often low cost)
- Suicide awareness training course

Potential Cost Effectiveness of Suicide Prevention Strategy in Scotland



Source: McDaid et al, Scottish Government 2006

Road safety

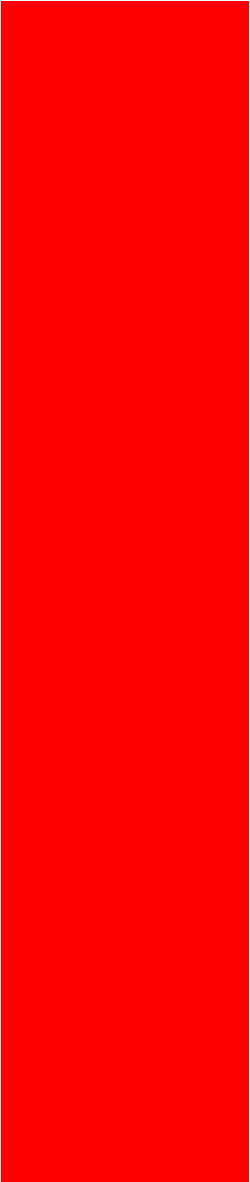
- Seat belts; advertising campaigns; laws against drink driving very cost effective - reduce frequency and severity of crashes
- Airbags; Helmets can be cost effective
- Speed camera traffic safety programme : costs averted (health care costs/ loss of employment etc) six times greater than cost of programme

School based anti-obesity programme

- **Design:** RCT (2 years) 10 schools in US
- **Intervention:** Interdisciplinary curriculum on diet/lifestyle plus physical activity
- **Modelling:** Use of modelling to predict transition to obesity from age 14 to age 40
- **Cost** \$14 per student per year
- **Cost per good quality life year gained** \$4,305
- **Predicts significant medical and employment costs averted**

Workplace Health Promotion

- Multi-component workplace health promotion programmes.
- Risk management; health and lifestyle advice; exercise opportunities
- Led to improvements in health status
- Cost: €100 per employee per annum
- More than outweighed by reduction in absenteeism



What mechanisms
can be used to help
prioritise between
interventions?

Expanding HTA: The NICE experience

- National Institute for Health and Clinical Excellence (in England and Wales)
- Remit expanded in 2005 to consider not only health care but also case for investing in public health interventions
- Can be funded/delivered outside health system
- Assessments include smoking cessation; mental/physical wellbeing at work or school; alcohol education; needle exchange programmes
- Consultation with relevant health and non health stakeholders throughout process

Expanding HTA: The NICE experience

- Most interventions examined **appear highly cost effective** compared to health care interventions
- Also **often very low cost to implement**
- Assessments have taken **context** and impacts on **different sectors of population**
- Has **looked at non-health impacts** to help strengthen case for action: e.g. benefits to workplace productivity of workplace smoking cessation programmes
- **Transparent discussion** of case for investment: meetings open to public and press - all documentation on internet

Adapting evidence to different contexts

- Consider evidence on effectiveness, budgetary impact and cost effectiveness of interventions

• But also important to consider context - if an intervention effective in England will it be effective in Austria or Lithuania?

• Tools are available to help adapt existing evidence on cost effectiveness to different country/region situations

WHO CHOICE project

- **CHO**osing Interventions that are **C**ost **E**ffective
- Takes account of differences in wealth of countries
- Synthesising info on costs and effect of a range of interventions to tackle health problems

Examples of highly cost effective interventions in European Region

Alcohol abuse: Excise tax, advertising ban

Coronary Artery Disease: Legislation to substitute 2% of transfat with polyunsaturated fat

Diabetes, heart disease, stroke: legislation on salt intake

Tobacco: tax; clear air laws in workplace; advert bans

Road Safety: Seat belt laws; speed bumps; random breath

testing; child restraints; media campaigns

Some cost effective interventions

| Condition | Intervention | Incremental cost-effectiveness (\$/DALY) |
|---|--|--|
| Alcohol abuse | 50% increase in excise tax | Eur-A : 258* Eur-B : 489* Eur-C : 156* |
| | Excise tax plus advertising ban | Eur-A : 570* Eur-B : 466* Eur-C : 209* |
| | Excise tax, advertising ban, and brief primary care advice | Eur-A : 2 359* Eur-B : 616* Eur-C : 593* |
| | Excise tax, advertising ban, brief primary care advice, random breath testing | Eur-A : 2 690* Eur-B : 5 070* Eur-C : 1 168* |
| Coronary artery disease | Legislation substituting 2% of trans fat with polyunsaturated fat at a cost of US\$6 per adult (Assuming 7–40% reduction in disease) | 48–838 |
| Diabetes, ischaemic heart disease, stroke | Legislation with public education campaign to reduce salt content | 1 937 |
| | Media campaign to reduce saturated fat | 2 617 |
| Tobacco addiction | Excise tax 600% of supply price (double the regional rate) | Eur-A : 32* Eur-B : 21* Eur-C : 5* |
| | Excise tax at 600% of supply price, plus advertising ban | Eur-A : 859* Eur-B : 163* Eur-C : 53* |
| | Excise tax at 600% of supply price, advertising ban, clean indoor air law enforcement, plus information dissemination | Eur-A : 1 909* Eur-B : 251* Eur-C : 82* |
| Traffic accidents | Increased speeding penalties, enforcement and speed bumps, combined with media campaigns and better law enforcement | 21* |
| | Enforcement of seat-belt laws, promotion of child restraints and random driver breath testing | 2 449* |

Alcohol and tobacco control policies in Estonia: Are they cost effective? [Lai et al 2007]

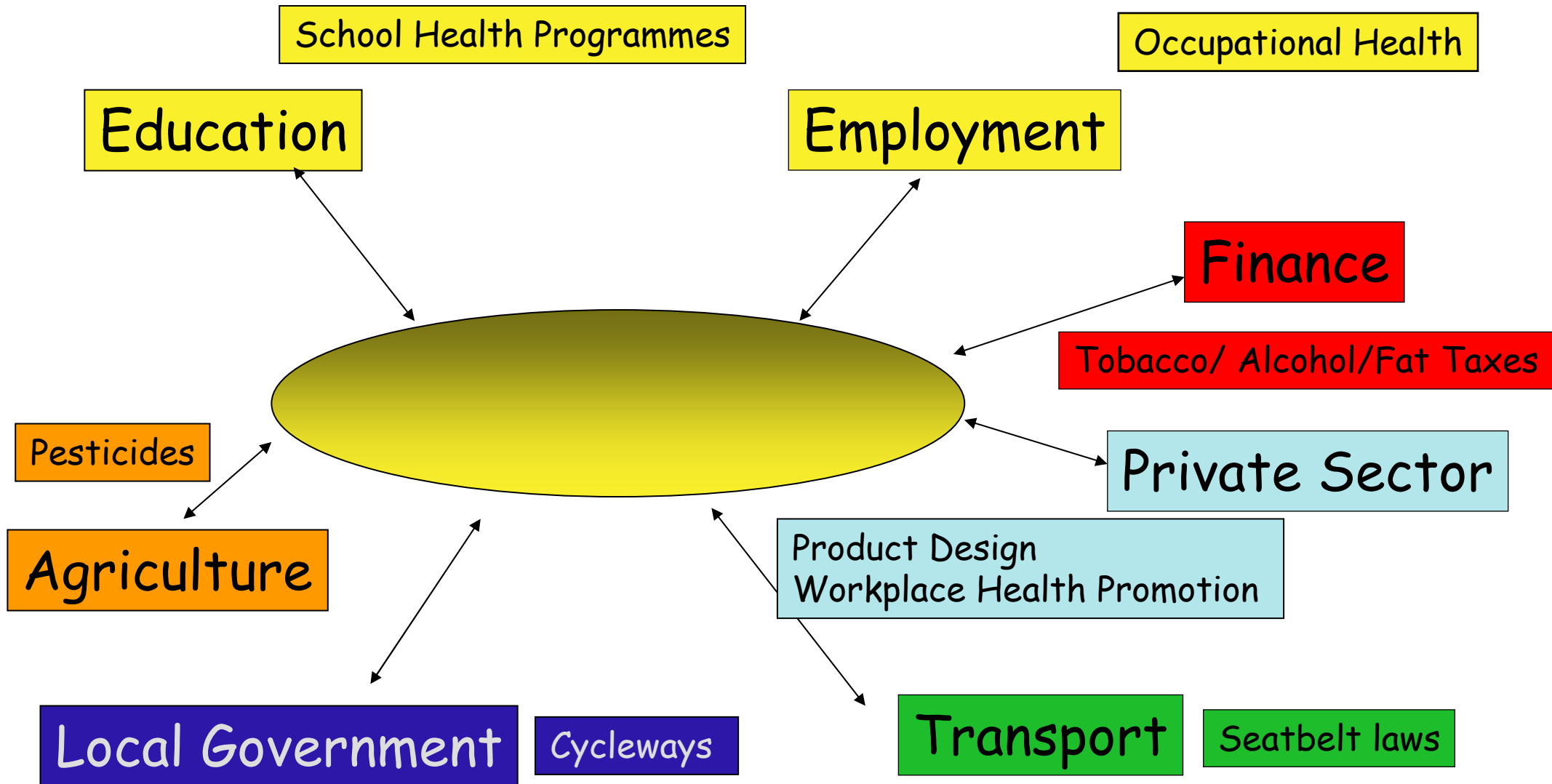
- Assessed population-level cost effectiveness of strategies.
- Local data on health behaviour and health risks.
- Local costs of implementing interventions calculated
- Local experts discussed and contextualised strategies
- **A range of measures appear highly cost effective**
- **Cost per DALY averted of less than €5780 considered cost effective in Estonia.**

| Intervention | Cost per DALY averted (Tobacco Control) | Cost per DALY averted (Alcohol Control) |
|--|---|---|
| Excise Taxes | €14 | €49 |
| Total advert ban | €19 | €85 |
| Comprehensive combination of interventions | €238 | €457 |



The costs and benefits of population wide interventions are often fragmented. This can be a barrier to implementation

Health/ non-Health Sector Interfaces



Cross sectoral investment is cost effective

Education in early years - improved educational & health outcomes: **benefits can outweigh costs**

Flexible employment opportunities in Occ. Safety & Health Policies - cost effective - **can have return on investment 8:1**

Financial support & re-training in economic downturn: lack of intervention increases poor mental and physical health - **leads to increased health service use**

Traffic calming measures: **each death averted worth £2 million plus to society**

Much broader stakeholder perspective

Public health interventions impact on health and non health system stakeholders

Non health system stakeholders may not view health outcomes as a key concern - but they may be responsible for funding and implementing interventions

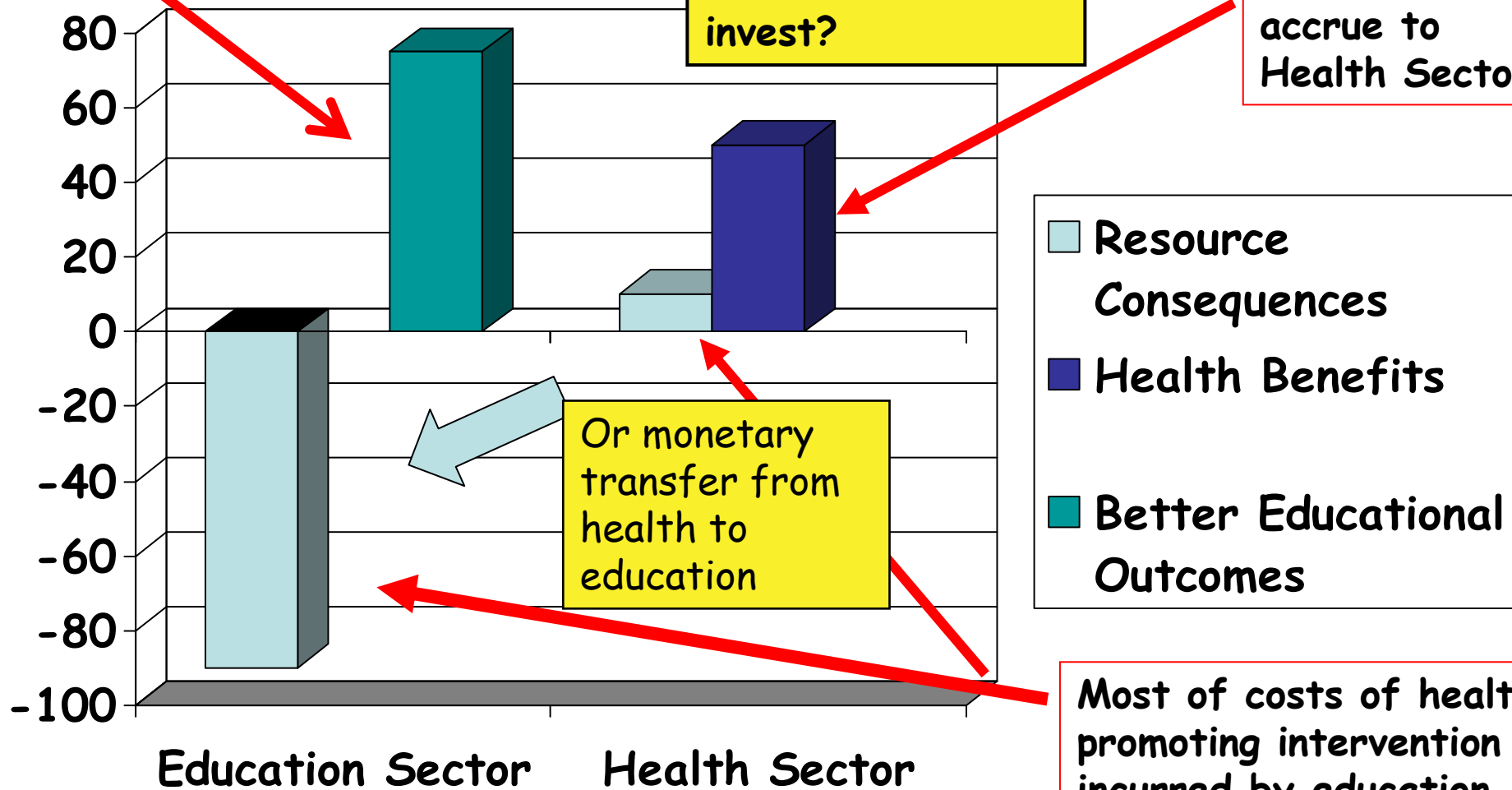
Growing recognition in public health of importance of **quantifying non health benefits of interventions to encourage implementation**

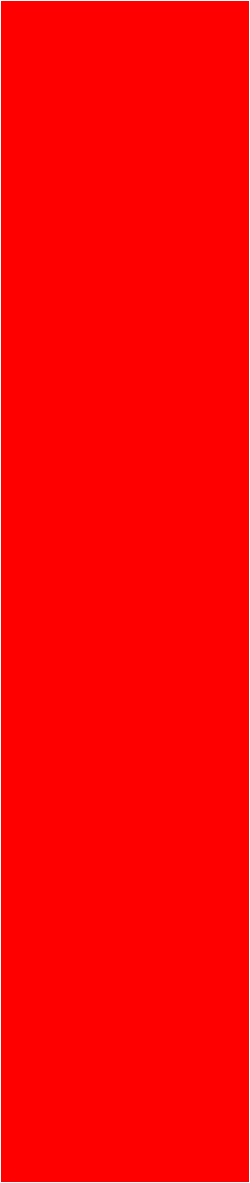
Impact of budgetary silos

Improved educational performance?

So why should education sector invest?

Health Benefits accrue to Health Sector





How can we
co-ordinate
actions across
sectors and
stakeholders?

Mechanisms to overcome financial disincentives

- Co-ordinating cross-sectoral body. E.g. Ontario Ministry for Health Promotion has budget and power to co-ordinate actions across sectors
- (Voluntary) joint budgeting arrangements - remove disincentives to invest across sectors - SOSCAM partnerships in Sweden
- Where overall benefits to public purse set up mechanism to transfer funds from sector that benefits to the one that pays for implementation.
Key role perhaps for Ministry of Finance?

Establish health improvement as a policy goal across sectors

- Establish collective sense of ownership over public health policy e.g. through intra-departmental arrangements - in Denmark 10 departments involved in public health policy 2002-2010
- Joint health related targets across sectors - but need to be explicit and clear - in England 82 commitments across 18 government departments to tackle health inequalities and promote good health

Going forward: implementation

- Many highly cost effective population health interventions exist; evidence base strengthens case for investment
- But need to assess transferability of effective interventions across countries: context matters
- Action can take place across many sectors: institutional arrangements can facilitate dialogue. HTA bodies?
- Identify key non-health consequences of interventions e.g. impact on education - can help 'sell' case for action
- Look at how to overcome disincentives: funding transfers across sectors; joint budgeting and common health (and non health) policy targets

Further information



Policy Brief

How can European health systems support investment in and implementation of population health strategies?

Available at

http://www.euro.who.int/document/hsm/1_hsc08_ePB_2.pdf