

ECONOMIC EVALUATION & THE CHALLENGE OF MODERN PUBLIC HEALTH

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- What is economic evaluation?
- Why do we need to evaluate the cost-effectiveness of public health interventions?
- What do we know about the cost-effectiveness of public health?
- What challenges remain?



What is Economic Evaluation?

The comparative analysis of alternative courses of action in terms of both their costs and their benefits.

Drummond et al 1996



Why do we need to evaluate the cost effectiveness of public health interventions?

Because resources are scarce – relative to all that we can do to improve health & well being



Why Economic Evaluation?

Intervention	COST / QALY
Vaccination – pneumonia aged > 65 years	Cost saving
GP advice to stop smoking	\$500
Kidney transplant	\$6,000
Coronary stenting versus angioplasty	\$28,000
Lung transplantation	\$125,000
Beta interferon for multiple sclerosis	\$700,000

SOURCE: Based on Harvard Cost Utility Database



Resources are scarce

Intervention	COST / QALY
Vaccination – pneumonia aged > 65 years	Cost saving
GP advice to stop smoking	\$500
Kidney transplant	\$6,000
GDP per capita (Canada, 2000)	\$24,800
Coronary stenting versus angioplasty	\$28,000
Lung transplantation	\$125,000
Beta interferon for multiple sclerosis	\$700,000

SOURCE: Based on Harvard Cost Utility Database



What do we know about the cost effectiveness of public health?

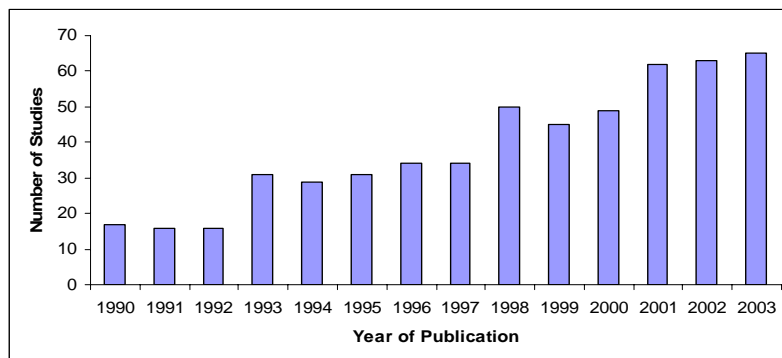


What do we know about the cost effectiveness of public health?

- Not a great deal



A Census of Economic Evaluations in Public Health: 1990 – 2003^{1,2}



Source: (1) Rush, Shiell & Hawe. Health Education Research, 2004, (2) Shiell et al, mimeo



A Census of Economic Evaluations^{1,2}

Strategic Intent of the intervention	Studies (%)	
Building healthy public policy	8	1%
Creating supportive environments	117	20%
Developing personal skills	190	33%
Strengthening community action	10	2%
Reorienting health services	12	2%
Clinical - preventive	237	41%
TOTAL	574	

SOURCE: (1) Rush, Shiell & Hawe. Health Education Research, 2004; (2) Shiell et al, mimeo



A Census of Economic Evaluations^{1,2}

Risk Factor Addressed	Studies (%)	
Biological risk factors	279	49%
Behavioural risk factors	233	41%
Environmental risk factors	49	9%
Social risk factors	6	1%
Economic risk factors	1	< 1%
TOTAL	568	

SOURCE: (1) Rush, Shiell & Hawe. Health Education Research, 2004; (2) Shiell et al., mimeo



What do we know about the cost effectiveness of public health?

- Not a great deal
- But enough to be confident to go looking for more evidence



Some Public Health 'Good Buys'

Intervention	Cost / QALY
Vaccination – pneumonia aged > 65 years	Cost saving
Random breath testing	Cost saving
Needle and syringe exchange programs	Cost saving
Bans on tobacco use in public places	Cost saving
GP advice to stop smoking	\$500
Selective v universal HBV vaccination	\$6,000 - \$15,000
Nicotine patches v no patches	\$7,500 - \$15,000
GDP per capita (Canada, 2000)	\$24,800

SOURCE: Based on Harvard Cost Utility Database



What do we know about the cost effectiveness of public health?

- Not a great deal
- But enough to be confident to go looking for more evidence
- And enough to be vigilant



Some Public Health 'Bad Buys'

These interventions cost money & are NOT effective

- Education to encourage folate supplementation vs fortification
- Screening for Hepatitis C in a population at average risk of infection vs no screening
- Video vs usual care for men attending their Family Practitioner with one or more CVD risk factors



Attitudes Towards Economic Evaluation

- Case for economic evaluation is now accepted by decision makers and research funders
- Initial concern about the ETHICS of economic evaluation in health
- Current concern about the METHODS of economic evaluation and applicability to public health practice



What Challenges Remain?

- Increase quantity & quality of economic evidence
- Translate evidence into practice
- Improve levels of ‘critical literacy’ among users

- Challenge of evaluating ‘upstream’ interventions that tackle social, economic & environmental factors



Challenge of Moving Upstream

- Contested values & conflicting interests
- How are individual preferences formed
- What constitutes social value

- Emergent properties of social interventions (interactions & multiplier effects)



C'est ca
merci et bon colloque

