Child health: What works and what counts

Dr Mary Duffy, Principal Officer, Research & Development and **Diana McNeish**, Director, Policy & Research at Barnardo's in the UK, outline the broad patterns in healthcare and illustrate why efforts to reduce inequalities should focus on implementing interventions for which there is good evidence of effectiveness

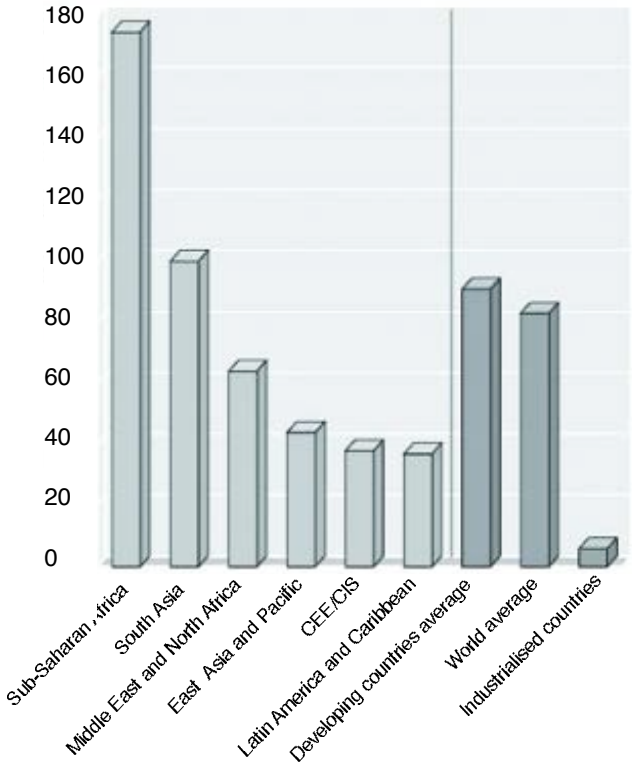
The most sustainable investment we can make in healthy populations is to take proper care of our children's health - Kofi Annan, United Nations Secretary General, 1997

Recent decades have seen improvements in population health across many countries. People are living longer, access to at least a basic level of health care is increasing, and many diseases have been successfully eradicated or controlled. These improvements also extend to child health, which is a priority of the international community (the Millennium Development Goal to reduce child mortality has a target of reducing by two thirds the under-five mortality rate by 2015).

However, despite general advances in medical care and public health, improvements have occurred at varying rates and there are significant differences in health outcomes across groups. Serious problems remain for developing countries: environmental risks to health are still a major concern, while in sub-Saharan Africa the HIV/AIDS pandemic continues to have a devastating effect not just on children and families (with around a third of fifteen year-olds likely to die of AIDS in some countries and life expectancy significantly reduced in many countries) but on the social and economic health of whole countries. As a general illustration of inequalities in child health, Figure 1 compares regional averages in infant mortality.

As well as gaps between countries, there are also dif-

Figure 1
Mortality under five years: regional averages 2000



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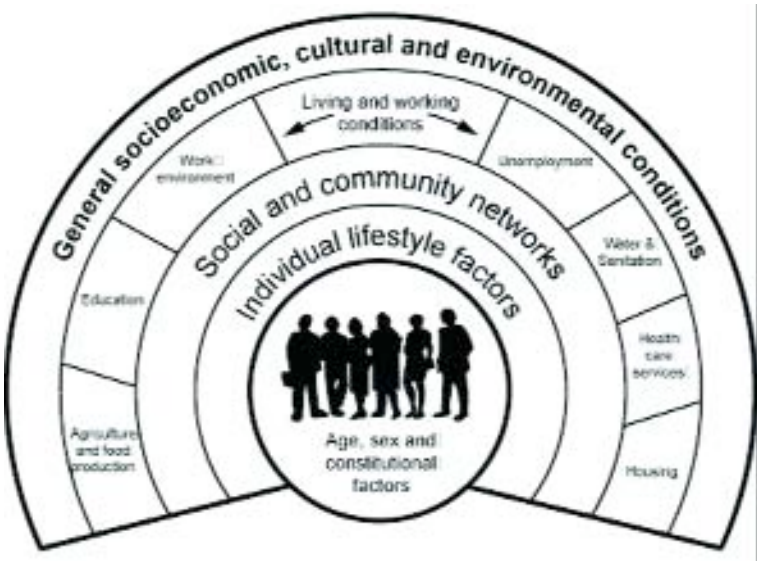
ferences within countries. In both developing and industrialised countries, poorer people have worse health than wealthier people at all stages of the life course, with the poorest children especially vulnerable. These inequalities are well documented (Whitehead and Diderichsen, 1997; Wilkinson and Marmot, 1998; Mackenbach and Bakker, 2001), have been the subject of major research programmes, and remain central to much national and international activity in health and other policy arenas.

This article focuses on children in the UK, outlining the broad patterns of persistent inequalities in health. It illustrates why efforts to reduce inequalities should focus on implementing interventions for which there is good evidence of effectiveness. It does not seek to discourage innovative interventions where such evidence is absent – in the face of clear need and stark inequity, the urge (and political imperative) to intervene can be compelling, and inaction is rarely an option. However, health can be damaged through well intentioned but poorly informed action and therefore simply 'doing something' does not necessarily lead to improvements. In these cases, the rationale for action and the underlying 'theory' of how change will occur should be clearly outlined and good monitoring and evaluation systems should be built in. And in every case, the views of children and their families should be taken into account.

Figure 2: A holistic view of the determinants of health



(Source: Acheson, 1998)

Intervening to improve health

It is widely accepted that health is a complex concept, affected by individual, familial, social, environmental and political influences. Interaction between these must be considered when attempting to change health outcomes, as is well illustrated by the case of HIV/AIDS in Africa. The most comprehensive programmes to improve health therefore involve action at many levels, often outside the arena of health services and sometimes beyond the national stage.

Figure 2 shows these different levels of influence. This model was developed for adults but is also relevant for children and young people, who are affected by the health and well being of those who care for them and for whom choices about their own health may be more constrained.

Successfully intervening to give children a better start in life is critical because what happens in the early years impacts significantly on development and may have benefits throughout life and even into the next generation. Regarding the relative 'performance' of interventions to improve child health in the UK over the last fifty years, a stock market metaphor provides an overview:

"Shares in interventions that reduce mortality and physical morbidity would have performed strongly. Stock in the prevalence of child abuse can be best described as volatile. Children's emotional well being has been something of a bear market … in steady decline." (McNeish et al, 2002, p 205)

Inequalities in child health: the UK picture

Health inequalities are the result of different levels of exposure to risks associated with socioeconomic position. Inequalities also occur linked to area, ethnicity and gender, for example, or in relation to specific groups such as children 'looked after' by the State; these factors are often related to socioeconomic position.

Concerns about the links between disadvantage and poor health outcomes were central to the establishment of the UK National Health Service. However, half a century later, despite reduced infant mortality rates and increased life expectancy, inequalities remain and in some cases have increased. Families with young children remain especially vulnerable, at increased risk of poverty and poorer health outcomes.

The Black Report (1980) recommended improving material circumstances as a way of improving health, in particular for children, and was influential in establishing health equity as a key theme in the 1985 health strategy of the European Region of the World Health Organization. More recently, the Acheson Report (1998) again highlighted tackling inequalities among children as a priority area where potential returns were greatest in terms of lifetime health.

Recent data for the UK show the following:

- In England/Wales, infant mortality rates for manual social classes registered by both parents jointly were 5.5 (inside marriage) and 6.3 (outside marriage) per 1,000 live births; for non-manual social classes they were 3.8 and 4.4 per 1,000 live births **(www.statistics.gov.uk/icd10mortality/)**

- The highest infant mortality rate was amongst babies of mothers born in Pakistan (11.4 per 1,000 live births), more than double the overall rate (5.3 per 1,000 live births) **(www.statistics.gov.uk/icd10mortality/)**

- For children born today in Scotland, life expectancy for the least deprived is 74.5 (male) and 78.7 (female), compared with 68.3 and 74.3 respectively for the most deprived (Scottish Executive, 2002)

- A child from the lowest social class is 16 times more likely to die in house fire than a child from a well-off home (Roberts, 2002)

Children who are 'looked after' by the State are at greater risk of a range of negative health outcomes **(www.doh.gov.uk/lookedafterchildren/promoting.pdf)**

These inequalities have been the focus of public health policy since the late 1990s (Department of Health, 1999; Scottish Executive, 1999) and in England a review across all government departments illustrated the political salience of the issue (Treasury, 2002). The well being of children in particular is a major concern, evidenced by initiatives such as Sure Start and Children's Fund in England, and Starting Well in Scotland.

The importance of 'what works'

What works is about outcomes

Not all interventions to reduce child health inequalities have the desired effect. Many have more modest effects than intended and some have unintended negative effects. Others may achieve positive outcomes but at a cost that could fund cheaper programmes achieving similar or better results. Some effective interventions to improve health may even increase inequalities.

The only way to know whether something works is to specify and measure outcomes. This means moving beyond immediate outputs and intermediate impacts. Without critical examination of the bottom line – improvements in the lives of disadvantaged children – there is a risk that ineffective interventions will be continued. Distributing educational materials (outputs) is common but rarely impacts on behaviour: for example, it does not reduce child accidents (Roberts, 1993) and has negligible effects on breastfeeding rates (Higginson, 2001). Similarly, raising self esteem (a presumed intermediate step towards many health enhancing behaviours) may not be the panacea it is sometimes presented as and may even have negative implications for well being (Emler, 2001).

In complex social interventions it is difficult to adequately take account of other factors that may influence the end result. It is also often challenging or not feasibl to track things over a sufficiently long period to observe changes. Nevertheless, even simple interventions can benefit from clearer thinking about outcomes.
This means being explicit about the steps by which a stated set of effects are to be achieved and measuring progress towards these.

What works isn't always what seems obvious

With limited resources to go around, taking account of relevant research from previous work improves the chances of devising an effective project or programme. It helps to balance or challenge 'gut reactions' about what seems to be the obvious response.

Fires are a leading cause of child injury and death and are much more common in poor households. However, while providing smoke alarms may seem a good response, whether and how they are fitted and whether they result in reduced injury and death depends on characteristics of the alarms, individuals, families, houses, etc (DiGuiseppi and Higgins, 2000). Similarly, although targeting health interventions in disadvantaged areas seems an obvious way of addressing inequalities, many disadvantaged children do not live in 'poor' areas and therefore require different approaches.

What works isn't necessarily about 'health'

Health can be improved through changes at many points in the system. This need for cross-sectoral action was emphasised in the Acheson Report, which highlighted affordable, high quality day care and pre-school education as ways of reducing inequalities in child health. In relation to reducing death and injury from accidents, where dramatic differences between the best and worst off children are apparent, it is traffic calming measures and separation of vehicles from children that is likely to bring best results, rather than interventions targeted at educating children and parents about safety. And in terms of the overarching impact of poverty, it is fiscal policy and changes to the welfare system that may offer most hope for reducing the differences in health outcomes.

What could work isn't always what does work

While understanding whether something works is critical, it is also important to understand how it works, or why it doesn't work in some contexts. Sometimes the success of an intervention in one area may be due to aspects of the local community or the profile and approach of key workers. Without an appreciation of these process issues, interventions that could have a positive impact may not succeed.

Similarly, infrastructure issues may create a barrier to success for interventions that in principle could be effec-

tive. For example, intensive one-to-one support from health professionals during pregnancy and after delivery for women from deprived backgrounds may lead to better health outcomes for their children. However, the ability to deliver such an intervention depends on having sufficient appropriately trained staff in place.

Evidence of effectiveness is never the sole impact on decision making (Davies et al, 2000). Issues of resource allocation always influence what action is taken, as does

the perceived acceptability of proposed interventions to those receiving them.

At a policy level in particular, politics inevitably play a part. In the UK in the 1980s, for example, the emphasis was less on tackling underlying structural factors leading to different health outcomes than on individual behaviour choices in relation to health. This led to certain types of responses being preferred, in some cases despite evidence of need and effectiveness.

We don't always know what works

Despite calls for action based on evidence of effectiveness, in many instances we simply do not know what works, or what is likely to work best in a given situation. In such cases, and in particular where there are obvious problems, inaction is not an option. The responsible course is to make best use of what evidence there is available, to address what we do know as a priority, and to take calculated risks in experimenting with new approaches.

Where innovative interventions are being tried, it is crucial that monitoring and evaluation systems are in place. These should help to record the process of implementation and assess the short, medium and longer term impacts and outcomes, generating evidence against which effectiveness can be judged and which can be used to inform subsequent interventions.

Listening to the voices of children

In weighing up potential policy approaches in planning specific practice responses, there is an increasing recognition of the views of those at whom interventions are aimed. Consulting in a non-tokenistic way with 'end users', especially children, can be challenging. It requires new ways of working and can throw up difficulties for project planning and implementation that would be avoided if professionals simply continued to do it 'their way'.

However, the process may seem less threatening if the views of children are regarded as 'evidence', to be considered in decision-making alongside other sources of evidence. Moreover, children's views are often consistent with those of 'professionals', which should not be surprising given their expert witness status in terms of what impacts on their lives and how things could be different. For example, when asked about threats to their health and things that improve well being, children talk about smoking, drinking and other risky behaviours but also about having more money, better relationships in the family and safer communities (Barnardo's, 2001).

Conclusion

Identifying 'what works' is fraught with difficulties. Research data are often unavailable, uncertain or inapplicable and there are never enough resources to tackle every issue adequately. The challenge for those working on social interventions to reduce inequalities in child health is to make best use of the research evidence that is available, be explicit about the intended outcomes of their programmes and the logic behind these, and be more rigorous about measuring and reporting effects. Yet at the same time as 'hardening' on issues of impacts and outcomes, a broader approach is required to take account of the views of end users as a legitimate form of 'evidence', critical to obtaining a full picture of what is required to make a difference. ◆

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www.unfoundation.org/programs/child_health/child_home.htm
www1.worldbank.org/hnp/CHPS/childhealth.asp
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