Introduction

The relationship between researchers and policy-makers is often assumed and mis-understood but rarely analyzed. A common view among researchers is that if their research is of good quality, rigorous and conclusive, then it will influence policy. They may prefer to stay in the realm of pure academia, perceiving policy work as subject to interpretations beyond their control. For policy-makers, research may seem one of the less relevant and more impenetrable of the many influences, including political pressures, to which they are subjected. Much of the literature about the transfer of research findings into policy focuses on examples of the failure of research and researchers to have a significant impact on the wider world of implementation and practice.\(^1\)–\(^5\) Surprise is expressed that research that rigorously demonstrates effective and beneficial interventions does not necessarily lead to policy change. However, there are also examples where research has influenced policy.\(^6\)–\(^7\) and investigation of such success stories can generate lessons for future transfer of knowledge between research and policy-making.

Policy analysis case study of ‘the Mwanza trial’

One notable success story in developing an effective relationship between research and policy is what has become popularly known as ‘the Mwanza trial’. This randomized controlled trial (RCT) was conducted from 1991–1994 in Mwanza, Tanzania by the London School of Hygiene and Tropical Medicine, the African Medical and Research Foundation (AMREF) and various institutions of the Government of Tanzania. It demonstrated the effectiveness of improved treatment services for sexually transmitted infections (STIs) in preventing HIV infection.\(^8\) Improved case management of STIs in rural health units decreased the prevalence of some STIs,\(^8\) and reduced the incidence of HIV infection by about...
The intervention, integrated into existing primary health care services available in rural communities, was shown to be both feasible and highly cost-effective.11 The case study reported here explored what was felt to be a widely held perception within the HIV community that the results of this study published in 1995 greatly influenced HIV prevention policy. STI control was commonly adopted as one of the main components of HIV prevention programmes, along with educational and condom promotion activities. It was given high priority by a variety of players: the World Health Organization (WHO), the joint United Nations Programme on HIV/AIDS (UNAIDS), the World Bank, bilateral development agencies, non-governmental organizations and Ministries of Health in numerous low-income countries.12–15 The implementation of the syndromic approach to the management of STIs (whereby an STI is treated simultaneously for the most likely causative pathogens16,17) became broadly accepted as the appropriate strategy for STI control in areas where high quality STI laboratory services are not available. Many donor organizations made additional funds available for STI interventions. For example, during the five fiscal years following 1994/95 (the year before the trial results were published), annual spending on STI control in developing countries by the UK Department for International Development (DFID) increased more than six-fold, reaching almost 11 million pounds by 1999/2000.

The results of another RCT (of STI mass treatment) conducted in the Rakai District of Uganda showed a modest reduction in the general population.8,10 The intervention, introduced a biomedical (treatment) dimension to the field of STI services and provided 'hard data to support an existing policy discussion'. One participant pointed to the dynamics that had already been recommended by WHO before the results of the Mwanza trial became available.16,17 One participant pointed to the dynamics that the results of the Mwanza trial influenced policy, interviews were conducted with STI professionals moving into the HIV field and the priorities formulated at the Cairo ICPD Conference. When discussing the process of internal change in their organization, a policy-maker stated that this phenomenon was 'like a sponge soaking up water'.

Policy-makers felt that the study enabled a heavy investment in STI services and provided 'hard data to support an existing policy discussion'. One participant pointed to the dynamics that were created by STI specialists when they became increasingly involved in HIV control during the late '80s to early '90s and introduced a biomedical (treatment) dimension to the field of HIV prevention. This was seen as contributing to the medicalization of AIDS and also to a shift which saw HIV classified not only as a systemic viral infection but as an STI itself. Others quoted the WHO consensus statement, on the importance of STI prevention as a measure for HIV control, as indicative of a pre-Mwanza policy shift. It was also stated that STI syndromic guidelines (enabling non-laboratory based treatment) had already been recommended by WHO before the results of the Mwanza trial became available.16,17 One participant pointed out that these guidelines moved treatment of STIs into the realm of Primary Health Care for the first time, an important pre-condition for the Mwanza success.

From research to policy – lessons from Mwanza

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from having studied together and from social contact. The felt need for a biomedical HIV intervention of proven effectiveness in addition to behavioural interventions, the drive to advocate the syndromic STI treatment approach, curiosity about why the HIV epidemic was spreading disproportionately quickly in Africa and the mounting evidence of an aetiological link between STIs and HIV infection were all cited as affecting the perceived necessity for and the timing of an RCT. Donors' flexibility explained in one case as resulting from the emergence of a new fatal illness and epidemic, enabled researchers to becoming proactive in investigating research sites and designing an initiative. After completion of the Mwanza trial, a variety of reasons and occasions were identified by the interviewees as supportive elements that drove policy change, including: the post-Cairo need for evidence for integration of STI care into MCH, publication of key articles, an air of optimism at the Vancouver World AIDS conference of 1990 and the re-structuring of the UN in the mid to late '80s, which brought STI and HIV professionals together as a working group within the same department in the Global Programme on AIDS.

Many participants talked in emotional terms about the results of the trial as ‘a light in a dark tunnel’. The mood of the HIV community before, during and after the trial was described as one of desperation in the face of soaring HIV figures and the lack of solutions, and this first community-based RCT appeared to provide a clear simple answer for resource poor settings. Although, as mentioned previously, the majority of participants located the policy shift pre-Mwanza, the results were still greeted with ‘relief’, ‘delight’ and seen as ‘too good to be true’. One policy-maker felt that the scarcity of knowledge at the time increased Mwanza’s impact apocalyptically. Their observation was that research rarely impacts on policy as significantly as Mwanza did.

Researchers and policy-makers formed an effective strategic alliance

The multiple donors and research partners for the trial were seen as important in enabling communication about the research process and leading to broad ownership of the results. One policy-maker felt that personally knowing the research team and institutions meant that the results were greeted with enthusiasm, whereas if it had been produced by a research team unknown to the policy-makers, it may not have been so warmly received. All the policy-makers interviewed felt it was important for the changing of British policy that the trial had British co-funding.

Work opportunities, such as consultancies, were mentioned as having led to increased communication between researchers and policy-makers, as did the preparation of technical documents for donors. The more standard academic communication channels, such as journal articles, were rarely mentioned as useful for communication, although some key articles were cited as ‘events’ when it came to discussing policy shift. Also important were links and trust that existed from having studied together and from social contact.

The major theme expressed in relation to this topic was cross-boundary interest, whereby a previous research interest would mean a continuing interest in this area of work for a policy-maker. Many key actors in the HIV field were cited as having been previously involved as STI professionals, which motivated the policy shift.

Practical issues mentioned as facilitating these communication links included the professional background of policy-makers, in that if they had a personal interest in the subject area or had previously been researchers themselves this enabled effective communication between ‘camps’. Similarly if researchers were interested in getting involved with the public health implications of their work and pushing for further implementation, this enabled further communication across the communities. These participants felt that intermediary organizations, with strong contacts in both the research and policy fields, such as NGOs, were important in enabling a bridging between the two worlds.

In this case the ‘foot in both camps’ advantage was supplemented by the majority of the research funds coming from a development aid arm of the EC (Department General VIII) rather than a research fund. This meant that the research needed to be named as an ‘intervention with evaluation’, and therefore crossed over the research and implementation fields. It was described by one policy-maker as pragmatic public health research, as opposed to ‘petri-dish village’ research. Being funded by a routine aid donor was mentioned by a couple of participants as increasing the credibility of the potential research, in Tanzania especially.

It was possible to present the data in an easily digestible way

The ability to demonstrate a clear relationship between STI intervention and a reduction of HIV transmission at the population level, and to provide proof of a reduction of HIV incidence by 42%, was often cited as important for the trial’s success. One researcher called this the ‘worship of the 42% as a magic number; others called it ‘staggering’. In addition researchers felt that the evidence of cost-effectiveness and the fact that the Mwanza trial had been community-based was important to enhance policy shift. The fact that the Mwanza results were perceived by some policy audiences, both as a ‘magic bullet’ of clinical treatment and as realistic public health intervention was also seen as increasing its popularity, although members of the research team were wary of the impact of the research being perceived as a magic bullet that would have the same results in every setting.

Interestingly, a policy-maker discussed the importance of the research being ‘easy to buy’ for all levels of the civil service hierarchy up to Cabinet Ministers. It is intuitively easy to understand and enabled all to talk coherently about the clear relationship and tangible results, whereas a technically complex breakthrough might not have travelled as well through the hierarchy.

Policy-makers discussed the difficulty they faced in general in filtering the mass of research information received and
Therefore the way in which institutional and work programme links were often more effective in translating information.

One researcher discussed his rounds of international policy meetings after the results were published. He felt like a ‘vacuum cleaner salesman’ selling the results and their implications. He sometimes found that policy audiences were keen to replicate exactly the same results, but in a different context, and that they thus disregarded the 95% confidence interval around the central estimate of the observed impact.

Another participant involved in writing documents for policy-makers working with researchers’ input mentioned that often research did not provide this kind of ‘digestible material’. In terms of content it was felt the issues that did the most to change people’s minds were the ‘clear’, ‘quantifiable’ results, the reiteration of ‘40% reduced HIV transmission’, the cost-effectiveness data and the possibility of replicating the initiative in a resource-poor setting. The evidence arising from a large scale RCT as strong ‘proof’ seemed crucial in convincing appropriate audiences that STI treatment had a direct demonstrable impact on HIV transmission in a way that smaller experiments did not.

Discussion

Below we discuss the limitations of the study and each of the key findings in turn. A major limitation of the study was that all interviewees were based and working in London, which may have created a bias towards British perspectives of international policy and indeed a more in-depth discussion of the research’s impact on DFID policy. The study was performed within the context of a summer project as part of the postgraduate training of one of the authors. For this reason, policy-makers or researchers from Tanzania were not included among those interviewed. However, a variety of professional groups were covered, and a number of key findings were apparent.

Favourable policy environment (‘Mwanza fell into a ready made bed’)

The Mwanza trial is often cited as the sole justification for policy shift. However, a variety of factors prior to the time of publication created an audience particularly receptive to the trial results. The idea for the trial arose from consensus that STI treatment had a direct demonstrable impact on HIV transmission in a way that smaller experiments did not.

One donor funded the research from a non-research budget, by classifying the trial as ‘intervention with evaluation’ which helped to mobilize funds that otherwise might not have been accessible. One researcher involved in the study felt that the trial provided ‘hard data to support an existing contention’. However, perceptions were that, outside an already convinced core group, the results proved useful to convince the ‘doubters’, defined by one policy-maker as ‘the social development people and the accountants’. The results came at a time when many policy-makers, programme managers and interventionists faced with the depressing situation of a rapidly expanding epidemic were sceptical that any interventions were really having an effect, and were keen to identify an intervention of proven efficacy. A rigorous trial demonstrating a reduction in HIV was therefore warmly welcomed. The Mwanza trial was a push to an already rolling policy stone.

Strategic alliances between researchers and policy-makers

There was close contact and shared ownership between the researchers, the government of the country that hosted the trial, donors and NGOs during the trial. This was further facilitated by long-standing networks between key researchers and policy-makers who were linked by both conviction and interest throughout, not only at the post-research stage. At different times, various key researchers and policy-makers had worked together, lived in East Africa or studied together. One policy-maker felt that it was crucial that they ‘knew the researchers personally and could therefore trust the results’. The researchers were not to blame for the policy-makers’ needs and in addition some had worked alongside them whilst ideas were generated and proposals developed.

Availability of easily digestible data (‘worship of the 42%’)

The complex epidemiological data produced as a result of the RCT were reduced to a single fact as they were translated within different audiences. The Mwanza trial became commonly known for one particular statistical result, a reduction of HIV incidence by 42% in the intervention as compared with the control communities. Researchers perceived this as a mixed blessing. An advantage was that such a simplified result was ‘easily digestible’, and facilitated advocacy. This proved vital when explaining the importance of the research to Members of Parliament and high-level civil servants, as it was ‘easy to buy’ and ‘intuitively understood’. However, it was a disadvantage that this simplification disregarded the 95% confidence interval around the central estimate of the observed impact (the result was consistent with a reduction of as little as 21% or as much as 58%).16 ‘Worship of the 42%’ was also potentially dangerous in raising the false expectation that the result would be immutable and entirely translatable into other demographic, epidemiological and behavioural contexts.

Conclusions – implications of the policy analysis case study

This case study explored in detail the interaction between a group of researchers and policy-makers involved in the research policy interaction and their perceptions of that
having an impact on policy.

Researchers should try to build strategic alliances with those likely to have an academic, geographical, political or development interest in the policy implications of the research, to discuss initial ideas, develop proposals and disseminate results.

Presentation of easily digestible data from the Mwanza trial certainly helped to influence policy worldwide. This demonstrates that results that can be presented simply and clearly, and understood by those with a non-research background, can have a major impact. Key study results should be translated into points easily digested by policy-makers, while trying to avoid the pitfalls of over-simplification.

Researchers may absorb themselves in the technicalities of their study without considering their role in pursuing the wider policy implications. It is important to consider how research will have an impact on policy not as an afterthought or a footnote in a post-results dissemination strategy, but as an integral element of every stage of the research process.

The case study of the Mwanza trial illustrates the importance of researchers taking a contextual view of the interaction between research and policy, and understanding how changing political contexts affect receptivity to research outcomes. This will increase the likelihood of their research findings having an impact on policy.

References
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