

Research impact: making a difference

A new approach to eradicating 'neglected' tropical diseases

LSE Professor Tim Allen established that social factors crucially influence drug take-up in mass disease eradication programmes

What was the problem?

Over one billion people are at risk of, or already afflicted by, 'neglected' tropical diseases. These are parasitic and bacterial infections, largely eradicated in the developed world, that persist among politically and economically marginal populations of Africa, Asia and the Americas.

The diseases include lymphatic filariasis or elephantiasis, which currently affects some 120 million people, and schistosomiasis or bilharzia (200 million sufferers, plus a further 600 million people judged at risk).

The United Nations Millennium Development Goals have focused attention on eliminating or controlling these diseases to help lift the world's poorest populations out of extreme poverty by 2015. To this end, international assistance over the past ten years, backed by massive donations of medicines, has enabled several countries to implement large-scale programmes, known as Mass Drug Administration or MDA. These offer free treatment to adults and children living in affected areas.

But just how effective are mass drug programmes at eliminating or controlling the diseases? And crucially, can they work on their own?

What did we do?

Since 2005, LSE Professor Tim Allen has participated in an international multi-disciplinary programme initially based at Imperial College to assess the impact of current strategies to control these neglected diseases. With medical anthropologist Dr Melissa Parker from Brunel University he shared equal responsibility for the programme's social research.

Allen and Parker each undertook 16 months of fieldwork in Tanzania and Uganda and supervised a team of postgraduate researchers from UK and African institutions. Between 2005 and 2011 they looked intensely at some 100 sites in these two countries.

Their findings raised many questions about the efficacy of current strategies to control these diseases and demonstrated that the social context often played a critical role in their success. For example, many fisherfolk in Uganda were not receiving treatment for schistosomiasis (bilharzia) because they were island-based and drug distribution was centred on mainland villages.

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The research also revealed poor communications, ethical challenges, disregarded side-effects, and a tendency to generalise diseases when their signs and symptoms varied within and between populations. Evaluation was also often patchy, confusing advocacy with research and making exaggerated claims for the programmes.

What happened?

The research has both improved clinical outcomes on the ground and successfully challenged world opinion on the efficacy of mass drug treatment strategies.

In Tanzanian coastal areas, the majority of the study population was resisting treatment for lymphatic filariasis (elephantiasis). Allen and Parker suggested to Tanzanian officials that as well as supplying drugs, the programme could offer free surgery for men with swollen scrotums. Individuals successfully treated would then become powerful advocates for the programme. Drug take-up rose dramatically in those sites where their advice was followed: from 40 per cent in one village to more than 90 per cent three years later.

Similarly in Uganda, the authors used the research to demonstrate to local leaders and health officials why treatment approaches were failing and how changes could bring improvements.

In terms of wider reach, the Ugandan research showed that mass drug treatment strategies could work in combination with other approaches but commonly faltered or failed when delivered on their own. This work soon garnered attention from key figures and institutions involved in the battle against infectious diseases, many of whom endorsed Allen and Parker's argument for a 'biosocial' approach at the local level that linked biological and social factors.

The findings were discussed at formal and less formal meetings, including sessions at the UK Department for International Development and closed sessions of the Bill and Melinda Gates Foundation in June 2009, at which representatives of the World Health Organization (WHO) were present.

Allen and Parker repeated their call for a biosocial approach to disease eradication in a special issue of the Third World Quarterly devoted to the Millennium Development Goals. The United Nations Secretary General Ban-Ki Moon echoed their plea in his preface to the issue, pointing to 'knowledge gained over the past decade about the effectiveness of taking a holistic approach'.

The article provoked controversy within the professional community. Argument and counter-argument followed, including a letter from Allen and Parker published on the front page of the

“...it initiated behavioral and attitude change in the local population who were initially resistant to use of drugs whereas they were in dear need of treatment. This I believe was achieved through your participatory approach of research, community mobilization and sensitization.”

**Mayor of Nebbi District,
Northern Uganda**

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world's leading general medical journal, The Lancet, asking whether increased funding for neglected tropical diseases really would 'make poverty history'. The letter was timed to coincide with an international meeting in London at which governments, global health organisations, the World Bank, the Gates Foundation and 13 pharmaceutical companies were announcing a co-ordinated partnership to eliminate 10 neglected tropical diseases by 2020, involving commitments of over \$785 million and significant support in kind.

Soon the tide of opinion began to turn and Allen and Parker gained widespread support for their approach to eradicating these diseases.

At the International Society for Neglected Tropical Diseases conference held in London in 2012, the respected head of the Schistosomiasis Control Initiative at Imperial College stated to a surprised audience that the kind of work undertaken by Allen and Parker should feature at all sites implementing mass drug administration programmes.

Opportunities to discuss their work followed — with government officials, with members of the UK Parliament, and at an international conference they convened in London with Dr Katja Polman of the Institute of Tropical Medicine, Antwerp.

Forty countries now have long-term plans to control or eliminate neglected tropical diseases, with close to £1 billion in funding and in-kind support promised over the next five years. Such assistance will defeat these diseases — and alleviate the misery they cause to lives, societies and economies around the world — if, as Allen and Parker have showed, it is delivered with sensitivity to social factors and local conditions.

Tim Allen is Professor in Development Anthropology and Head of the Department of International Development at the London School of Economics and Political Science. He has carried out long-term field research in several African counties, mostly in East Africa. His publications include the bestselling textbook, *Poverty and Development* (Oxford University Press 2000), as well as books and articles on ethnic conflict in Europe, media coverage of wars, links between culture and development issues, mass forced displacement, and global health issues. His latest books have been *Trial Justice: The International Criminal Court and the Lord's Resistance Army* (2006), and *The Lord's Resistance Army: Myth and Reality* (2010). In recent years his research has focussed on justice and accountability in African war zones, and social aspects of Neglected Tropical Disease control.

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