

Using Research to Influence Policy and Practice: A story from Thailand

Melioidosis is an infectious bacterial disease present in tropical and sub-tropical countries¹. It has high fatality rates: globally, 89,000 of the estimated 165,000 people who had melioidosis died in 2015. It is a difficult disease to diagnose as its symptoms mimic those of common diseases such as flu and leptospirosis. Even in areas where it is most prevalent, most people have not heard of melioidosis. To complicate matters further, most hospitals in low- and middle-income countries do not have the resources for diagnosing and treating the disease.

Thailand is one of many countries affected by melioidosis which is the focus of research by the Mahidol-Oxford Tropical Medicine Research Unit (MORU), a research collaboration between Mahidol University in Thailand, the University of Oxford and the Wellcome Trust.

By 2013 MORU researchers had published more than 100 research articles on melioidosis and had observed more than 150 fatalities a year from the disease in a single hospital in Northeast Thailand which they used as a research study site. Yet the official figure reported by the Thai Ministry of Public Health (MoPH) in 2013 was just four fatalities from melioidosis in the whole country and an average of 10 cases in previous years.

Since the 1990s when the MORU team were convinced that far more attention needed to be paid to the disease, they repeatedly attempted to encourage the MoPH to allocate resources for a national prevention campaign. Early efforts proved ineffective as health policymakers, doctors, health workers, the wider public, and the media had little knowledge of melioidosis. According to MORU researchers this was due to chronic under-reporting of incidences of and fatalities from the disease:

“It was like a loop: doctors didn’t have time to communicate with the person responsible for disease reporting in the hospitals, hospitals didn’t tell MoPH, MoPH reported very few cases, the media wasn’t interested, and the population wasn’t aware. Again, when doctors didn’t tell patients and their relatives, people didn’t know about the disease, and they did not raise an issue. Then policymakers don’t think it’s a big problem, so they don’t campaign for melioidosis prevention. And then people still don’t know about the disease.”

¹ <http://www.ox.ac.uk/news/2016-01-11-millions-risk-little-known-deadly-tropical-disease>

How change happened

In order to have influence, MORU staff knew they would have to strengthen their relationships with Thai policymakers. To do this they needed to build their own credibility as researchers, which was a challenge as melioidosis was not well understood. Researchers realised they needed to begin by responding to policymakers' demand for other locally relevant research (for instance demonstrating their expertise on evaluating disease reporting systems on dengue and leptospirosis) and by working with them on those issues, so they could be seen as a reliable source of knowledge that could produce results. As the relationships strengthened MORU was able to raise the issue of melioidosis and work together with the MoPH on the issue of under-reporting and the problems this caused.

In 2012, MORU took a different approach to influencing policy and practice for melioidosis. Acting on advice from an MoPH representative, MORU researchers produced an estimate of the true number of melioidosis cases in Thailand. Their reasoning was that improving the official data would help highlight the severity of the disease, which in turn would persuade the ministry to invest in national improvements to diagnosis, monitoring, treatment and prevention.

They approached the development of the estimate in several ways. At the study hospital where they had previously observed fatalities MORU researchers supported staff to collect and prepare accurate data on deaths due to melioidosis and ensured that this data was submitted to the MoPH via the national notifiable diseases surveillance system.

MORU staff also analysed the reporting system of hospitals in Northeast Thailand and collaborated with them and the MoPH to develop better estimates of fatalities from melioidosis countrywide. If the figures from this single hospital were representative of the wider population, the simple estimate would suggest that in Northeast Thailand alone, approximately 1,500 people die of melioidosis every year. This would confirm that the impact of the disease is much greater than other well-known diseases such as dengue fever, leptospirosis and malaria, each of which kills fewer than 100 people per year in Thailand.

While they welcomed the concept and the support, hospitals were initially reluctant to submit the data. This reluctance stemmed from two key concerns: that publishing the correct data would show a sudden increase in the numbers of deaths from melioidosis and that this would trigger a formal outbreak investigation; and that they would be blamed for previously reported data being incorrect. MORU therefore had to ensure that policymakers would not penalise hospitals who began reporting accurate data. They worked to create a positive narrative where the high numbers were seen as evidence that hospitals recognised the severity of the problem and as evidence of the need for a greater focus on prevention and treatment. According to the Head of Microbiology at MORU: *"It had to be framed not as a punishment story, but as a rewarding story for others to follow"*.

MORU also initiated the development of a global network – the International Melioidosis Society (IMS) – to act as a platform for sharing knowledge about the disease. The IMS website allows information sharing between countries, helping policymakers to see detailed evidence of the disease in their countries, as well as open-access advocacy materials shared by researchers from different countries (eg. Australia and Singapore) designed to inform people about melioidosis and how to prevent it. This platform shows policymakers that their colleagues in other countries face similar challenges and gives them an insight into what they are doing to address them.

The network's meetings are also a space for interaction between policymakers and researchers. At the first meeting in 2012 in Thailand, local and international melioidosis researchers interacted with government representatives to discuss priorities and agree on realistic approaches to combating the disease. While international experience was welcomed, local sensitivities were also recognised: towards the end of the meeting Thai policymakers and researchers met on their own to discuss sensitive issues in their own language and express what they thought were realistic changes that could be made given local constraints.

Impact

MORU researchers believe that their engagement activities have been instrumental in bringing about a change in how Thai health policymakers view and address melioidosis. The official number of melioidosis fatalities reported has increased from 13 in 2012 to 233 in 2017. This suggests that the work to improve the reporting system and to persuade policymakers not to penalise hospitals that report higher figures is beginning to pay off. As a result, melioidosis is now one of MoPH's top priorities. MoPH is putting more resources into combatting the disease, beginning with research grants. According to the Head of Microbiology at MORU, *"The amount of money for research is not the main issue. Thailand has lots of research organisations from US and UK doing good research on melioidosis. But having money from MoPH as well represents local ownership and is an official record that melioidosis is now a priority."*

While MORU teams had long recognised that the media is an effective way of reaching local communities with messages about melioidosis, researchers had struggled to find ways of disseminating those messages nationwide. Improving the official data has begun to raise the media's interest in the disease: MORU researchers are now being called upon to provide information and advice to media outlets, backed up by the resources available through the IMS global network.

Next steps

MORU plans to continue working with hospitals and MoPH policymakers to strengthen their recording and reporting of melioidosis. In the long term, as the true extent of the disease becomes more widely known, MORU hopes to convince MoPH policymakers to launch a prevention campaign through the national media to raise awareness of the disease among communities across the country.

Background to the Mahidol-Oxford Tropical Medicine Research Unit

Established in 1979 as a partnership between Mahidol University in Thailand, Oxford University in the UK and the Wellcome Trust, the Mahidol-Oxford Tropical Medicine Research unit (MORU) develops effective and practical means for diagnosing and treating malaria and other neglected diseases. MORU has established a research network of research capabilities and clinical study sites spanning multiple countries in order to conduct responsive, clinically relevant tropical medicine research into diseases including malaria, melioidosis, typhus, tuberculosis and leptospirosis. MORU's Mathematical and Economic Modelling group (MAEMOD) works with the Thai Health Intervention Technology Assessment Programme (HITAP) to support evidence-informed decision-making by the Ministry of Public Health.



Pamphlet for educating people about melioidosis from Ministry of Public Health Thailand, 2018. The pamphlet was co-developed between Thailand Melioidosis Network and Ministry of Public Health Thailand.