

## Keynote Speech (1)

# GLOBAL HEALTH: CHALLENGES AND OPPORTUNITIES OF TRANSLATING POLICY INTO PRACTICE

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### SUMMARY

Many advances in applied health and science ultimately lead to policies intended to improve people's lives. Policy making and effective implementation present us with both challenges and opportunities. As scientists we have the opportunity to look at health issues in a way that identifies "What works and Why", and must make sure that what we learn is shared through 'Knowledge Transfer' (KT). KT happens in many ways – the ICASH events and other conferences are examples, but ultimately the 'gold standard' to aim for is publication in a peer reviewed journal. But even with publication of an important discovery it still always a challenge to get policies to result. Usually it is necessary to validate your results with those of other researchers, and to actively lobby policy makers. The most direct route from research to policy is usually to look at issues of direct interest to policy makers. And when you do this, the best way to begin is to review what research has been done globally that you can apply locally, and use this as the basis for investigating the problem you want to focus on in your area.

To describe how policies lead to change, and give you ideas for research that will help to promote health, I want to look at some specific health issues relevant to Thailand and Indonesia, and consider the 4 main strategies involved in implementing policies aimed at promoting health. These are: 1). Legislation to require people to follow a specific policy. 2). Application of technology to create change. 3). Public education to provide new knowledge; and, 4) Activities intended to change lifestyle and behaviors [1].

Malaria is a problem in Thailand and Indonesia. There are government programs and policies in place. The Thai malaria development plan (2018) is an example which aims to eradicate malaria from most districts by 2021, and from the whole of Thailand by 2024 [2]. To do this will require use of all 4 health promotion strategies. Legislation is in place for example for some forms of vector control – particularly spraying – but in remote and border areas this can still present a challenge. New technologies are being developed, and as they become available they provide novel opportunities, for example, to improve malaria prevention with more effective chemicals on treated bed nets, and aid diagnosis with rapid diagnostic testing and new optical methodology to diagnose *P. Falciparum* malaria [3,4]. Vaccines are one the best forms of health investment [5]; but so far meeting the challenge of manufacturing suitable vaccines for malaria has proved elusive. Education progressively increases public awareness – and targeted school programs working to inform children are an important, scalable and very effective approach [6]. While working to change lifestyles and behaviors is always a challenge, this is an important element of any policy, and certainly something relevant to malaria - programs exist at national and community levels, with promotion of the use of bed nets as a preventive method a good example. Most studies suggest that insecticide-treated bed nets (ITNs) provide protection even with significant outdoor and early evening biting. There is a strong culture of bed net use in Thailand, and net ownership

is quite high [2], but the fact that currently many of these nets are untreated is an example of both a clear challenge and a parallel opportunity.

Translation of policies like those in place for malaria into practice involves many people from different professions and multiple agencies – but all of us have roles and opportunities as individuals, family members, parents and members of society. Through our work as health care providers and scientists, we can contribute uniquely by focussing our individual interests, experience and expertise on some aspect of any challenge or opportunity. For example, with malaria, epidemiological studies are needed to collect data on infection rates, rapid diagnostic testing and monitor the emergence of artemisinin resistance, and so are surveys to evaluate people’s knowledge, attitudes and behavior.

A new challenge of importance to all of us is the current global epidemic of chronic non-communicable diseases (NCDs) such as type 2 diabetes and high blood pressure [7,8]. We should all look for opportunities to contribute to the body of research necessary to develop effective policies to address this challenge of NCDs. Meanwhile it is important to promote education on the topic in our communities, making sure in particular to teach young people and health care providers about the importance of maternal health and micronutrient supplements during pregnancy, and the need for good infant nutrition (neither too much nor too little) during the first 2 years of life [7].

In my research an unusual way to spread health promotion messaging has become evident. Young people follow celebrities; and there is strong evidence that what celebrities say and do, and any causes or policies they actively support, make an impression that can influence awareness, attitudes and actions [9,10]. Also, you all know how widespread and powerful the use of social media can be. So we need your generation to create and advocate for health promotion applications using social media that can support health policies and encourage beneficial health behaviors

Last year at the 2<sup>nd</sup> International Conference on Applied Science and Health we heard about the problem of plastic waste in Thai water systems. The UN and WHO sees this plastic as a danger on many levels, from impacting our food supply to producing dangerous estrogen-like by products as it degrades [11]. This challenge offers all of you opportunities to research, educate and campaign for policies that will reduce the problem and improve public health. Examples from Europe and North America include the banning of free plastic bags to pack purchases in stores and stopping the use of drinking straws with fast food.

However you choose to contribute to the challenges and opportunities of translating policies into practice you will eventually need to write up a report. Setting out to write up the reasons why you did your research and present what you have found in the results is always challenging. Remember that the most important sections are 1). A step by step description of the methods and population involved that is comprehensive enough for others to repeat your study, and 2). A logical summary of the results which tells the reader clearly what you found that is important.

One interesting way to consider presenting your ideas for publication is in a ‘Photo-essay’. An article in the next edition of Global Health Management Journal (GHMJ) describes how a series of images accompanied by captions can be combined with a brief text and short reference list to create a visually engaging and informative report [12]. Photo-essay is a novel way to report on an applied health, social or scientific topic, and the concept comes from the discipline of photojournalism that uses images in order to tell a news story [3]. Not all research can be presented for publication in this way, and only a small number of journals accept submissions of photo-essays, but this format is an excellent one to use for a brief report, or to prepare a research presentation for a scientific meeting. Photo-essays can also be used as the basis for progress reports to project supervisors or funding agencies, and are a good format for young investigators to consider [13]. GHMJ has a section for photo-essays and welcomes submissions for publication in this format.

Finally, develop the habit of looking at a wide variety of reports from different journals, as this will give you ideas about good ways to report your research. However you decide to share the advances in

applied health and science that you have made, carefully follow the instructions for authors for the journal you have selected when preparing your manuscript. To prepare a good submission it is also important to keep what you write brief and to the point; make sure that you only include material under the headings introduction, methods, results and discussion that is meant to be in each of those sections, and spell check the whole manuscript carefully [12]. Then, as an important last step before submission, have a mentor or supervisor read through your final version. In this way you will have the best chance of having your report published, and of sharing your ideas with those able to advance health care policy.

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