Antimicrobial resistance communication activities in South East Asia

There is an urgent need to raise public awareness of antimicrobial resistance in the region, say Natasha Godinho and colleagues

Public health communication is the scientific development, strategic dissemination, and critical evaluation of relevant, accurate, accessible, and understandable health information, communicated to and from intended audiences to advance the health of the public. In the field of health information, communicated to and from intended audiences to advance the health of the public. In the field of health information, communicated to and from intended audiences to advance the health of the public. In the field of health information, communicated to and from intended audiences to advance the health of the public.

Our research shows, however, that there is a limited volume of information available on AMR related communication campaigns in the World Health Organization South East Asia Region (SEAR). All countries in the region need to adopt comprehensive, strategic communication campaigns to transform behaviours that lead to antimicrobial resistance. This article describes the landscape of government led public awareness interventions on AMR in South East Asia, and suggests recommendations to help national level authorities in the development of future campaigns.

Methods

Our analysis of AMR communications campaigns in South East Asia was divided into two phases: desk research and interviews. In phase one, online searches were conducted for research papers related to AMR communication, government reports, press releases, news articles, and blogs across databases such as JSTOR and PubMed for English published data. Google was searched by using strings that combined the names of countries, publications, authors, partnerships, and stakeholders with the following AMR related keywords: “AMR,” “AMR awareness campaign,” “AMR education campaign,” “AMR stewardship,” “AMR workshops,” “AMR prevention,” “AMR containment,” “ABR,” “drug resistance,” “rational use of antibiotics,” “self medication,” “antibiotic workshops,” and “drug awareness.”

In order to align with the inception of the WHO SEAR regional strategy on AMR 2010-2015, the study focused on documentation published in or after 2010. The study incorporated the experiences of the 11 countries in the region: Bangladesh, Bhutan, Democratic People’s Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste.

In phase two, we conducted interviews to fill in gaps and validate information gathered through desk research. Four interviews with WHO members of staff who work on AMR were conducted to validate the findings, based on their availability and interest in participating in the study.

Elements of an effective communication campaign

While public health communication campaigns assume various forms and approaches, guidelines recommend certain design elements to ensure greater effectiveness and impact. These include:

- Multi-pronged communication plans involving a mix of media channels
- Audience segmenting and audience-centric messaging
- Timing of campaign activities (seasonality of epidemics, for example)
- Involvement of key opinion leaders
- Phase-wise evaluation (formative, process, and summative evaluation)

During the course of our research we found that the information in this domain was limited. From over 3.5 million search results, only 54 had any information related to AMR communication related activities in the SEAR countries. In most cases, these interventions were not structured campaigns, and therefore they did not contain the aforementioned key components. In order to describe these interventions and draw comparable inferences, therefore, proxy indicators were used (table 1). These indicators were developed based on recurring elements identified in the communication interventions studied.

Overview of AMR communication efforts

A total of 24 interventions related to AMR awareness from the 11 countries were identified and included in the analysis. This analysis brings to light the deficit of evidence about public health campaigns tackling AMR in the region. Sustained awareness campaigns have not been leveraged within the overall AMR prevention and containment strategy, being limited to a few sporadic awareness activities and restricted in terms of their design and scope. Only 8% of the interventions studied—for example, the Antibiotic Smart Use and AMR containment programme in Thailand—can be considered

Table 1 | Key components of a sound awareness campaign strategy and their proxy indicators

| Key components                                                                 | Proxy indicators                                                                 |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Multi-pronged communication plan involving a mix of media channels             | Pre-defined campaign objectives: campaign approach needs to align with its objective |
| Audience segmenting and audience-centric messaging                             | Intervention design: campaigns should leverage multiple platforms to maximise impact |
| Timing of campaigns activities                                                 | Frequency of campaigns                                                            |
| Involvement of key opinion leaders                                             | No proxy required                                                                 |
| Phase-wise evaluation (formative, process, and summative evaluation)           | Documented success factors and monitoring and evaluation                          |
AntiMicrobial resistance in South East Asia campaigns, since they demonstrate a combination of components including clear communication objectives, regular and sustained activities, involvement of multiple stakeholders, systematic targeting of diverse audience groups, and well defined key messages. The remaining interventions are irregular, stand-alone awareness activities, primarily in the form of meetings and workshops involving doctors and healthcare workers.

Scope and characteristics of AMR communication efforts

Of the five key components of an effective communications campaign, only two components (a mix of media channels and phase-wise evaluation) have been utilised, by 8% of the interventions studied. The other components—including audience segmentation and audience-centric messaging, timing of campaign activities, presence of champions, and phase-wise evaluation—are entirely missing.

Multi-pronged communication plan involving a mix of media channels, including social media platforms, traditional media, and poster presentations. The findings suggest that the majority of the campaigns have been restricted in their approach.

Audience segmenting and audience-centric messaging

The proxy indicator of “implementing agencies” was used to understand the key stakeholders driving AMR communications in the region. International agencies led 38% of the interventions, government agencies led 29%, and medical colleges 25%. Non-governmental organisations, pharmaceutical bodies, animal husbandry, and others including professional bodies and regulatory bodies, global networks of organisations were less frequently involved. Most of the interventions were led in isolation by one or two agencies. Only two in isolation by one or two agencies. Only two...
interventions (in Thailand) were implemented with the involvement of four or five agencies. The target audience for these interventions includes policy makers, doctors, health workers, pharmacists, media representatives, civil society organisations, the general public, officials of animal husbandry, and others. Most of the interventions targeted one or two of these audience groups. Out of the 24 interventions, the general public was addressed by 33% of the interventions and civil society organisations were targeted by 25%. Other audiences were less frequently the focus. The strategy of audience segmentation and audience-centric messaging, one of the five key components, is therefore largely missing from AMR communication efforts in the region.

Only 50% of the interventions documented the use of any key messages. These appear to be generic, focusing on the completion of dosage and the rational use of antibiotics: “Save the pill for the very ill,” “Where there is a will, there is a way,” “Save antibiotics, save lives,” and “Antibiotics should never be shared and the full course of treatment should be completed—not saved for the future.”

Timing of the campaign
While no information could be found on the timing or seasonality of the interventions in terms of the proxy indicator of “frequency,” most of the documented interventions were isolated events extending to one or two days (workshops, for example) or up to a week (commemorative events). Only 13% of the interventions were in the form of campaigns with regular activities over a period ranging from three to eight years.

Involvement of key opinion leaders
None of the interventions analysed leveraged popular personalities or key opinion leaders for disseminating messages or engaging with the audience.

Phase-wise evaluation
The execution of a phase-wise evaluation (consisting of formative, process, and summative evaluation) was identified as one of the key components of a successful communications campaign. The majority of interventions included in this study did not report any attempts to monitor activities or evaluate outcomes and impact. Only 8% of the interventions incorporated a monitoring and evaluation framework, with one intervention having reported parameters for measuring programme success and challenges.

Moving from commitment to action
Reports reviewed recommend that public awareness campaigns are an intrinsic part of a larger AMR control strategy and a...
global awareness campaign is urgently needed.\(^{11}\) The experiences of some of the developed countries leading AMR control efforts around the world show the need for the design and implementation of effective AMR communications campaigns.\(^{12}\) Health communications have played a pivotal role in tackling some public health challenges in developing countries as well. In South East Asia, India’s success with polio elimination is attributed to a robust public health programme, supported by a strategic and sustained communications campaign.\(^{13}\) Similarly, Bangladesh’s communication campaigns increased the rate of survival in cases of severe diarrhoea.\(^{14}\)

Despite resolutions passed by the World Health Assembly\(^{15}\) and the commitment of member states to the Global Action Plan’s objectives,\(^{16}\) the near absence of awareness and communication interventions is cause for concern. A review of campaign activities in South East Asia does not appear to reflect the degree of prioritisation accorded by member countries to AMR prevention and containment. Of the eleven countries analysed, only Thailand has shown significant commitment towards addressing AMR and most other initiatives have not addressed the components defined above. Therefore, this situation warrants further investigation of the challenges and barriers. Our findings may have some limitations. Specific interventions may have been conducted but not reported or available online. However, we believe the overview is sufficiently accurate to suggest that national governments need to urgently act upon designing and incorporating comprehensive communications campaigns within a larger national action plan on AMR. Furthermore, since WHO recommends improving awareness and understanding of AMR through effective communication, education, and training in its Global Action Plan, periodic WHO cross country meetings could be a strategy to track progress and encourage sharing of best practices.

Communication activities in the future need to be strategic in design and approach, incorporating elements such as multi-pronged communication plans involving a mix of media channels; audience segmenting and audience-centric messaging; timing of campaign activities; involvement of key opinion leaders;\(^{17}\) and phase-wise evaluation.\(^{18}\) Further standardised guidelines could be issued by WHO to aid the development of strategic AMR communication campaigns by countries in the region.

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