

Operationalising of SDG: experience of Malaysia

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ABSTRACT

The Sustainable Development Goals (SDGs) [2016-2030] which was launched by WHO in January 2016, is a continuation of the Millennium Development Goals (MDGs) [2000-2015]. WHO acknowledged that progress towards the MDGs, however, did not equitably benefit all groups in society and many programs neglected to build on the connections between the different goals. Thus, the introduction of SDGs addresses a more complex agenda than the MDGs, capturing the many ways in which development challenges are interconnected. As for Malaysia, most of the SDG goals are already aligned with the Malaysia's 5 year national development agenda (ie.the 11th Malaysia Plan) with the theme 'anchoring growth on people'. Centrally it is coordinated by EPU and PM's department and with regards to health, it is coordinated by MOH. SDG has also been incorporated into the MOH's Strategic Plan and also the Health Service Transformation Plan. These alignments indicate that the Malaysian Government is committed in achieving the SDG goals through the implementation of related activities and programme using the on-going development and recurrent budget. These programs and activities are monitored regularly and actions taken to improve on the progress of the planned activity. The most relevant SDG goal to MOH is the Goal 3, which is ensure healthy lives and promote well-being for all at all ages and is associated with nine targets (or sub goals). Crucially, within the SDGs, core health issues sit in other goals beyond SDG 3, especially goals 1, 2, 4, 5, 6, 11 and 16. Achieving the implementation of SDGs is not without challenges. Malaysia faces issues and challenges in terms of financing; capacity gaps and building; data limitation; and cross-sectoral coordination along with a reliable monitoring and evaluation system. Perhaps the most challenging of SDG operationalization, is the in-silo working culture of different sectors. The SDGs place renewed emphasis on linkages between the goals and the need for integrated, collaborative and participatory approaches to sustainable development towards providing Universal Health Coverage (UHC) "leaving no-one behind", ultimately making Malaysia a better place to live in!

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Artificial intelligence in public health early warning system

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ABSTRACT

Studies have shown a yearly increment in Asia for the cost of vector Control, reaching numbers as high as USD 307 million annually and South America sources showcased more than USD one billion are spent to control dengue. Exiting work related to dengue monitoring and control in Asia and South America is limited to passive, pre-emptive and reactive. The analysis of dengue data is currently relying on statistical method. In addition, the available dengue data is limited to time, location, and accumulated cases. Extra information such as weather and geographical variables that could be crucial to dengue outbreak monitoring and prediction is not provided in a dynamic and real-time manner. Our proposed plan was to reduce both the burden of the disease and the economic impact these diseases impose in the affected nations by introducing an artificial intelligent platform, capable of reporting & accurately predicting the next Dengue outbreaks. This platform will allow public health professionals to make informed decisions even before an outbreak occurs. We incorporated enormous amount of epidemiology data, weather data, geographical data & machine learning capabilities in order to predict, geo-locate & determine future dengue outbreaks. Currently our platform AIME (Artificial Intelligence in Medical Epidemiology) is able to predict deadly dengue outbreaks up to 3 months in advance and geo-locating them up to 400meter radius with an accuracy of 88.7% in real time. AIME's technology has been deployed in Rio de Janeiro, Brazil to curb dengue for the Rio Olympics 2016 and even in the city of Manila, Philippines. The overall field prediction accuracy obtained in Asia and Latin America ranged from 81.0% to 88.7% with only 15% error rate due to imbalance and missing values in dataset as reported by government agencies. We hope this novel innovation will be incorporated in every country's national policy since it is time that health authorities be more vigilant in identifying potential high risks outbreaks even before it occurs. We believe this innovative tool accompanied with good governance will allow health authorities to intervene at an early stage and mobilize their expertise towards a more proactive approach in order to save more lives as well as to be more cost effective in their disease control strategies.