ABSTRACT

Introduction: Geographic Information system (GIS) is a computer-based data mapping system which facilitate planning and controlling the disease and health related issues. The electronic Reproductive Health Management Information System (eRHMIS) is a national level health information software based on district level health information on maternal and child health programme. Public Health Midwife (PHM) areas' data are still not incorporated in GIS map in eRHMIS. This study will accompany to analyze the PHM data as GIS map in eRHMIS.

Objective: To assess the need for a GIS system for MOH staff, and to design, develop, implement GIS to be incorporated to ongoing eRHMIS.

Methods: The study contained in two components. Component 1- Descriptive cross-sectional study to need assessment of GIS in PHM layer. Data was collected from 215 number of MOHs and AMOHs from North Central, Central and Southern provinces with proportionate sampling using a self-administered questionnaire in online platform. Component 2-Data of PHM areas and corresponding Grama Niladhari areas were gathered in whole island and geographic margins of PHM areas were developed by Quantum GIS software and incorporated in to eRHMIS.

Results: GIS maps were selected as third most effective data visualization method by 47.6% participants and 93.5% participants were stated that PHM area map will be useful at MOH level. None of the participants were thought introduction of GIS will not be useful.

Discussion: There were 92.5% participants' familiar with eRHMIS and 40% participants were used GIS maps in MOH. Participants of 47.6% were identified GIS map as a third most effective method of data visualization and 55.5% were familiar with GIS maps. Participants of 84.8% were happy to use digitalized map at MOH and 93.5% participants were stated GIS is useful in MOH level. The majority (n=198) were agreed that identification of low performing PHM areas as an advantage of GIS. Development was done using geoprocessing tools in Quantum GIS by dissolving GN area boundaries. Finalized map was then integrated to eRHMIS for usage.

Conclusion and Recommendation: Results of the study clearly stated that majority of the participants (93.5%) agrees with the uses of GIS at MOH level. 183 of 215 participants were willing to try a PHM map at their institution. PHM layer was constructed using the GN boundaries. It was recommended to carry out training programs when necessary to improve the sustainability of the system.

Key words: GIS, eRHMIS, DHIS2, PHM Layer, Health geography