

Sri Lanka needs more Public Health Midwives

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Abstract

Introduction Sri Lanka has a well-established Primary Health care system. One of the key players in the primary health system is the Public Health midwife (PHM) and as end of 2019, there were 7087 PHMs in the field service. Many health experts believe that existing number of PHMs in the system is inadequate. There had been on no systematic assessment of PHM workload.

Objective This study attempts to identify the number of PHMs needed for the field service in Sri Lanka, to carry out the current programmes.

Methods Research included desk reviews, consultative workshops and Workload Indicator Staffing Needs (WISN) analysis supplemented by use of One Health tool.

Results Sri Lanka need one field PHM per 1878 population to meet the current service demands. Therefore, Sri Lanka needs 11,612 PHMs to work in the field, as end of 2019, indicating a short fall of 4525 PHMs.

Conclusion In order meet the acute shortage at least 1000 PHM should be trained annually for a foreseeable period. Routinely PHM trainees are recruited from GCE Advance Level Bio-Science stream students. However as there is insufficient number of applicants, from Bio-Science stream, the Ministry should take steps to recruit PHM trainees from any GCE Advanced Level stream.

Key words: Public Health Midwives, Workload Indicator, Staffing Needs

Introduction

Sri Lanka is a country which had achieved many health gains at low cost. As per the latest published National Health Accounts 2016 (1), Sri Lanka spent only around USD 155 per capita health per year.

Public Health Midwife (PHM) is the key health care provider at the domiciliary level in Sri Lankan health care system. They indulge mainly in maternal and childcare services in the Sri Lankan community setting. They provide preventive and promotive primary care services through 354 Medical officers of Health Divisions.

The success of the Sri Lankan health system is well evident by the country's health indicators such as low maternal mortality (33.8/100000 LB), neonatal mortality (5.6 /1000 LB) and infant mortality (8 / 1000 LB) which are among the best in the Asian region. (2)

PHMs were originally recruited for the provision of maternal and child care. However, their role gradually broadened to include, family planning, school health, well woman care, pre-conception care, elderly care, Non-Communicable Disease prevention, Dengue prevention etc.

The target population assigned to a field PHM is 3000 people (600 households) (2). This ratio has not changed though their scope of work has expanded over the years. Presently there is a comprehensive Primary Health Care (PHC) programme being implemented as a collection of several packages of interventions. This covers Reproductive, Maternal, Newborn, Child, Adolescent Youth and women Health services with a life cycle approach (RMNCAYH).

Table 1 presents the monthly allocation by normative standards and average number per PHM, developed using published data by

Family Health Bureau (2).

As evident above, many stakeholders are of the view that full time equivalents of existing PHM cadre in the PHC system is not adequate for performing all the tasks assigned to PHMs.

Objective

To identify whether Sri Lanka has enough PHMs to provide an optimum field service at community settings by using Workload Indicators of Staffing Need (WISN) (3) and OneHealth tool (4).

Methods

The scope of work, types and numbers of different types of workload components (i.e. Interventions) implemented by the PHMs were determined through a desk review and a consultative process involving 12 consultative workshops. A purposive sample of 300 field PHMs from 12 MOH areas representing all sectors: urban, rural, estate and Northern & Eastern Provinces were involved. The validation of proposed worktimes was carried out by group discussions among public health experts and supervising PHMs.

Table 1 Monthly allocation by normative standards and Average number per a PHM

Target population type	Monthly allocation by normative standards	Average number per PHM
PHM with Population	3000	3700
Number of Births monthly	4	5
Number of mothers under care	34	42
Number of children under care in any month of age	4	5
Number of under 5 children under care	225	278
Number of eligible families	555	685
Fertile couples	540	666
Contraceptive users	367	453
Immunization	28	35

As study instruments; Excel based data extraction sheets were prepared for listing of various activities conducted by field PHMS and to define standard operational procedures during desk reviews. These computer-based worksheets were used to extract the activity related information from various circulars and standard operational manuals belong to different preventive care programme areas.

The authors followed the following process in this WISN study.

i) First, we identified the scope of work of PHMs under the different program areas under which they provide services.

ii) Then the interventions (work load components) to be carried out under each of the above program areas were identified. The number of interventions based on the sizes of the intended target populations in need for each intervention, implementation guidelines and universal (100%) coverage were estimated.

iii) Next step was setting intervention (activity) standard of each intervention. Intervention standard is the time necessary for a well-trained, skilled and motivated PHM to perform a directly client-oriented intervention to professional standards in local field settings. In addition, the time required for support activities and additional activities were also determined. Support activities means the activities conducted by all the PHMs that support the efficient program functions. Number of such activities are not directly based on the number of recipients. For example, one-hour office time used for record keeping, which is used by all PHMs can be considered as a support activity. Additional activities are also activities that are having facilitative function to service provision but performed by only a selected number of PHMS. For example, clinic preparation was considered as an additional activity as it was only performed by the PHMs who are responsible for a clinic.

iv) The next step was to identify the number of existing cadres of PHMS and available work time of them based on the work hours and days, leave options, fixed time allocations for non-working times such as training days etc.

v) The final step was to calculate the WISN using the WISN formulas and the software.

Number of interventions, to be carried out annually in the country based on existing program guidelines and assumed universal

coverage (100%) were estimated using the OneHealth Tool (OHT). OHT can be used to assess the annual number of "based services" based on the target populations, population in needs and service coverages. Having identified the target population, population in need (percentage of target population who are eligible for the intervention) for each of the intervention defined in this study based on program guidelines and set the service coverages at 100% to reflect universal coverage. Once these values were stipulated OHT can be used to estimate the annual number of each type of interventions to be conducted by PHMs in the country. For example, to estimate the number of vaccination visits to be attended by PHMs for under 5 children in the country, we have used the "number of infants surviving the first month" which is generated within the OHT based on the country statistics as the target population. The population in need was stipulated as 900% as 9 injection visits are included in the National Immunization schedule for under 5 children. The coverage was assumed as 100%. OHT was used to calculate the annual number of all immunization visits by multiplying these parameters. Likewise, annual numbers of all types of interventions were calculated in the OHT, using appropriate parameters.

This study was conducted from January to December 2019.

Results

WISN analysis showed, based on the current program guidelines and assumed 100% coverage of all target populations in need; the country requires 11,622 PHMs working in the field, for implementing direct client-oriented interventions, support activities and additional activities.

Around 7087 PHMs were deployed for field service in the 9 provinces of the country. This gives rise to PHM staff gap of (11612-7087) 4525 in relation to the work demand created by the existing programs. The WISN ratio: the ratio of existing staff to calculated staff requirement will be around 0.61 indicating fairly significant staff gap at national level.

Table 2- Workload indicators of staffing need by provinces

Province	Calculated PHM Requirement	WISN ratio	Number needed to be newly employed to meet the demand
Western	3267	0.40	1954
Central	1475	0.72	413
Southern	1414	0.62	531
North Western	1358	0.55	606
North Central	734	0.66	250
Northern	610	0.82	107
Eastern	923	0.85	135
Uva	735	0.82	131
Sabaragamuwa	1096	0.64	398
National	11612	0.61	4525

Table 2 presents the WISNs by Provinces. The analysis shows that the Western province is having the largest staffing shortage. The WISN

ratio of the Western province is reported as 0.40, indicating that the province has only 40% of its estimated requirement. The national average of WISN is 0.61 and Eastern and Uva provinces seems to have around 80 % of their required PHM cadre based on the estimated requirement.

PHM population ratio based on the calculated requirements

The current national norms for PHM employment require one PHM per each 3000 population. Findings of this study showed that at least one PHM is required per each 1878 population (21,803,000/11,612) to meet the current service demands.

Discussion

As shown by this study, country needs one PHM deployed in field service, for 1878 population. Accordingly, in order to provide the

current services, Sri Lanka need to deploy 11,612 PHMs for field service. Currently there are only 7087 PHMs (5) in field service. Therefore, another 4525 PHMs are needed to provide a comprehensive care. This is a huge 64% rise in the number of field midwives. Unfortunately, whether the current health system is able to train that number of midwives in the short run is a serious concern. On the other hand, with the existing number of field midwives, it would be a near impossible task to provide the services expected from them.

In Sri Lanka PHM are trained at the nurses training schools, under guidance of the Deputy Director General of Health Services (Education Training and Research). Training duration is one and half years. Maximum total training capacity (considering all training

Table 3- Number of PHMs recruited for training 2014-2019

Year	Number recruited for Training
2014	174
2015	210
2016	654
2017	552
2018	-
2019	847

(Source – ETR Unit Ministry of Health)

schools) is about 800 per batch. The number recruited for training over the last 6 years is shown in the Table 3.

As shown above, annual production of PHM has been around 400 per year over last 6 years. Even if retirement and attrition are disregarded, it will take 11 years to produce ($11 \times 400 = 4400$), the number needed. As the current training rate is not adequate for the current requirement, there should be a paradigm shift. PHM curriculum should be revised to suit the current needs, while the training rate should be increased.

The main limiting factor for the reduced intake of trainees is the lack of qualified applicants. Currently to be selected for midwifery, the candidate should be an unmarried female in the age group of 18-30, with a minimum height of 147cm and have passed GCE Advance level Examination in Bio Science stream with a minimum of 3 simple passes. They should have obtained a simple pass for English at the GCE Ordinary Level examination.

Conclusions and Recommendations

It is high time for Ministry of Health to change the entry requirements for PHMs and take steps to train at least 1000 PHM per year for a foreseeable period. One possible approach would be to open at least two more training schools for midwifery within the existing nurses training schools and select from any stream at GCE Advanced Level examination,

while giving preference to science stream students.

Over the years, PHMs were considered as the backbone of the enriched primary health care system of Sri Lanka. However, at present as there is a dearth of PHMs deployed for field service, immediate steps should be taken to increase the number, in order to provide an optimum primary health care service.

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