

A CASE STUDY ON RETAINING OF FAMILY  
HEALTH WORKERS IN RURAL COMMUNITIES IN  
SRI LANKA

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Asia-Pacific Action Alliance on Human Resources for Health

4<sup>th</sup> Annual Conference

November 2009

**Abstract**

The community based maternal & child health care commenced in 1913 with the appointing of Public Health Midwives (Family Health Workers/PHM) to the Colombo Municipality. Formal training of these grass root level workers dates back to 1932. The training focused on developing a qualified grass root level worker for rural settings.

The paper describes the selection criteria for training of PHMs in order to retain them in rural settings. It also elaborates the characteristics of PHM training programme and training centers of PHM training programme and continuous professional development of PHMs with an emphasis on retaining them in the rural settings.

It further describes the appointing of PHMs to rural settings, bonding schemes involved and facilities & allowances required to provide an uninterrupted service to rural communities.

The government through Gazette Notification invites applications for the PHM training programme, in which it also spells out the conditions to retain them in rural settings.

The contribution from the non health factors such as free education, equal educational opportunities for girls, low transport cost, availability of a widespread network of roads, free health services and minimal gender discrimination are immense for the successful training of PHMs.

The activities of the PHMs in providing the primary health care paved the way to the improvements of health indices. This also lead to demographic, epidemiological and nutrition transition with, which emerged new challenges. The present PHM training curriculum needs extensive revision to face these new challenges.

## **The Background**

Sri Lanka is an island located in the Indian Ocean south east to India with an area of 65610 km<sup>2</sup> and a population of approximately 20 million<sup>1</sup>. Approximately 72% of the population is living in the rural community<sup>1</sup>. The primary health care system of Sri Lanka is a unique system with family health workers reaching out to these rural communities at grass root level.

The history of primary health care in Sri Lanka dates back to the early civilizations which existed 2500 years ago and only the ruins exists to speak of the ancient glory today<sup>2</sup>. The modern primary health care system began during the British rule. The community based maternal & child health care was started with appointing of Public Health Midwives (Family Health Workers/PHM) to Colombo Municipality in 1913<sup>2,3</sup>. The inauguration of the first Health Unit (synonymous to the Office of the Medical officer of Health or MOH) of Asia in Kalutara under the guidance of Dr. W. P. Jacocks and his local counter part Dr. Chellapa with funding from the Rockefeller Foundation took place in 1926<sup>4</sup>. Training of public health personnel at this Health Unit commenced in 1928 and the training of Public Health Midwives was initiated in 1932<sup>3</sup>. In 1966 the Health Unit was initially upgraded to the Institute of Hygiene and later in 1979 as the National Institute of Health Sciences, which is the main training institute in charge of the training of Public Health Midwives (family health workers/PHM) in Sri Lanka<sup>3</sup>.

Today the services of PHM have evolved into a professional carrier taking a holistic approach in preventive health covering many aspects other than midwifery. Their services are immensely valued in rural setting where health resources are scarce. The government of Sri Lanka has adapted many strategies to keep these health professionals in rural settings. The objective of this case study is to describe the strategies and their effectiveness in retaining PHM in rural settings.

## **Methodology**

**Study setting:** This case study was a descriptive cross sectional study carried out in Sri Lanka.

**Study population:** The study population is Family health Workers (Public Health Midwives/PHM) of the government sector, engaged in the primary health care activities.

**Study sample:** The study population is Family health Workers (Public Health Midwives/PHM) of the government sector who were enrolled for primary health care services in 2006 and 2007.

**Study period:** The study was carried out during the month of September 2009.

**Study design:** Descriptive cross sectional study.

**Study instrument:** Following study instruments were used:

1. Pre-tested standard questionnaire to extract data from existing data sources.
2. An interviewer administered pre-tested standard questionnaire to collect information from PHM.

**Data collection:** The data was collected from:

1. The Ministry of Healthcare and Nutrition
  - Education, Training and Research Division
  - Technical Administration Branch
2. Office of Regional Directors of Health Services – Puttlam District
3. Literature Review: Previous publications of studies on retaining PHM in rural settings were identified by:
  - Electronic searching of the literature using PUBMED (key words Family Health Worker or PHM AND Sri Lanka)
  - Hand searching the journals published in Sri Lanka (Ceylon Medical Journals, Journal of the Sri Lanka College of Community Physicians, Journal of the Ceylon College of Physicians, Journal of the Sri Lanka College of Obstetrician and Gynaecologists, Galle Medical Journal, Kandy Medical Journal, Sri Lanka Medical Journal, Jaffna Medical Journal, Ruhuna Medical Journal)
  - Reports published by the Country Office of the World Health Organization
  - Using the bibliography of medical publications (by K Peiris & CG Uragoda and Ministry of health).

A sub sample analysis was conducted among 50 PHMs randomly selected from the rural areas of Puttlam Districts to describe possible reasons to retain in these rural settings using an interviewer administered pre-tested standard questionnaire.

### **The Conceptual Framework**

The concept framework is about the education & training and employment of PHMs who are the grass root level family health workers in rural Sri Lankan primary health care system<sup>5</sup>. The government is responsible for the management and training of primary health care staff including PHMs and the private sector do not provide PHM services in Primary Health Care. The recruitment of trainees for PHM training course is done by the government<sup>6</sup>. The eligibility criterion for enrolment is a minimum of simple passes for all subjects (presently three subjects) in Advanced Level examination<sup>6</sup>. The training courses for PHM consist of 1 year basic training and midwifery, in a Nurses' Training School and 6 months training in community health management in Regional Training Centers. Presently PHM training is conducted in all provinces<sup>3,5</sup>.

The premier training centre in the country for primary health care is the National Institute of Health Sciences. It is mainly responsible for the development of course materials and conducting various public health courses for all categories of primary health care staff<sup>3</sup>.

During the training period an allowance of approximately 30 US\$ is paid for a trainee PHM. Once completion of the training and assessments, all those who pass out are recruited for the government health sector for provision of primary health care services<sup>6</sup>. Their starting salary is approximately 134 US\$<sup>6,7</sup>. Apart from the salary there are allowances (such as office allowance and traveling allowance) and incentives for encouragement. All trainees have to enter into an agreement for a period of five years of service after the training period and to serve anywhere in the country. The approximate cost of this bond is 1,000 US\$.

Continued training is provided at regular intervals for the primary health care staff including PHMs at central, district and MOH level. In-service programmes are conducted once a month at every MOH Office. The central level institutions such as Family Health Bureau conduct programmes at district level and some these programmes are usually participated by all PHMs of MOH Offices of the district.

## The description and main results of the case

### Recruitment

Table 01 describes the number of PHMs enrolled for services during the past 15 years.

**Table 01:** The number of PHMs enrolled for services during the past 15 years\*

Year	Number enrolled for services	Year	Number enrolled for services
1995	480	2001	618
1996	70	2002	126
1997	614	2006	567
1999	433	2007	709
		March	
2000	27	2007	786
		October	

\* Data obtained from the Ministry of Healthcare and Nutrition

During the past 15 years more than 400 were recruited on seven occasions. The recruitment criteria are purely based on educational qualifications and there is no community involvement in the selection of students. It is because only those with these educational qualifications can comprehend the teaching in PHM training course and complete it successfully. However on several occasions (in 1996, 2000 2002 and 2009) the educational qualifications for recruitment has been lowered to enable trainees from very rural settings to participate in PHM training course in order to post them to their villages to serve<sup>7,8,9</sup>. These recruitments were done mainly for plantation sector in Central, Sabaragamuwa and Uva Provinces and to the Northern & Eastern Provinces. Also very rural settings there is hardly any one with required qualifications to apply for PHM training course and it is difficult to retain fully qualified PHMs who are usually from rural settings with better facilities than these very rural settings.

The recruitment policy of the country also favours recruiting PHM trainees from very rural settings. According to the Public Administration Circular 15/90 – II of 15/06/1990, when recruiting for training it is mandatory to recruit trainees from all Provinces proportionate to the population living in each Province<sup>10</sup>. This provides opportunity for those in Provinces with more rural settings to get selected for training. Those who are selected from a particular Province will later be enrolled to serve within that Province.

## Training

The teaching component contains a significant portion of technical aspects which are usually being taught to health professionals. By including these technical details and teaching them the PHMs gain a very satisfactory knowledge on reproductive health issues pertaining to maternal and child health and therefore they are able to function at a higher capacity than a usual grass root level community health workers of other developing countries. A World Bank report on Sri Lankan PHMs has shown that this had enabled them to gain a high recognition among the rural communities, who identify them as experts in maternal and child health, thus helping to retain these "experts" in rural communities<sup>11,12</sup>. The absorption of the PHM services to paramedical services in 1992 upgraded the profession further increasing its recognition in the rural communities<sup>13</sup>.

There is at least one Regional Training Center in each Province. Thus those who are living in the Province can be trained within the Province resulting in fewer defaulters from the rural settings.

## Postings after completion of training

Table 02 describes the analytical details of the last batch of trainees recruited for PHM training course, which was in 2004. More than 90% of the trainees attending the PHM training course were posted to rural settings after completion of the training course.

**Table 02:** Analysis of the PHMs trained in 2006 and 2007\*

Province	a. Number required	b. % from the requirement (a*100%)/1218	c. Number allocated	d. % from allocations (c*100%)/2026	% from recruited (c*100%)/a
Central	186	15.3%	232	11.5%	124.7%
North Central	64	05.2%	153	07.6%	239.1%
North East	Not available	Not available	572	28.2%	-
North Western	46	03.8%	82	04.0%	178.3%
Sabaragamuwa	151	12.4%	149	07.4%	98.7%
Southern	102	08.4%	162	08.0%	158.8%
Uva	92	07.5%	169	08.3%	183.7
Western	577	47.4%	507	25.0%	87.9%
Total	1218	100%	2026	100%	

\* Data obtained from the Ministry of Healthcare and Nutrition

It is worth to note that the highest proportion was sent to Northern & Eastern Provinces in 2006, 2007 March and 2007 October inspite of the on going war against terrorism in these areas.

Table 03 describes the selected health indicators in each province. The analysis of this indicates that significant proportion of PHMs was provided for Provinces with poor health indicators.

**Table 03:** Description of selected health indicators in each province<sup>14,15</sup>

Province	Maternal Mortality Rate (10,000 live births)	Infant Mortality Rate	% delivered by a skilled provider	% birth protected against neonatal tetanus	last birth weight less than 2.5kg	Measles vaccine coverage
Central	2.90	14.9	97.8	92.6	24.8	97.2
North Central	2.45	12.7	98.8	95.4	16.1	100
North East	6.10	08.3	97.2	82.3	16.1	95.9
North Western	0.65	22.1	98.5	92.0	13.4	96.3
Western Sabaragamuwa	1.45	50.8	99.4	97.0	20.5	97.1
Southern	1.83	09.4	99.1	95.4	19.7	97.9
Uva	2.60	11.8	97.6	89.6	20.0	96.0
Western	0.77	09.7	99.4	92.3	12.3	97.2

Table 04 describes the appointments to rural settings.

**Table 04:** Posting of first appointment of 2006 and 2007 PHM trainees\*

Batch	Total trained	No. appointed for rural settings	No. paid the bond and left by 2009 October
2006	567	511 (90.1%)	0
2007 March	709	684 (96.4%)	0
2007 October	786	748 (95.1%)	0

\* Data obtained from the Ministry of Healthcare and Nutrition

### Continuous Professional Development (CPD)

The PHMs are always kept updated through various local as well as regional and national programmes. During last year approximately 90% of MOH Offices has conducted in-service programmes for their PHM staff at least once a month. At district level all most all districts in

the county has conducted at least one training programme. The PHMs from the very rural settings has attended all these training programmes. At national level the Family Health Bureau has conducted at least one training programme for the PHMs in each district. A World Health Organization report on the CPD for Sri Lankan PHM has shown high participation for continuous professional development by these PHMs in very rural settings and this was not due to economic gains and neither was it linked to promotions or re-registrations<sup>16</sup>. The same report indicates that CPD is a requirement of majority of the health care workers and is one reason for health professionals to flock around main cities instead of rural settings<sup>16</sup>. Therefore it is mandatory to providing CPD facilities to those working in rural settings in order to retain them in these rural areas.

### **Bonding scheme**

Also the Gazette Notifications usually include the clause that when recruited for training the trainee should complete the training course successfully and need to serve a bond period of five years and that the trained PHM should be prepared to work any where in the Province<sup>6</sup>. These actions also ensure family health workers to be retained in rural communities. The value of the bond is approximately 1,000US\$. From the 2006 and 2007 batches so far none has paid the bond and left the profession.

### **Allowances**

Various types of allowances are presently provided for the PHMs to retain in the rural communities. These are:

1. Office allowance – Approximately 1.5 US\$ are given monthly to maintain a office in the respective PHM area. However the present cost for renting an office is approximately ten times the allowance. More than 50% of PHMs in Puttlam District are having their offices in the quarters or community centers which are provided rent free.
2. Field (Transport) allowance – A payment of 1.25 US cents per kilometer is paid with a maximum limit of 10 US\$. However when considering the present fuel and transport prices this is not adequate.
3. Clinic allowance – An allowance of 1.75 US\$ per clinic sessions (for maximum of 8 clinics per month) is given for conducting community clinics

### Facilities to retain in rural settings

When asked about the facilities required to retain in the rural communities from a sub sample of 50 PHMs randomly selected from the rural areas of Puttlam Districts all of them mentioned quarters, transport and allowances as major requirements, which is shown in Table 05.

**Table 05:** Facilities required by PHM in Puttlam District to retain in rural communities

Facilities required	PHM requirement (n=50)	Presently provided (n=192)
Quarters	50 (100%)	25 (13%)
Transport	50 (100%)	192 (100%)
Maintenance of transport vehicles	50 (100%)	0 (0%)
Office Allowance	50 (100%)	192 (100%)
Travel allowance	50 (100%)	192 (100%)
Field allowance	50 (100%)	192 (100%)

Presently majority of PHMs in Puttlam do not have quarters. Ideally the PHM should reside in her serving area. Approximately 70% in Puttlam at least temporarily resides in the serving area by staying in a rented room while others travel from home.

Mopeds, scooters and bicycles have been provided for PHMs as transport facilities in Puttlam District. However no allowances are provided for the maintenance of these transport vehicles. Thus nearly 80% of the transport vehicles are presently not in working condition. . Among the transport facilities provided to

Apart from these the availability of good quality schools, transport facilities and good road networks are other non health amenities required by PHMs when retained in the rural communities to provide primary health care.

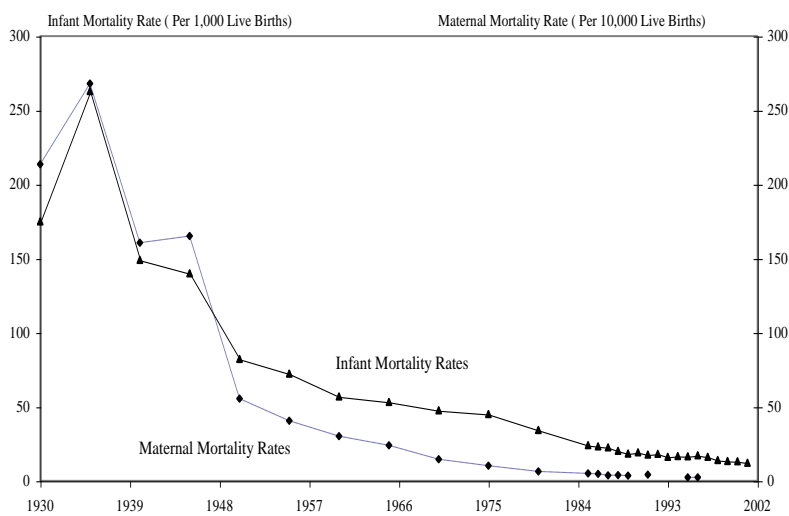
### Other benefits as government servants

The availability of pension schemes, cost of living allowance and subsidized mobile communication facilities lures many into the government sector and helps to retain their services in rural communities.

The success of PHM recruitment, training programe and employment in the rural sector can be seen by its ultimate impact in the health

indices. Over the past years maternal mortality ratio (MMR) dropped from 265 in 1935 to 5.3 per 10000 live births in 2003 and infant mortality rate (IMR) from 263 in 1935 to 11.2 per 1000 live births in 2003 (Figure 01)<sup>12</sup>.

**Figure 01: Trends in Maternal and Infant Mortality Rates, 1930 - 2002**



The reduction of MMR with the increase of hospital deliveries in the presence of skilled attendance is revealed in figure 02.



### **The Lessons Learnt**

The success of the Sri Lankan primary health care system lies on its ability to retain grass root level primary health workers in remote/rural areas. The contributions from the PHM training programmes are immense. The recruitment for PHM training is based purely on education and removes any biased applicants while selecting those with better IQs. However the flexibility of the educational standards has helped to retain PHMs in very rural settings<sup>7,8</sup>. Selecting trainees from each Province and after completion of training enrolling them to serve in the same Province that they are living, requirement to serve the bond period and work anywhere in the Province are agreed by the trainees at the time of recruitment<sup>6,7,8</sup>, which also helps to retain family health workers in rural communities.

The PHM training curriculum has given them the confidence to work in rural settings and it has obtained the recognition of the rural communities as well. Conducting ongoing CPD programmes in the periphery by MOHs, and conducting outreach educational programmes for the most rural primary health care workers by the centre also helps to keep the staff in rural settings since the opportunity to update the knowledge is given. There is high participation for CPD programmes by rural communities.

The favorable government policies which had been continuously present since the inception of the primary health care system in Sri Lanka is one of the main reasons for its ability to retain PHMs in remote/rural settings. The key policy decisions that helped for this were the replacement of traditional birth attendants (TBA) by trained midwives<sup>11,12</sup>, discontinuation of TBA training<sup>11,12</sup>, human resource deployment policies, mandatory recruitment of trainees from all Provinces proportionate to the population living in each Province<sup>10</sup> and allocating higher proportions to Provinces with poor health indicators.

The contribution from the non health factors had been another crucial aspect for the provision of PHM services to rural settings. These include introduction of free education and equal educational opportunities for girls, high female literacy (87.9%), increasing age at marriage of girls (25.5 years 1994), high health literacy level, and minimal gender discrimination<sup>1</sup>. This provides the opportunities for the females to achieve the required educational qualifications to apply for the PHM training course.

The present system needs to reconsider the evaluation of allowances and increase them adequately in order to lure many into PHM training course and retain in the rural settings.

### **Proposal for Regional or Global Actions**

1. The governments should provide adequate training for primary health care workers. The recruitment criteria for training programmes should give more weight for educational qualifications, yet be flexible on this if they want health workers to retain in rural settings.
2. During selection for the training programmes the participant should be provided with conditions that help to retain them in rural requirement to serve the bond period and agreeing to work any where in the Province/country.
3. Keeping provisions to selecting trainees from each Province/District/Village and after completion of training enrolling them to serve in the same Province/District/Village that they are living.
4. The training curriculum of grass root level workers should be a comprehensive one. It is important to revise the curriculum regularly. The opportunity should be provide to participate in CPD programmes even by the most rural grass root level worker regularly. CPD programmes should conduct out reach education programmes to reach for rural workers. Also it needs to be linked with incentives, promotions and punishments as well.
5. The trained grass root level workers should be distributed appropriately without inequity.
6. The governments should be able to provide free education and equal educational opportunities for girls and minimal gender discrimination.

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### **Acknowledgements**

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2. Dr. S. Terrence G. R. de Silva – Deputy Director General (Medical Services) I, Ministry of Healthcare and Nutrition, Sri Lanka.
3. Dr. Sarath Samarage – Deputy Director General (Planning), Ministry of Health, Sri Lanka.
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