

Research Article

Hard-to-Reach Villages in Myanmar: Challenges in Access to Health Services and Interim Solutions

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ABSTRACT

Background: After decades of under investment in health system, strengthening primary health care becomes a central focus of Myanmar's National Health Plan (2017-2020). In 2011, a health systems strengthening programme was piloted in 20 hard-to-reach townships of Myanmar with support from the Vaccine Alliance. Programme reached the hard-to-reach population with outreach health services, and introduced Hospital Equity Fund to provide free hospital-based MCH services for poor mothers and children. Prior to its implementation, a baseline assessment was conducted in 2010 and early 2011 and after 2 years, in 2013, programme performance was assessed.

This paper reviews the baseline health system situation of 20 hard-to-reach townships in 2010 and assesses programme outputs in 2013. Further, it draws key lessons from implementing interim strategy of primary health care strengthening, to inform current primary health care reform in Myanmar.

Method: Findings from baseline assessment of 20 hard-to-reach townships in 2010-2011 are reviewed to understand township health system situation. Programme outputs after 2 years, in 2013, are assessed through routine monitoring data and reports review, in-depth interviews of total 48 key informants from two selected townships who are township medical officers and basic health staffs, and field observations by the authors.

Results: Baseline assessment uncovered large gaps and multiple challenges that impeded delivery of primary health service in hard-to-reach areas of Myanmar. For example, shortage and misdistribution of primary health workers, lack of essential medicines, equipment, infrastructure and allowances hampered the delivery of outreach and static primary health services. Only 7% of rural health centers met the 13-health workers standard; while 19% of sub centres did not have sheltered premises for service provision. Poverty, low education, financial, geographical and social barriers were key demand side barriers

After two years, in 20 townships, statistics showed increased rates of antenatal care in 19 townships, Skilled Birth Attendants in 15 townships, and coverage of 2nd dose of Tetanus Toxoid and BCG in 11 townships. The Hospital Equity Fund prevented 1,327 potential maternal deaths through obstetric emergency.

Conclusion: Outreach services in low resource setting can ensure improved access to essential health services for the hard-to reach population. While investment in Interim strategy such as outreach services and hospital equity fund demonstrates positive changes in primary health care indicators, it should be gradually replaced by a sustainable primary health care system, for progressive realization of universal health coverage.

Keywords: Health systems strengthening; Township health system; Primary health care; Hard-to-reach villages; Global alliance for vaccines and immunizations; Myanmar

How this Fits in with Quality in Primary Care?

What do we know?

Health systems gaps particularly at primary care level are the main barriers for countries to achieve health related MDG.

What does this paper add?

This paper demonstrates supply and demand side barriers in access to health services among the poor people living in hard-to-reach villages in Myanmar, and how interim solutions through out-reach services and Hospital Equity Fund improved the access to services and coverage indicators.

Experiences and lessons reveal the critical need to strengthen the system at primary health care level with adequate trained health workforce, essential medicines, static infrastructure and financial protection for progressive and sustainable realization of universal health coverage. These findings contribute to the current PHC strengthening reforms in Myanmar.

Background

Myanmar, a lower middle-income country with Gross National Income (GNI) per capita of US\$ 1,280 in 2014 [1], is in the midst of vibrant political and economic transformation. In 2011, General Government Expenditure on health was as low as 1% of general government expenditure resulting in high out-of-pocket health payments by households, equaling 79% of total health expenditure [2]. Inadequate investment in the health system in the last few decades resulted in weak health infrastructure, particularly primary health facilities, in hard-to-reach villages, hampering access to health services.

As a result, by 2011, Myanmar had high level of Under Five and Infant Mortality rates (62.4 and 49.3 per 1000 live births). Health status also varied across geographic, economic and social settings [2,3], worse health status was noted among the disadvantage States and Regions.

Inequity in access to primary health care (PHC) is observed in developing countries including Myanmar [4]. Likewise, Myanmar's multiple indicator cluster survey 2009-2010 [5] indicates higher coverage of antenatal care in urban (98.3%) than rural villages (91%). Prevalence of skilled birth attendance (SBA) rate is higher among the richest quintiles in urban communities and mothers with secondary or higher education, than those who are less educated, poor and live in rural areas. Institutional delivery rate is also highest in urban areas with 68.9% in Yangon. However, a smaller inequity gap is noted on DPT3 coverage across wealth quintiles, rural and urban areas [5], due to its high coverage as a result from "reaching every community" initiatives.

While geographical and financial barriers are common factors restricting poor and rural populations from accessing health services [6], supply side capacity gaps in providing essential health services play a larger role. Supply side capacity gaps differ at different levels of the health system; experiences from Timor Leste, South Africa and Myanmar demonstrate weakest supply side capacity at primary health care level [7-9].

Currently under the political leadership of National League of Democracy (NLD), Myanmar has expressed strong commitment to improve the health of its population by accelerating progress towards universal health coverage in a phased manner with initial efforts to strengthen primary healthcare.

Strengthening country's national health system with supply side system readiness to provide decent quality services at the township level and below, with pro-poor policy interventions is the central highlight of Myanmar's National Health Plan (NHP) 2017-2020 [10]. The country is gearing towards phase wise expansion of Basic Essential Package of Health Services (EPHS); prioritizing its reach to the neediest townships defined by their geographic location, economic and social profiles.

Such reform agenda demands strengthening of primary health system with adequate investment in cadres of front line

health workforce, financing, infrastructure, medical supplies, to enable supply-side readiness and deliver quality health services at the township level. Therefore, evidence from real life experiences on primary health system strengthening will contribute to the current design of PHC reform.

In 2011, a health systems strengthening programme was piloted in 20 hard-to-reach townships of Myanmar with support from the Vaccine Alliance. Program reached the hard-to-reach population with outreach health services, and introduced a Hospital Equity Fund to provide free hospital-based MCH services for poor mothers and children. Prior to the programme implementation, a baseline assessment was conducted in 2010 and early 2011, and programme performance was assessed after two years, in 2013.

This paper reviews the baseline health system situation of 20 hard-to-reach townships in 2010, and assesses the outputs and outcomes of programme implementation in 2013. Further, it draws key lessons from implementing interim strategy of Primary health care strengthening by this programme, to inform current primary health care reform in Myanmar.

The Program Objective and Design

In 2011, in order to fast track Millennium Development Goal (MDG) commitments, the Ministry of Health (MOH) aimed to increase DPT3 coverage and SBA in hard-to-reach townships, to 90% and 80%, respectively by 2015. A four year health system-strengthening programme (GAVI HSS) supported by GAVI the Vaccine Alliance, was implemented to realize this vision.

Selection of townships

There were 180 hard-to-reach townships having DPT 3 coverage and Skilled Birth Attendances (SBA) rate below 80% and 60%. The programme was implemented in a phased manner responding to the resource constraints and prioritization needs. In 2011, the MOH implemented the programme in 20 out of 180 townships, where there were capacities to implement the program.

Assessments: Baseline in 2010, and two years after pilot in 2013

Prior to the program implementation, a team from ministry of health reviewed the situation of health systems in 20 hard-to-reach townships and generated the baseline data. This baseline data guided the design of health system strengthening programme activities to reach the hard-to-reach population in these 20 townships.

Township health team in all 20 townships identified and mapped hard-to-reach villages in their locality, using geographical, economic and social criteria to support programme implementation. This exercise was done through a consultative process, engaging MOH, the World Health Organization (WHO) and other relevant stakeholders. Accordingly, programme activities including outreach service delivery and HEF were

designed and implemented. Volunteer health workers were recruited and trained to support basic health staff (BHS) in outreach service delivery (Box 1).

After two years of program implementation, in 2013, a Performance Assessment was conducted to review the program progress. Routine data collected for outreach service delivery and the hospital equity fund in the 19 hard-reach townships were analysed (program implementation disrupted in one township due to civil unrest). Focus group discussions were conducted at two sample townships out of the 20, to understand program performance on the ground. Further, key primary health care data maintained at the Health management and Information system unit (HMIS) of ministry of Health and Sports were analysed to review program output.

Study Methods

Findings from baseline assessment of 20 hard-to-reach townships in 2010-2011 were reviewed to understand township health system situation. Programme outputs after 2 years, in 2013, are assessed particularly based on the routine monitoring data for the coverage of outreach health activities, contributions by hospital equity fund, and the data maintained by health information management system (HMIS) of the ministry of health for key PHC indicators.

In-depth interviews were conducted with 26 and 22 key informants of two selected townships, namely Nyaungshwe township in Taunggyi district of the Shan state and Yedashe township in Taungoo district of Bago region of Myanmar. The key informants were township medical officers and basic health staffs working at the township hospitals, rural health centers and sub-centers [11]. The authors also made field observations in these two townships, to witness on the ground programme performance.

Results

Hard-to-reach areas in 20 townships: Baseline status in 2010

For several decades, government expenditure on health was 1% of total government spending; budget allocation for infrastructure development and health workforce distributions favored tertiary care [2]. One third of rural health centers and sub-centers did not have one health worker trained to provide pre-natal care and there were vaccine shortages. Limited capacities to detect anemia in pregnancy and urine protein were common in Rural Health Centres (RHCs) and sub-RHCs [9].

Findings from baseline assessment highlight high out-of-pocket payments, equally 80% of total health spending, which prevented most people and the poor from accessing health care. Primary health care facilities lacked adequate supply of essential medicines and equipment. Only 8 (7%) out of 108 RHCs met the thirteen-health workers standard. In almost 50% of RHCs, each midwife was responsible for a 4,000-10,000-catchment population. Static health facility coverage was low and 19% of sub centres had no sheltered premises for service provision, forcing the midwives to provide services from the village administrative office or the house of village leaders.

Midwives had neither adequate kits nor transport facilities for outreach services; although there were a few project-funded but non-functioning motorbikes. The government did not subsidise maintenance and petrol for the self-purchased motorcycles serving the communities.

These PHC service gaps, described in Box 2, along with high-level poverty, illiteracy, ethnicity and geographical remoteness, calls for urgent PHC strengthening.

Box 1: Defining hard-to-reach villages, outreach service and hospital equity fund.

Hard-To-Reach Village

A hard-to-reach village is defined as a village, which faces geographical, economic and social (language and religious beliefs) difficulties and hampers villagers' access to primary health services. Using these criteria, midwives identified hard-to-reach villages in their respective catchment villages. The proposed list was finalised through focus group discussion among the township health team, the State Health Director, Ministry of Health and WHO.

Outreach Service Delivery

The monthly outreach service sessions in hard-to-reach villages were planned by the township health teams annually through a consultative process, and incorporated into the existing coordinated township health plans.

Activities include vaccination, antenatal care, and treatments of sick children, nutritional promotion and advocacy for safe water and sanitation. Basic health staffs were supported with training, per diem, transport allowances and essential medicines. Also auxiliary midwives (AMW) and community health workers (CHW) from these villages were recruited for six-month and one-month training or refresher courses, and provided with kits to support BHS in community mobilisation and service provision.

Outreach services were provided in these villages by team of three to four Basic Health Staff. On average, around ten outreach sessions per month per township were provided.

Hospital Equity Fund

The Hospital Equity Fund (HEF) provides funding for transportation, daily allowances and medical care to poor mothers and children who require hospital delivery and the treatment of sick children. An annual amount of US\$ 10,000 was allocated to each township for this purpose. Eligible poor patients were identified and referred by midwives in the local community to township hospital.

Box 2: Health system in selected twenty townships: a baseline assessment.

The baseline assessment conducted in 2010-2011 in 20 selected townships uncovers the following:

Poverty and health financing

With an average 160,000 population in a township and a poverty rate of 25.6% in 2010, there were some 40,960 people living below the national poverty line. More than 80% of total health expenditure was out-of-pocket payments, which the poor could not afford to pay.

Human resources for health

Basic Health Staff (BHS) consisting of Health Assistants, Lady Health Visitors, Midwives, and Public Health Supervisors grade II and I, runs the primary health centres including Rural Health Centres and Sub-centres in all townships. Midwives are the backbone of PHC, 60% of total BHS serve the vast majority rural poor [16]. Furthermore, health volunteers such as Auxiliary Midwives (AMW) and Community Health Workers (CHW) support BHS particularly the midwives. In addition to shortages and misdistribution of BHS, they also lack adequate per-diem, transportation allowances and essential kits to provide quality services [12,13].

Health Infrastructure

Primary health care facilities are inadequate; for instance, 117 (19%) designated sub centres did not have sheltered premises for service provision. Out of the total 115 RHCs and 617 Sub-centres in 20 townships, the majority were as old as 45 years, which requires major renovation. The majority of these facilities did not have electricity, while the only water source was from shallow well. Sanitation was also inadequate.

Hard-to-reach areas in 20 townships: Relevant changes after two years of program implementation

Performance assessment in 19 townships (excluding programme disruption in one township due to civil unrest) in 2013 highlights several positive changes.

Outreach service delivery

Providing frontline health workers with basic equipment, medical supplies and allowances motivates them to perform well in these hard-to-reach villages. In 2012, each township delivered an average of 123 sessions of outreach services per annum or 10 sessions per month.

These outreach services to hard-to-reach communities, boosted coverage of prenatal care, SBA and immunization for pregnant women and children. All 19 townships demonstrated increased coverage of antenatal care, 15 demonstrated increased skilled birth attendance and 11 demonstrated increased 2nd dose of tetanus toxoid in pregnancy and Bacillus Calmette-Guérin (BCG) in newborns.

Recruitment, training and contribution by AMWs and CHWs

Recruitment and training of volunteers such as Auxiliary Midwives (AMWs) and Community Health Workers (CHWs) from the hard-to-reach villages addresses the health workforce gaps. They assisted midwives in deliveries and mobilised the community for health education, immunisation and MCH services. Older health volunteers living in their own village and speaking the local languages had higher probability to serve the communities longer [12,13]. Nonetheless, adequate supply of outreach kits, support of transportation allowance, supervision and training are critical to retain them and maximize their contributions.

Financial risk protection

In 2013, HEF supported 1,327 poor pregnant women in

these twenty townships with delivery difficulties and obstetric emergencies that could have otherwise led to maternal deaths.

However, utilisation rates varied across hospitals in these townships, despite equal distribution of US\$ 10,000 per township. By the end of June 2013, 14 out of 20 township hospitals utilised more than 95% of the allocated fund. Supply side factors such as hospital size, staff strength, attitude and skills of hospital staff, and demand side factors such as geographical distance between villages and township hospital, and public awareness influenced uptake of HEF by the poor women and children.

Programme outputs

Overall Programme outputs are described in Table 1.

Trend analysis of MCH service coverage, comparing prior to the GAVI HSS programme (2008 to 2010) and after the GAVI HSS Programme (2011 to 2013) indicated a significant coverage increase in prenatal care. The coverage is over 80% in 2013 in all townships.

In 2013, a high coverage of 2nd dose of Tetanus Toxoid, ranging from 70% to 90% was noted in many townships; most townships showed increased SBA coverage between 50% and 70%. DPT3 coverage was also high (80-90%) in many townships. BCG coverage was mostly higher than 80% and homogenous across 19 townships. Oral rehydration therapy (ORT) coverage among children under five years was very high and homogeneous across townships, between 90% and 100%

Notably two townships (Htilin and Hsipaw), where 62% and 51% of their total villages were hard-to-reach had demonstrated significant improvement in antenatal care (ANC) coverage. On the other hand, all indicators in Maungdaw Township decreased drastically, due to unexpected civil unrest and security challenges, which hindered effective programme implementation.

Improvement of these service coverage indicators was the result of a small investment by the GAVI HSS Program of USD 1.8 per capita in the hard-to-reach villages of these townships.

Table 1: Change of coverage rate between 2013 and 2010, percentage points.

	ANC	TT2	SBA	DTP3	BCG	ORT	Sanitation
Of total 20 townships							
Townships demonstrated increased coverage	19	11	15	7	11	4	9
Townships demonstrated decreased coverage	1	8	5	12	6	6	11
No changes	0	1	0	1	3	10	0
Average changes, percentage points between 2013 and 2010							
Townships with increased coverage	19	10	18	9	16	4	7
Townships with decreased coverage	-37	-11	-11	-17	-16	-3	-8

Source: Performance Assessment of GAVI-HSS Interventions in 20 townships, 2014 [12].

Box 3. Summary on lessons learned.

1. Outreach service delivery offers an interim option for people living in hard-to-reach areas, to access vital health services.
2. Ultimately, static PHC services should be established and made accessible to everyone in the longer term.
3. Adequate allowances (per-diem and transportation budget) can motivate frontline health workers to perform in the most remote and hard-to-reach locations.
4. Unless health facilities are furnished with adequate human resources, medical supplies, equipment and beds, financial risk protection alone cannot increase availability, despite improving access.
5. Volunteer health workers address HR gaps, however, adequate facilities (medical supplies, kits, supervision and training) are critical to retain them.

Discussion

A functioning PHC system is an essential platform for achieving health-related sustainable development goals [14,15]. Yet in reality, lack of infrastructure, equipment and medicines on the supply side and geographical remoteness and poverty on the demand side are significant barriers for the poor to access the needed health services, as revealed by these townships

Primary health strengthening in low resource setting can ensure equitable access to vital health services for the hard-to-reach population. Experience from the GAVI HSS programme implementation in Myanmar suggests that outreach services offer a strategic interim option to deliver essential health services in hard-to-reach communities on a regular basis. Although favorable outcomes emerged from the outreach service programme, the government's long-term vision and commitment towards establishing static PHC services are critically needed. This will ensure sustainable access to health services in these communities. Basic health staffs, CHW and AMW volunteers perform better even in these difficult circumstances when they are well equipped and motivated.

HEF prevented the deaths of a thousand poor women and children who would have died due to life-threatening obstetric conditions. The Fund could be considered an entry point for scaling up the government budget for health, and making progressive realization towards universal health coverage. However, a policy on providing financial risk protection alone may not work; parallel policies are needed to focus on geographical extension of functional PHC facilities operating with adequate numbers of committed front-line health workers, medical supplies, equipment and supportive health volunteers.

Conclusion

Despite these favorable outcomes, a donor-funded program is not sustainable, unless the government significantly commits to invest more in PHC system strengthening and financial risk protection in Myanmar (Box 3).

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AUTHORS' CONTRIBUTIONS

SW, WP and VT contributed significantly in the assessment design. SW and WP did literature review and prepared the first draft; VT reviewed the draft; MLN provided inputs to the draft; all authors involved in the assessment and field visit. Manuscript was read and agreed by all authors.

ETHICS APPROVAL

The study was conducted as a part of routine program

monitoring. Hence, the Ministry of Health, the Republic of the Union of Myanmar waived the ethical clearance. Waiver letter is shared as “the additional file 1 waiver letter”. Informed consents were sought and protection of confidentiality was strictly followed.

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