

Awareness and Utilization of Health Services under Social Security Scheme among Insured Persons in Yangon Region, 2018

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Abstract

Objective: In Myanmar, Social Security Scheme had been implemented since 1956. Social security law was reoriented in 2012 to promote the insurance coverage, and extend the health services including the purchaser-provider split system which is steered by social security board. The study explored the awareness, attitude toward, health seeking behavior, and utilization of health services under the scheme among insured persons, and find out the barriers to access by qualitative approach.

Methods: Community based cross-sectional descriptive study was conducted among 270 employees from 6 factories in three townships of Yangon region by using pre-structured questionnaires. Multistage sampling method was used. Health seeking behavior was explored by Andersen's model of healthcare utilization. Utilization rates were calculated by USAID Measure formula using secondary data sources. Focus group discussions and key informant interviews applied to explore the barriers.

Results: The utilization rate in 2017 was 3214/10000 population per year among insured persons in the study three townships. Nearly all participants knew that they had the right to free medical care at SSB health services. Among them, 54.4% of the participants had awareness score more than mean score, 12 in maximum of 19. The awareness level was significantly associated with educational and occupational statuses, and service years. In term of utilization, 48.5% had utilized, and it was significantly related with awareness level and some socioeconomic conditions. The participants preferred the other health facilities than the SSB health services. The health seeking behavior was associated with awareness level, perceived severity of illness, and some socioeconomic factors. The higher awareness group, female group, low income group and the group who perceived that their illnesses were severe were more preferred the SSB health services. The main reasons for not utilizing were perceived severity of illness and inconvenient opening hours. The qualitative findings stated that the main barriers were long waiting time, inconvenient opening hours, and inadequate health facilities.

Conclusion: The study indicated that the insured employees perceived that Social Security Scheme is effective for them and helpful when they need. However, it needs to extend the opening hours, expanding the SSB clinics, and promoting the public-private partnership system to increase the utilization of health services under the scheme.

Keywords: Community-Based Health Care; Ethic of Care; Covid-19 Pandemic; Lived Experience

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Introduction

Myanmar has a pluralistic mix of public and private system both in the financing and provision. The major sources of finance for health care services are the government (36.6%), other ministries (3.3%), private households (54.3%), social security system (0.3%), and INGOs (5.6%). Out-Of-Pocket (OOP) spending by households remains the dominant source of financing for health. The risk pooling mechanism would be the good one to tackle this problem.

In Myanmar, social security scheme exists as still running and expanding compulsory social health insurance. The Social Security Board (SSB) was created in 1956 after the adoption of the Social Security Act, 1954. The SSB has 77 township offices covering 110 townships (i.e. 30% of the existing townships). It is present in all States and regions to the exception of Chin State. In 2012, the Government of the Union of Myanmar adopted a new Social Security Law to provide for an extended social security system and introduced purchaser-provider split system. There were 31119 establishments actively registered with Social Security Scheme in 110 townships, and the employees actively registered in SSB were 1254010 according to the data from Social Security Board in September, 2018. SSB provides through 21 SSB clinics, 4 carewell clinics which were contracted with SSB, one traditional medicine clinic, 250 bedded Yangon Worker' Hospital and 100 bedded Htan-Ta-Bin Worker' Hospital.

The social security scheme is financed by tripartite contributions from the employees, employers and the state. Employers and employees have to pay their contributions in the ratio of 2:2 of the insured wages for the employees who were under the age of 60, and 2.5:2.5 for the employees over 60 years of age (for the social security fund). Nowadays, the social security scheme, the SSB has a small portfolio of 33,462 companies registered and 706,750 registered workers in December 2013. The number of insured persons rose up to 1254010 in September, 2018 [1].

The new social security law was enacted in 2012 with the expansion of SSB services, but implementation was started in 2014, the greater awareness and utilization of SSB services need to be extended. Although the insured persons had SSB health insurance, the percentage of insured persons seeking care from private health facilities was higher than from SSB health facilities. In the recent years, the internal migration toward the city especially Yangon and Mandalay where were the most abundant area of the insured workers is higher due to the unstable conditions of agricultural sector. The awareness and perception toward health services under social security board among the insured workers especially in the Yangon region should be revised and the barriers to utilize these services should be explored.

The study on awareness and utilization of SSB services was done on 2008 and no recent study, except the evaluation of SSB operations by ILO-MDRI that published in 2015 which was based on 2012-2013 data. Furthermore the ILO report was focus on the countywide overview, which is not concentrated on the Yangon where the insured workers mostly distributed. However, Yangon region was selected for the following reasons; the study will be feasible and Social Security Scheme was initiated first in Yangon

Municipal Area since 1956 and has nearly 60% of insured persons are in Yangon and the majority of insured contributions comes from Yangon region. And then, the number of establishments and insured persons were 11834 and 861163 respectively in 2018. There are about 38% of establishments and 68.7% of the total insured persons occurred in Yangon region. The results will provide invaluable information on various aspects of compulsory health insurance system to improve their efficiency and effectiveness of SSB Health services and to increase their coverage. It may also provide some information for health care financing in National Health System [2].

Materials and Methods

The research was conducted using a Socio-Economic Approach to Management (SEAM) intervention-research. This intervention helps organizations conduct organizational change processes and unleash the human potential to generate more economic value. The human potential is considered in this theory as the invisible resource that helps the organization develop its strategic plans and helps it reach the objectives. The intervention-research was conducted in the Syndicate of Private Hospitals of Lebanon in the years 2017 to 2019.

Study sample and design

Factory survey was conducted based on two-stage sampling procedure in which the factories in each township having the same probability of being selected. The list of the factories in each township was collected from the local authorities, and SSB offices. At the first stage, 3 townships were selected purposively, Hlaing-Thar-Yar, Shwe-Pyi-Thar, and Mingaladon. At the second stage, two factories were selected randomly from each selected township. At the third stage, 45 insured persons from the selected factories were selected respectively with simple random sampling procedure. One focus group in each factory, (total 6 focus group) was selected purposively for Focus Group Discussion (FGD). One key informant in each factory, (total 6 informants) was selected purposively in each factory for key informant interview. The participants were from the factory which had more than 200 employees, and the key informants were HR supervisors or managers [3].

Data collection

We reviewed the secondary data sources from SSB offices, SSB clinics, and SSB contracted 'Carewell' clinics to determine the utilization rate. And then, Face to face interviews were done by using pre-structured questionnaires to assess the attitude and awareness toward health services under SSS. Focus Group Discussions (FGD) and key informant interviews were done to explore the barriers by using open-ended questions, probing and clarifying questions. All factories which included in the study were private factories. There were 4 garment factories, one construction company, and one pharmaceutical factory participated in the study. Furthermore, all factories were large size factories (>300 employees) [4].

There were two note-takers involved for the group discussions and recorder.

Data analysis

Collected data were checked for proper coding. Data entry and analysis was done by using SPSS version 23. For the nominal data, frequencies and percentages were calculated and for continuous data, median, means and standard deviations were calculated. Frequencies and percentages were calculated to provide an overview of the data. Statistical tests for cross tabulation of the dependent categorical data to independent categorical data were done by chi-square test. In categorizing the good and poor awareness groups, the cut-off point was mean of the total score, 12, and the participants who got exactly 12 were categorized into the poor awareness group. For qualitative data, thematic analysis was done by manually.

Results

Utilization rates

In terms of utilization, it was 3214/10000 population per year in SSB health facilities, which indicated that 32.14% of the insured employees had sought medical care from the clinics under SSB (Table 1).

4352/10000 population per year in Hlaing-Thar-Yar township occurred which was the highest among the three townships. To be categorized 1910/10000 population per year in SSB clinic, and 2442/10000 population per year in carewell clinic. The lowest among the including townships was Mingaladon township, in which only 1716/10000 population per year presented, 261/10000 population per year in SSB clinic and 1455/10000 population per year in carewell clinic. The utilization rate for Shwe-Pyi-Thar township was 2030/10000 population per year, in which 1718/10000 population per years in SSB clinics, 311/10000 population per year in carewell clinic. There was only 185/10000 population of employees had visited the traditional medicine clinic in 2017. This clinic was only one traditional medicine clinic under the SSB, and located at Hlaing-Thar-Yar township. So, the number of insured employees from Hlaing-Thar-Yar township had used as the denominator [5].

Socio-demographic characteristics

The majority of the study population for quantitative study were female 75.9%, single (56.3%), and in the age groups of 20-29 (55.2%). Meanwhile, the participants who aged >60 years were only two (0.7%). There was no illiterate person, 31.9% were graduated, followed by 27% middle school passed and 26.3% high school passed respectively. The large proportion of the participants were laborers, which included 61.5% (166 in 270 participants). Among the study population, 48.5% of them earned from 200000 kyats to 300000 kyats per month, and 31.9% earned

less than 200000 kyats. There was only 19.6% earned more than 300000 kyats per month. Nearly half of the participants have the family income from 300000 to 500000 kyats per month. Most of the participants have less than 10 years of service years, in which 48.2% were <3 years, but just only 7% have more than 10 years of work experiences [6].

In the qualitative study, 6 Focus Group Discussions (FGDs) and 6 Key Informant Interviews (KIIs) included. Among the 58 participants in FGDs, the age was ranging from 19 years to 54 years of age, and the mean age was 32 years. Most of the participants were worker, helper, security staff and cleaning staff, in which 28 out of 58 included, while others were line clerks, supervisors, office staffs from HR department, some technicians and three managers. Six participants involved in the key informant interviews. All of them were the authorized persons in their HR departments, graduated and had at least 3 years of services in their respective factories [7].

Awareness and utilization among study population

Nearly all of the participants (97.8%) noticed that they have to contribute monthly from their salary. Most of them (97%) aware that they have the benefit of direct medical care at SSB clinics and SSB contracted clinics. Majority of them knew that the benefits of free medical care at Worker' hospital, sickness cash benefits, and maternity cash benefits, which occurred 89.3%, 94.1% and 89.3% respectively. The large proportion of them (66.7%) did not aware on the specialist OPD at Worker' hospital, but just more than half of the participants (53.7%) knew that they can be sought the direct medical treatment at Worker' hospital on closing hours of SSB clinics. SSB registration card was maintained themselves in 85.9% of the participants, and just only 1.5% of the participants stated that the card was maintained by the employer, and the other 1.5% mentioned that their cards were maintained in the office by their self-decision. On the other hand, 8.9% of the respondents have not received SSB registration card. The greatest majority of the study population (98.1%) knew that they need the SSB registration card when they have to seek medical care in SSB clinics or Worker' hospital. About 60.4% of the respondents noticed that the other evidence such as the recommendation letter from HR office which include their SSB serial number [8].

The large proportion of the respondents (80.4%) knew that the location of the SSB registered clinics, 68.5%, and 58.1% noticed the opening days and opening hours of these clinics. Among them, 96.6% responded that they knew the opening days correctly,

but just above the half knew correctly about the opening hours. There was 56.3% of the participants knew the location of Workers' hospital. 97.4% of the participants aware that they have the benefits of taking medical leave from SSB clinics, and 75.2% knew that they have the cash benefit from their medical leave. On the other hand, there were only 50% of them aware of cash benefit on purchasing prescribed drugs. Furthermore, there were 84.1% of them aware on reporting to SSB office/clinics when they suffered employment injury.

The awareness level of the participants was related with their

Table 1: Major sources of finance for health care services

Health care services	
Major sources of finance	Percentage
Government	36.60%
Other ministries	3.30%
Private households	54.30%
Social security system	0.3%)
INGOs	5.6%)

educational status ($\chi^2=15.471$, $p<0.001$). The majority of low educational group (73.3%) were in the group of low awareness level, meanwhile, the large percentage of high educational group (66.7%) were in the group of good awareness score. The relationship also occurred between the service years and awareness level ($\chi^2=7.772$ $p=0.025$). More than half of the participants whom less than 3 years of service were in the group of low awareness level, but, the large proportion of the participants whom more than 3 years of services were in the group of good awareness level. According to occupational status, the awareness level among the non-laborers was much higher than the laborers. The non-laborers group comprised of administrative staffs, office staffs, technicians and accountants. The relationship between these two variables was statistically significant ($\chi^2=7.573$ $P\text{-value}=0.006$).

There were only 48.5% of the total 270 participants had utilized SSB clinics/carewell clinics, only 31 participants (11.5%) had ever utilized Worker' hospital. And then, there was just 34.4% of the respondents responded that they had the experience of getting medical check-up and medical treatment at their factories from mobile team of SSB clinics. The relationship between awareness score and utilization of SSB services was statistically significant ($\chi^2= 8.153$, $P =0.004$). There were 56.5% of the participants with awareness score of >12 had ever utilized SSB health services, but, only 39% of low awareness group had utilized the SSB clinics. Furthermore, the utilization was associated with some socioeconomic factors, such as gender ($\chi^2 =5.912$ $P=0.015$), educational level ($\chi^2=7.303$ $P=0.026$), monthly income ($\chi^2=19.813$ $P<0.001$), occupational statuses ($\chi^2=4.25$ $P=0.039$) and living township ($\chi^2=12.501$ $P=0.006$) respectively. According to gender, 52.7% of female employees had ever utilized SSB clinics to compare with male group (35.4%). The large percentage (67.4%) of employees who had the income less than 200000 kyats per month had ever utilized SSB clinics which was very obvious in comparing with the low utilization rate among the group of >300000 kyats per month (32%). Regarding Living Township, the employees in Shwe-Pyi-Thar township had utilized SSB clinics more than the other townships (60.9%) [9].

There was the statistically significant association occurred between gender, educational level, occupational statuses, monthly income, family income and living townships. Laborers were utilized SSB clinics than the non-laborers, 35.6% to compare with 19.5% respectively ($\chi^2=6.974$ $P=0.008$). To be specified the educational level, 43.3% of low educational status group utilized SSB clinics, but the greatest majority of high educational status group (83.3%) seeks medical care from private health facilities ($\chi^2=14.256$ $P=0.001$). On another hand, the relatively larger percentage of participants who had the monthly income of only 100000-200000 kyats per month took treatment from SSB clinics to compare with the higher income group, in which 90.6% visited private clinics for their last time illness ($\chi^2=423.267$ $P<0.001$).

According to the quantitative study, the largest proportion of the respondents (44.1%) responded that they did not visited to SSB clinics because they perceived as their illness was not severe. However, 34.6%, the second large percentage stated the inconvenient time as the barrier for them. There was 14

participants (7.8%) mentioned that they did not visited because of difficult transportation.

Thematic analysis on qualitative findings about the barriers

According to the latest data from social security board, the number of active insured employees in these townships was about 462500 persons. To be more stratified, 105093, 104736, and 252671 for Mingaladon, Shwe-Pyi-Thar and Hlaing-Thar-Yar townships respectively. Among the participants in FGDs, 29 out of 58 participants had utilized clinics under SSB. The large proportion of respondents told that they seek medical care from private clinics than SSB clinics when they need. On the one hand, nearly all participants mentioned that the reason for utilization was for taking medical leave, maternity benefits, paternity benefits and for taking medical leave in chronic illness.

On the other hand, the participants responded that they did not visited SSB clinics because of the opening hours of these clinics were coincide with the working hours, inconvenient in weekend days, prolong waiting time, and inadequate health facilities. And then, some described that there was some difficulties presented to get gate pass from factory, difficulties occurred in taking cash reimbursement due to documentation problems, and so on. However, most of the participants perceived that the social security scheme and health services were effective for them because they can get medical leave and cash reimbursement when they need, no out-of-pocket expenditure and good quality of care at SSB contracted clinics. Some of them perceived that the scheme was very effective for the insured who were suffering chronic illness. The participants suggested for extending opening hours of the clinics, providing more health facilities including human resources, increasing the number of SSB clinics, and extending public-private partnership system with private clinics.

The main themes emerged from FGDs and KIIs can be categorized in the followings;

- Availability barriers
- Accessibility barriers
- Affordability barriers
- Acceptability barriers
- Need factor barriers
- Factory Side Barrier
- Awareness Barriers
- Availability Barriers

There were five subthemes under the availability barriers,

- Prolong waiting time
- Inconvenient opening hours
- Inadequate health facilities
- Inadequate SSB clinics, and
- Inconvenient in weekend days

Among the participants in FGDs, 21 out of 58 participants cited about prolong waiting time as the barriers for utilization of SSB health services.

'I did not attend SSB clinic when I was pregnant, because there were too many patients in this clinics and I would be waiting too long, so I attend the private clinic.' 29 years old female worker from a garment factory, Hlaing-Thar-Yar Township.

16 out of 58 participants in FGDs stated that the opening hours of the SSB clinics was coincide with their working hours, and they cannot seek medical care these clinics if they want to take care after working hours. In our factory, we can go out at 3:50 PM if we need medical care and not taking over-time, but the SSB clinic is closed around 4:00 PM. Therefore, we cannot visit the SSB clinic and seek medical care at the private clinics. 27 years old female worker from a garment factory, Mingaladon township.

13 participants told that the health facilities in SSB clinics and carewell clinics are not adequate for their needs. They have to go other health facilities if they need to take radiographs and lab results, and it leads to decrease trustworthy on SSB clinics.

Accessibility barriers

Among the total 58 participants, 24 participants discussed about the accessibility barriers. The subtheme emerged from accessibility barriers were

- Distance from home
- Difficult transportation

There were 15 participants discussed about this barrier for utilization of SSB health services.

Affordability barriers

There are two subtheme explored;

- Opportunity Costs
- Indirect costs

If the ones visited the SSB clinics, about 4000 kyats for over-time will be deducted because SSB clinic is open only in the working hours. We are working for the money, so, it is a very important problem. 24 years female, a line clerk from a garment factory, Hlaing-Thar-Yar township. On the other hand, one manager from KIIs stated as follow, 'As the factory rule, we do not deduct salary for the absence hour if the employee is transported by the factory' car and go back to work. Unless this condition or the employee is not right back to the workplace, we deduct for his absence hours. 30 years female, HR supervisor from a garment factory, Mingaladon township.

Acceptability barriers

There are five subthemes can be categorized

- Poor social dealing
- Haphazard token system
- Trustworthy
- Difficulties in cash reimbursements

- Difficulties in taking medical leaves

6 employees discussed that the cash reimbursement is delay, and then, some of the HR officers in the interviews argued about that too. According to the rules of SSB, the township authorities can reimburse only for the cash reimbursements less than 30000 kyats, and reimbursements more than 30000 kyats were decided by the central office. Furthermore, the doctors' signature for buying drugs is an important document to take reimbursements, but the employees face with difficulties to get the doctors' signature because of many reasons. Sometimes, the cash reimbursements are reimbursed lately, and I think it's takes about two months. Some of the employees have the difficulties for that, because they borrow the money for their costs in hospitalization. The long the waiting time, the higher the interests for this money. 47 years male, an all-supervisor from a garment factory, Shwe-Pyi-Thar township.

Need factors barriers

There were two subthemes emerged;

- Perceptions on their health status
- Factory clinics

A few percent of the participants argued that the gate pass procedure is the main difficulty for taking medical care at SSB clinics.

Awareness barriers

The majority of the participants discussed that they know well the medical benefits. But, some of them have wrong information related with the SSB cards, and incomplete information about the location and opening hours. In the key informant interviews, the informants discussed as they make knowledge sharing during the contract days, and also through the supervisors and line clerks. At the contract days, we share information about the SSB benefits, and also answering if someone asked. 30 years female, a HR manager from a garment factory.

Discussion

The study was done in Mingaladon, Shwe-Pyi-Thar and Hlaing-Thar-Yar townships of the Yangon region, from April, 2018 to December, 2018. It included 270 insured employees for quantitative data, 58 participants for focus group discussions, and 6 key informants for key informant interviews from 6 factories.

The study was designed to determine the utilization rates among the insured employees, to assess the awareness and perceptions toward SSB health services, and also to explore the barriers which they occurred for utilization of SSB health services.

The utilization rate among insured employees in all three townships was 3214/10000 population per year in 2017. It indicated that the utilization trend was just a little decrease comparing with the previous study in 2013, in which it was 33.7%. The utilization in Hlaing-Thar-Yar township was higher than other townships. One factor may be the locations and opening hours of these clinics, in which the closing hour was 7:00 PM. The lowest utilization occurred in Mingaladon township, (17.16%), and some

participants in FGDs stated that they faced with some difficulties to go out from the industrial zone because there were no buses from the zone to outside. And, they also demanded to extend the opening hours to align with their working hours including over-time.

In terms of utilization, the predisposing factors such as socioeconomic status, and perceived severity of illness, and permission from the factory were the push factors for utilization of SSB health services. On the other hand, the enabling factors such as the awareness on SSB health services, the perceptions on characteristics of SSB health services among the employees, the availability and acceptability of these health services were the pull factor for utilization of SSB clinics [10].

In the current study, the mean score for awareness was 12, and categorized into two groups-low awareness group and high awareness group. Among them, more than half of the participants were in the high awareness group, and only 45.6% were in the low awareness group. The educational status, the work experiences, and occupational statuses of the employees were largely influence on the awareness level of the employees ($\chi^2=15.471$, $p<0.001$). In terms of occupation, 67.1% of the non-laborers were in the good awareness group; meanwhile, only 48.7% of the laborers were in this group. But, the findings from qualitative data stated that the reason for not utilization of SSB health services were not due to the awareness, it was due to the barriers they faced, such as inconvenient time, prolong waiting time, inadequate health facilities, and so on. According to qualitative study, they suggested upgrading the awareness raising programs through various channels, such as billboard, pamphlet, televisions and social media, and recommended the contents such as the précised location, opening days, opening hours, the guiding map to visit the SSB clinics, and the SSB benefits.

Conclusion

According to the findings from the study, the health seeking behaviors and utilization of SSB health services among the insured employees were depend not only on awareness but also on the other influencing factors such as the predisposing factors, enabling factors and need factors too. In terms of awareness on

SSB features and benefits, almost all respondents aware of the right to free medical care at SSB clinics, SSB contracted clinics and Worker' Hospital. The awareness was associated with the educational level, work experiences and occupational statuses

of the employees. And then, there was a significant relationship occurred between the awareness level and utilization, the more they knew, the more they utilized.

The predisposing factors such as socioeconomic statuses had influenced the utilization of SSB health services. The utilization of SSB health services was more occurred in the low income groups and the female employees. And, it was also associated with the enabling factors such as inadequate SSB clinics, inconvenient opening hours, and the perceived distance from their home. The main barriers for utilization were prolong waiting time which leads to increase the indirect cost and opportunity costs, and the inconvenient opening hours.

The insured employees preferred the other health facilities than the SSB health facilities but the difference was not very much. There was 43.6% utilization occurred in their last time illness within 30 days. The employees with low socioeconomic status, and who perceived their illness was severe preferred SSB clinics than the others. The employees perceived that the SSB health services and social security scheme were effective for them because the health is unpredictable, thus, this scheme would be helpful when they need, and it can provide the fairness in health especially for the vulnerable persons. Therefore, it should be extend in many ways to provide the demands and needs of the all employees.

Limitation

In collecting the secondary data, the number of new cases and old cases could not separated in the data of care well clinics which were contracted with SSB. Therefore, it may affect the determination of utilization rates. In the qualitative study, the difficulties from SSB clinics sides had not explored because the key informant interviews were done only in the factories, not to the health care providers.

References

- 1 Saw, Yu Mon (2019) "Myanmar's human resources for health: current situation and its challenges." *Heliyon* :e01390.
- 2 Saw YM, Than TM, Thaug Y, Aung S, Shiao, et al. (2019) Myanmar's human resources for health: current situation and its challenges. *Heliyon* 5: pe01390.
- 3 Aung, Htoo Wai (2022) "Awareness and Utilization of Health Services under Social Security Scheme among Insured Persons in Yangon Region, 2018." *IPHSPR* 97: 1-7.
- 4 Swe Zin Win (2008) Awareness and utilization of social security board services among insured persons, Yangon.
- 5 Van Rooijen M, Myint CY, Pavlova M, Groot W (2018) Health insurance in Myanmar: The views and perception of healthcare consumers and health system informants on the establishment of a nationwide health insurance system. *Risks* 6: 81.
- 6 Myint CY, Pavlova M, Groot W (2019) Health insurance in Myanmar: Knowledge, perceptions, and preferences of social security scheme members and general adult population. *Int JHealth Plan Manag* 34: 346-369.
- 7 Myint CY, Pavlova M, Groot W (2019) Patterns of health care use and out-of-pocket payments among general population and social security beneficiaries in Myanmar. *BioMed Central Health Servi Res* 19: 1-16.
- 8 Myint CY, Pavlova M, Groot W (2019) catastrophic health care expenditure in Myanmar: policy implications in leading progress towards universal health coverage. *Int J Equity Health* 18: 1-13.
- 9 Pudpong N, Durier N, Julchoo S, Sainam P, Kuttiparambil B, et al. (2019) Assessment of a voluntary non-profit health insurance scheme for migrants along the Thai-Myanmar border: A case study of the migrant fund in Thailand. *Int J Environ Res Public Health* 16: 2581.
- 10 Myint ANM, Liabsuetrakul T, Htay TT, Wai MM, Sundby J, et al. (2018) Impoverishment and catastrophic expenditures due to out-of-pocket payments for antenatal and delivery care in Yangon Region, Myanmar: A cross-sectional study. *BioMed J Open* 8: e022380.