ORIGINAL ARTICLES

The impact of health financing policies on the service delivery at the grassroots level: A case study in Vietnam

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ABSTRACT

Objectives: This study analyzes the impact of health financing on the service delivery at the district health centers within the context of Vietnam's autonomous policy implementation.

Methods: Data was collected through secondary sources and qualitative methods in 2023. Thematic analysis was conducted based on four in-depth interviews and eight focus group discussions involving 40 key provincial, district, and commune stakeholders.

Results: The study revealed that insufficient public funding for essential activities and input-based payment mechanisms failed to provide adequate incentives for improving the quality and efficiency of primary healthcare services. As a result, patients lack trust in the quality of services offered at the grassroots level. Many bypass these facilities in favor of higher-level specialist care, further reducing revenue for the district health centers under the autonomous policy.

Conclusions: Adequate public financing and appropriate payment mechanism incentives are critical for delivering quality primary healthcare services at the grassroots level.

Keywords: *Health financing, Preventive, curative, Primary Health Care, Quality, Equity, Policy Vietnam.*

INTRODUCTION

The goal of health systems worldwide is universal health coverage (UHC). UHC means ensuring all citizens have access to needed promotive, preventive, curative, rehabilitative, and palliative health services of sufficient quality to be effective while also ensuring that people do not suffer financial hardship when paying for these services. To achieve this goal, the health system should be based on Primary Health Care (PHC) services, strengthening grassroots healthcare capacity as a deciding factor (1).

Vietnam's healthcare system is divided into levels and administrative units: central, province, district, and commune. PHC in Vietnam includes both preventive and curative services. Providing quality PHC services is the primary function at the grassroots level in Vietnam, including commune health stations (CHSs), district health centers (DHCs), and district hospitals (DHs) (4).

From 2004 to the present, there have been numerous changes in the organizational structure of healthcare units at the district level. There has not been any organizational model considered optimal and uniformly implemented nationwide. This has significantly impacted the operations of district health centers/ hospitals and commune health stations. In 2017, to ensure uniformity in the management mechanism and the organizational model of

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the DHCs, the Government Resolution stated: "*Implementing a unified model, each district-level unit only have one multifunctional DHCs (except for districts with hospitals ranked II or higher*" (5). In 2023, 60 out of 63 provinces/ cities and DHCs are under the Provincial Department of Health (PDH) management. In the remaining provinces, DHCs are under the district People's Committee (6).

The multifunctional DHCs directly manage district hospitals and CHSs. The DHCs act as the 'gatekeeper', being the first point of contact for individuals who are ill or have health issues. The multifunctional DHCs are responsible for providing comprehensive service packages, including preventive–curative care, re-habitation, food safety, and population (7). Strengthening the grassroots health network and promoting PHC have always been prioritized in Vietnam's health system development (4).

However, PHC services at the grassroots level in Vietnam have recently been perceived as low quality and underutilized, leading to overcrowded patient loads at higher levels of care. The review done by the Ministry of Health (MOH) and health partnership partners in 2015 identified reasons for this underutilization, including lack of equipment and medications, poor infrastructure, under-investment for PHC facilities at the commune level, and lack of coordination and linkage between preventive and curative, and between levels of care (1).

There are two levels of state budget for health in Vietnam. The central state budget is managed by the Ministry of Health (MOH). It allocates funds to healthcare facilities under the management of the Ministry and specific target programs (for example, buying vaccines for the Extended Program on Immunization). The Central State Budget allocates funds to the provincial level based on the population and is adjusted according to the level of geographical difficulty. The central state budget accounts for a small proportion of total recurrent health expenditure because most funds are decentralized to localities. The specific budget level of each locality is decided by the local government and depends on their priority and available local budget.

Financial sources for DHCs include the state budget, health insurance (HI), and user fees. The state budget mainly ensures salary and operational expenditures of the preventive care and CHSs. The state budget for curative services gradually decreases until it no longer exists because of autonomous policy and is replaced by HI revenue and user fees (10, 11).

Health financing is a core function of health systems. It impacts the quality, accessibility, and coordination of health service delivery. The payment mechanisms also influence service delivery behavior. Therefore, this study was conducted to analyze the impact of health financing on the service delivery at the grassroots level in the context of implementing Vietnam's autonomous policy.

METHODS

Study design: A case study was conducted in October 2023 in two provinces of Vietnam. This design enabled in-depth investigation of a phenomenon in a particular setting utilizing multiple sources of evidence. Case studies were widely used in health policy analysis because the policy was usually embedded within complicated contexts, in specific institutions, and can be interpreted differently by various people involved in the policy implementation.

Study site and time: The study was implemented in October 2023 in two provinces: Ha Tinh and Kon Tum. These provinces were purposefully selected to diversify the management models of DHCs. We randomly selected a DHC (including a CHS) in each province.

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Ha Tinh is a poor province located in the central region of Vietnam. Local government budget expenditures depend heavily on the central budget (58% of the total provincial budget expenditures) (9). Kon Tum is also a poor province of the Central Highlands. About 80% of its budget is from the central budget.

In Ha Tinh province, the District People's Committee (DPC) is responsible for allocating and managing the state budget for DHCs. In Kon Tum province, the Provincial Department of Health (PDH) is responsible for DHC management. In Ha Tinh, 06/13 DHCs implemented partly autonomy (responsible for 30 percent of recurrent expenditures). In Kon Tum, all 10 DHCs implemented autonomy.

Tools and methods of data collection

Secondary data: Secondary data from DHCs were collected according to 8 forms, including the types of PHC services provided, annual financial sources and expenditures, number and structure of health staff, and Training plan at both DHCs and CHSs.

Primary data: The qualitative data collection included four in-depth interviews (IDIs) and eight focus group discussions (FGDs) with 40 participants, as presented in Table 1. The purpose of the qualitative method was to understand the impact of health financing on the service delivery at district and commune levels.

Table 1. Study participants of qualitative study

Participants	Methods	
	In-depth Interview	Focus Groups
Provincial level - The Provincial Department of Health (PDH): 4 participants in each group (leader representative, persons in charge of personnel, finance and planning) in each provincial department of health		2 x 4 participants/group
District level - District People's Committee: 3 participants (leader, persons in charge of health and finance) in each District people's committee		2 x 3 participants/group
- District Health Center: 6 participants (Leader, Heads of personnel, planning and quality department, a nurse, a medical doctor) in each DHC		2 x 6 participants/group
- Head of financial department	2	
Commune level: Commune Health stations: - Chief of CHS	2	
- 5 staff in each CHS		2 x 5 participants/ group
Total	**4**	**8 (36 participants)**

Processing and analyzing data

Secondary data: The information collection forms were checked, cleaned, entered into the computer, and analyzed using Excel software. Policy documents and reports were reviewed using a policy proforma to summarise their content. The content of different policy documents was compared.

Primary data: The thematic analysis was applied in this paper. Qualitative data was collected from

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in-depth interviews and focus group discussions with key informants. The transcription debriefing information was classified into major themes and sub-themes established on the analytical framework. The results were gathered and evaluated according to each research objective and content. Results were extracted and mapped based on relevant theme. Data were analyzed in Vietnamese, and the codes and report were written in English. Selected illustrative verbatim quotes from Vietnamese transcripts were translated into English.

The study analyzed the effects of health financing policies on health service delivery based on WHO's approach, focusing on three core functions of health financing: 1) Sources of funds; 2) Risk pooling of funds and 3) The payment mechanism (12).

Research ethics: This study was approved by the Ethics Committee for Biomedical Research at Hanoi University of Public Health, Hanoi, Vietnam (approval number: 406/2023/YTCC-HD3, dated September 18th, 2023), and conducted according to the guidelines of the Declaration of Helsinki. Participants provided informed consent at the commencement of data collection.

RESULTS

Insufficient public funding sources for service delivery

There are three main financial sources for DHCs, including the State budget, social health insurance, and User fees/ out-of-pocket money (OOP). The payment mechanism at DHCs in the two provinces is the same as nationwide: The state budget pays by the global budget (based on the number of population or staff for preventive care and the number of beds for curative care). Payment from HI fund bases fees for service. Households pay out-of-pocket money (OOP) in fees for services.

Table 2 presents the main source of revenue for both DHCs was the state budget (74.2 and 50.6%), while the revenue from HI accounts for 19.6% and 45.8% respectively, the revenue from hospital fees accounted for a small proportion of 6.2% and 3.6%. The state budget was lower in Kon tum DHC because this DHC was assigned 55% autonomy and the state budget provided about 45% of recurrent expenditures for curative care.

Table 2. Sources of financial revenues of DHCs, 2022

Unit: Thousand dong

Sources of revenues	DHC in Ha Tinh		DHC in Kon tum	
	Number	Percentage	Number	Percentage
State budget	29,205	74.2	19,618	50.6
Health insurance	7,697	19.6	17,769	45.8
User fees (OOP)	2,452	6.2	1,384	3.6
Total	**39,354**	**100**	**38,771**	**100**

Table 3 below shows that the main expenditure was health workforce (about 55-59%). Next is the expenditure on curative care: about 30% in Kon tum DHC), while this rate in Ha tinh DHC was 25%. It is worth mentioning that spending on preventive health was quite low in both DHC, ranging from 4.0% to 7.3%.

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Table 3. Recurrent expenditures at DHCs in 2022

Unit: Thousand dong

Expenditures	DHC in Ha Tinh		DHC in Kon tum	
	Number	Percentage	Number	Percentage
Workforce	23,298	59.2	21,655	55.9
Curative care	10,122	25.7	11,773	30.4
Preventive care	2,877	7.3	1,552	4.0
Administrative	2,457	6.3	3,199	8.3
Maintenance	600	1.5	470	1.2
Others	0	0	122	0.2
Total	**39,354**	**100**	**38,771**	**100**

The impact of health financing on the health service delivery

Inadequate incentives for preventive service delivery

Insufficient funding has resulted in the prevention and control of epidemics being passive, as reflected: "…*There is no funding to implement epidemic prevention activities. For example, vector control/spray impregnation and environmental treatment are currently no longer feasible. Now, we are completely passive, only when the pandemic occurs...*" (FGD 5).

The staff had no incentive to supervise the epidemic regularly: *"... Because there is no operating budget, no per diem allowance, only petrol for travel, the health staff have no incentive to supervise epidemics regularly and actively. "* (FGD 5).

The supervision of food safety was not implemented correctly because of no testing kits: *"No food testing kit, hence in food hygiene inspections, only superficial checks are conducted such as source verification, label adherence, odor, and visual inspection."* (FGD 6).

The shortage of supplies and equipment influenced the delivery of reproductive health services: "*Shortage of consumables, medical equipment; ultrasound machines for reproductive health services; damaged malaria microscope, unusable for 2 years.*" (FGD 6).

Health education and promotion activities were also not regularly implemented due to a lack of funding. Where possible, CHCs integrated these activities into community meetings. However, this was only done when there is an epidemic and the funding for prevention and control is available.

Shortages of medicine – equipment – staff to provide the quality curative services

CHSs are under the financial management of DHCs because CHS is not an independent accounting unit. The DHCs procure and deliver drugs and medical supplies to the CHSs. In Ha Tinh, CHCs suffered from a medicine shortage, so they had to transfer patients to higher levels or prescribe the necessary medicine for patients to buy themselves: *"...There is no medicine provided for some diseases. Although these medicines are on the reimbursed list, they are not available. When there is a medicine shortage, the patient will be transferred to the DHCs or pay by themselves."* (FGD 7).

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Due to the lack of funding, the CHC used their savings (which would otherwise have been distributed as additional income for the CHC staff) to buy some equipment to carry out medical examinations and treatment in the commune, such as small surgical instruments and blood pressure monitors. Furthermore, the CHC had no funds to maintain or repair equipment allocated from the PDH, leaving it damaged while there was no equipment to use.

Low income and difficult working conditions led to a severe shortage of human resources in DHCs, particularly doctors and specialized professionals:"... *salary is insufficient, not enough to live. I must take care of family and children while working as a head of CHS, there is no time to work outside to increase income..."* (Interview 3).

Implementation of the autonomous policy was also the concern because the income of health staff depends on the revenue of the DHCs: *"There was a risk that some DHCs will not have funds to pay salaries for employees. Therefore, for DHCs in mountainous areas such as some districts of Kon Tum, the autonomy may be considered due to difficulties in raising revenue."* (Interview 2).

The duty allowance of medical staff is too low, discouraging medical staff from increasing the provision of medical services at the grassroots level. Participants noted: *"On duty (1 USD/person/night) and surgery (2 USD) allowances are not enough to afford a quick dinner meal. Doctors must work extra jobs to get more income."* (FGD 3).

In Ha Tinh DHCs, there were 178 medical doctors, with a shortfall of 35 doctors. Similarly, a multifunctional DHC in Kon Tum lacked 12 specialized doctors (in obstetrics and gynecology, ophthalmology, surgery, traditional medicine, and 1 administrative staff member). The shortage of doctors causes the inability to provide services: *"In the Surgery department: one general doctor is on training in surgery. However, there is a lack of an anesthesiologist. Therefore, surgical services cannot be provided due to the lack of synchronization, resulting in resource wastage."* (FGD 4).

"14 doctors were working in 20 CHSs of this DHC, leaving a shortage of 6 doctors. To ensure doctor availability at CHSs, the DHC rotated doctors working in the district to the CHSs." (FGD 8).

There are several reasons for the doctor shortage, especially the difficulty in recruitment: "*Recruitment is challenging because the salaries and allowance to the staff working at the district and commune level are not enough to live."* (FGD 1).

Retaining competent doctors is also a challenge because many have moved to private or higher health facilities: *"DHC fail to retain doctors, particularly at CHSs, due to low income, insufficient attracting policies, and inadequate training."* (FGD 1).

The absence of policies to attract and/or training financial support because of no funds as reflected: *"Kon Tum province lacks policies to attract personnel and support doctor training due to economic difficulties, having no local budget to attract and support training."* (FGD 7, 8).

DISCUSSION

Public funding sources are inadequate for quality health service delivery

The findings reveal that the health service delivery at the grassroots level has not met practical needs. The underlying reasons are a lack of equipment, outdated and broken equipment, and drug unavailability. The shortage of medicine in CHSs resulted in HI patients paying out of pocket money (OOP) for the services they should have been entitled to,

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either because they must purchase medicines outside the CHSs or attend higher-level facilities to access medicines. Consequently, the patients do not believe in the quality of services at the grassroots level. A vicious cycle has undermined PHC at DHCs: underfunded services are unreliable, of poor quality, and not accountable to users. Therefore, many people bypass DHCs to seek out higher-level specialist care. This action deprives more funding for DHCs to implement autonomous policy, and the lack of resources further exacerbates the problems that have driven patients and qualified staff elsewhere.

Previous studies in Vietnam reported similar findings, such as people not trusting the quality of PHC services provided at CHSs, so they must go to higher levels. It leads to hospital overcrowding at higher levels and high OOP payments (the rate of OOP payments for PHC accounts for about 40% of total PHC expenditures) (13).

Low income and insufficient attractive policies contribute to the shortage of health staff at the grass-root level

Both studied DHCs suffered a shortage of health staff, especially medical doctors, because of difficulty in recruiting and retaining them. The lack of doctors created a lack of cohesion within the working team, and results in an insufficient provision of services. The main reasons were low income, insufficient attraction policies, and inadequate training. The research findings are similar to those of other studies regarding the shortage of healthcare personnel, particularly medical doctors at CHS and specific specialized departments in DHCs (6). The doctor shortage has persisted for years without successful recruitment efforts, despite ongoing staff transfers to higher-level healthcare or private health providers (14, 15). The shift might be due to higher income and better conditions for career development at the higher-level facilities. The root cause could be the financial mechanism linking health workers' income to healthcare facilities' revenue when implementing autonomy and socialization policies. Therefore, healthcare units in disadvantaged areas (like Ha Tinh and Kon tum) face challenges in ensuring a stable income for their staff. Autonomy constraints further exacerbate income inequality and the remuneration bias for healthcare personnel in various economic-social areas or essential health service fields. Despite efforts to promote the PHC services at grassroots levels as the closest contact point for service users, upper-level hospitals remain the primary providers of healthcare services, even basic services. This results in an undesired outcome for equity and efficient directions of the health system (1).

Financial decentralization to local authorities may lead to a fragmented and low-risk-pooling financial system.

We revealed that the revenue sources of DHCs, including CHCs, mainly rely on two public financial sources: the state budget and the HI fund. The state budget is the source of disease prevention, population, and CHSs. The allocation norms are low and mainly cover salaries (80-90 percent of total funding), administrative expenses, and little funding for preventive activities. This has been further affected by the closure of the National Target Program (NTP) on Health and Population in 2021 and the transfer of responsibility to local budgets. Therefore, funding for these activities depends heavily on local governments' priorities. Due to the low allocation norms and allocation methods, the revenue from the state budget has not met the spending needs of the DHCs. The consequence is that DHCs and CHSs face substantial difficulties in implementing preventive activities.

The state budget for curative services has been declining following the gradual implementation of financial autonomy. The financial resources for curative services are

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mainly from HI. However, HI has not paid for community prevention, counseling, and early detection screening for non-communicable diseases (hypertension, diabetes). For DHCs, especially in mountainous and disadvantaged areas (such as Ha Tinh and Kon Tum), the increase in revenue from curative activities is extremely difficult because of the low-income population. It becomes more difficult due to the impact of the bypass policy (HI patients can go directly to the unregistered DHCs & provincial hospitals without the referral letter). Therefore, the financial autonomy mechanism applied to the grassroots level in poor and remote areas should be under careful consideration because it is impossible to generate revenue.

The study also provides evidence that the multifunctional DHCs have two different financial management mechanisms: subsidy from the State budget for preventive care and CHSs; and Autonomous revenue from HI and user fees for curative care. This leads to fragmentation and lack of cohesion to establish continuous and comprehensive care (preventive and curative) between district and commune levels (11).

Payment mechanisms from the State budget and HI to DHCs do not provide incentives for improving efficient performance.

As described earlier, the state budget's payment mechanism for DHCs is not based on healthcare needs and actual service delivery capacity. It is allocated based on inputs (number of beds for curative care or number of health workers for preventive care). Because payment mechanisms are not linked to output or performance, providers have little incentive to improve the services they deliver in terms of quantity or quality.

The study adds evidence that the allocation of recurrent expenditures is low and does not consider several functions and tasks such as disease supervising, warning, disease prevention and control, early detection screening in the community, and health education. Slow and inactive outbreak prevention and control may lead to more severe and prolonged epidemics, which may harm the socio-economic activities of the localities. Therefore, it is necessary to change the method of allocating the state budget to ensure a sufficient budget for DHCs. This budget can be allocated according to the number of populations or the package of PHC services. This is also the Government's direction towards innovating the method of allocating the state budget. However, no localities have been able to implement it due to a lack of guidance from the Ministry of Health (MOH). Primarily, MOH has not yet issued a PHC service package (17).

The current payment method from the HI fund for DHCs is a fee for service. This payment mechanism has disadvantages that increase medical costs because of providing unnecessary services or hospitalizations to maximize revenue (18). Other countries tend to apply a combination of payment methods for PHC services, with "capitation at the center". For example, Thailand applies the capitation payment method to pay for outpatient services at the district and commune levels; Diagnosis-Related Group (DRG) for inpatient services; fee for service method for early disease detection screening services such as cervical cancer screening; performance-based payments for the management of chronic diseases such as hypertension and diabetes. Particularly for disease prevention and health promotion, a fixed annual rate for the district level is set aside for this activity but for localities to decide and proactively use based on the determination of local priorities according to the annual disease model (19).

Limitations of the study: The study used of the selection of two poor provinces may have constrained broader generalizability.

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CONCLUSION

We have demonstrated that adequate public financing source and appropriate payment mechanism incentives are critical for delivering quality primary healthcare services at the grassroots level. In addition, the financial autonomy mechanism applied to the grassroots level in poor and remote areas should be under careful consideration because it is difficult to generate revenue.

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