

Description of the Procurement and Management Systems for Medical Equipment, Supplies, and Medical Oxygen at Health Facilities in Vietnam

Study Report

February 2022

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The work described in this report was carried out as part of PATH's COVID-19 Respiratory Care Response Coordination project, which is a partnership between PATH, the Clinton Health Access Initiative, and Every Breath Counts Coalition to support country decision-makers in the development and execution of a comprehensive respiratory care plan to meet the demands of COVID-19. The project is also pursuing strategies to help prioritize and improve access to oxygen therapy and other essential equipment involved in respiratory care as an integral part of health systems strengthening, beyond the pandemic response.

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Abbreviations

CO	Cabinet Office
COVID-19	coronavirus disease 2019
HF	health facility
MOF	Ministry of Finance
MOH	Ministry of Health
MPI	Ministry of Planning and Investment
PHD	provincial health department
PPC	Provincial People's Committee
VND	Vietnamese Dong

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Overview

Context

Through a cooperative agreement and in collaboration with PATH, from October 2020 to the end of November 2021, the Cabinet Office of the Ministry of Health (CO/MOH) implemented in Vietnam the PATH-led COVID-19 Respiratory Care Response Coordination project. This project aims to increase access to respiratory care equipment and medical oxygen sources and share lessons learned in the COVID-19 response among project implementation countries globally.ⁱ

One of the project-specific objectives is to support the decision-making process in procuring and reallocating respiratory care equipment, specifically COVID-19 care and treatment equipment. Decisions in the procurement and effective management of equipment contribute to determining the capacity of health facilities (HFs) in treating COVID-19 patients specifically and providing oxygen therapy in general. Data collected in this study will help the CO/MOH and PATH analyze current procurement practices, explore strategies, and provide the technical support needed to increase access to respiratory care for patients in need in Vietnam.

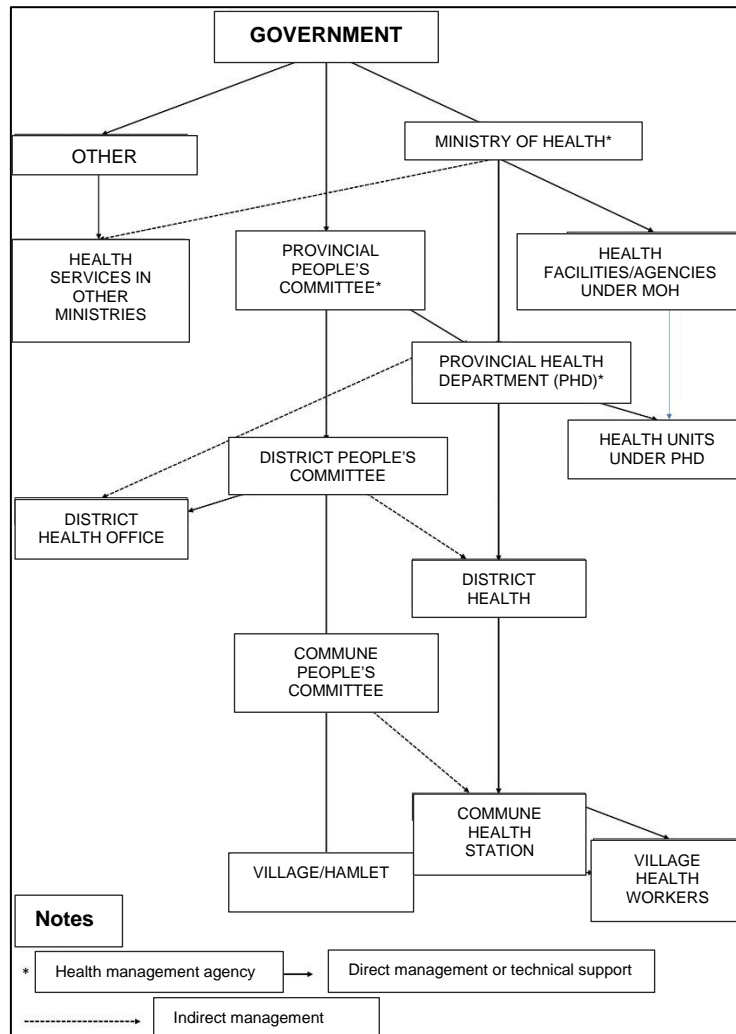
The data collected will also help describe current systems for procurement and management of medical equipment, supplies, and medical oxygen in HFs at different levels of the health system in Vietnam. Understanding these systems can help optimize procurement practices and, in the long run, result in more effective spending on and ordering of commodities (i.e., to the correct destination, on time, and in an efficient manner) and higher quality and/or volume of products purchased through channels with equal or lower unit costs. Understanding how to manage medical equipment and supplies in general and respiratory care equipment specifically can help mobilize or reallocate equipment among HFs effectively, especially in emergencies. This information can be used for decision-making and recommendations for future procurement and management of medical equipment and supplies.

Vietnam and its health system

Figure 1 illustrates the relationships between Vietnam's health networks and administrative organizations.

ⁱ The 12 countries participating in the project are as follows: Cambodia, Democratic Republic of the Congo, Ethiopia, India, Kenya, Laos, Liberia, Malawi, Nigeria, Senegal, Vietnam, and Zambia.

Figure 1. Model of relationship between the health network and administrative organization.



Vietnam is located on the Indochinese peninsula in the Southeast Asia region, stretching along the Pacific Ocean. It borders China to the north, Laos and Cambodia to the west, and the East Sea to the east. According to census results, in 2020 the population of Vietnam was estimated at 97.58 million people. It has 63 provinces and centrally run cities and is divided into three main geographical regions: North, Central, and South.¹

Regarding organization of the health network in Vietnam, according to the state administrative organization, the Vietnamese health system is divided into central and local health care levels.² Central-level health care includes the MOH and central-level HFs under the direct management of the MOH (except for those HFs under the Ministry of National Defense and the Ministry of Public Security). Local-level health care includes health care at the provincial, municipal, and grassroots levels. For economic classification, HFs are divided into public and private sectors. For categorization according to field of operation, Vietnam's health system consists of six areas, in which the two main ones are curative care and preventive care.

Study objective

The objective of the study is to describe systems for procurement and management of medical equipment and supplies in general and for care and treatment of COVID-19 patients in particular, including medical oxygen.

Data collection methods

Data were collected through qualitative interviews with semi-structured qualitative interview questions.

Data sources were from full-time staff at relevant departments/administrations of the MOH, selected public HFs at all levels of the health system (central, provincial, and district), and private HFs (see Table 1). Selected public HFs at central and provincial levels are assigned by the MOH to care for and treat COVID-19 patients.

Collecting data from provincial health departments (PHDs) and different levels of hospitals helps to cross-validate the collected information and provides baseline insights into how procurement and management of medical supplies and equipment in HFs at all levels are conducted. A brief description of the interviewed agencies is presented in Table 2.

Interviews were conducted in person or by phone. In face-to-face interviews, a recording device was used with the interviewee's consent. The questionnaires were prepared in either Microsoft Word or Excel format and were sent in advance to the interviewees for them to fill out some content by themselves, as needed. The study team also conducted data clarification, either by phone or email or else face-to-face.

The CO/MOH is the agency assuming primary responsibility for implementation and management of this study, with financial and technical support from PATH, through a cooperative agreement to implement the signed project.ⁱⁱ

Table 1. Number of interviewees, by selected agencies.

Unit type	Number of agencies	Number of interviewees at each unit	Total number of interviewees
Ministry of Health departments			
Medical Equipment and Construction	1	1	1
Planning and Finance	1	1	1
Medical Services Administration	1	1	1
Cabinet Office	1	1	1
Hospitals and provincial health departments			
Central-/national-level hospitals	2	1	2
Provincial health departments	2	1	2
Provincial general hospitals	2	1	2
District general hospitals or district health centers	2	1	2
Private hospitals	1	1	1
Total	13		13

ⁱⁱ Cooperative Agreement No.: GAT.583614-01706794-SUB.

Table 2. Summary of functions of the interviewed agencies.

Agency classification	Function
Ministry of Health (MOH) departments	
Medical Equipment and Construction	Responsible for the state management of medical equipment, specialized medical equipment and machines, and management of investments in health facility construction in the country.
Planning and Finance	Responsible for the state management of health-related strategies and policies; health-sector planning and development; management of financing, accounting, fees, cost, and payment methods related to health services; investment in health-sector development, public-private partnership, and health-targeted programs and grants; management of public goods in the health sector; business management; etc.
Cabinet Office	Responsible for coordinating departments and agencies under the MOH to ensure they follow their work plans, travel plans, and regulations; managing the MOH's facilities, goods, operations, and budget; and assuring the functioning of the MOH and internal administration following governmental regulations.
Medical Services Administration	Responsible for state management and law enforcement related to medical examination, treatment, and rehabilitation; medical and psychiatric forensic assessment; and development and strengthening of medical services.
Hospitals and provincial health departments (PHDs)	
Central-/national-level referral hospitals (1 general hospital in the South and 1 specialized hospital for tropical diseases in the North)	Responsible for providing medical services as the highest referral hospital level of the country, under the direct management of the MOH in terms of organization, financing, and service quality.
PHDs	Responsible for the state management of health-related issues within each respective province, in compliance with the state law. The PHDs are under the governance of the Provincial People's Committees in terms of organization, staffing, and operation and under the direction and inspection of the MOH in terms of health professional expertise.
Provincial general hospitals (1 in the South and 1 in the North)	Responsible for providing medical services as top referral hospitals in respective provinces, under the governance of the PHDs.
District general hospitals (1 in the South and 1 in the North, in the same provinces as the 2 provincial hospitals)	Responsible for providing medical services within respective districts, under the governance of the PHDs.
1 private hospital (conveniently selected, in the North)	Responsible for providing medical services. Technically, a private hospital operation must comply with the Law of Medical Examination and Treatment. Operation of a private hospital is supervised by the respective PHD.

Findings

Data collection overview

Interviews for the data collection started in March 2021. However, due to the impacts of the COVID-19 waves in Vietnam, especially the fourth wave starting in late April 2021, the collection and finalization of data could not be completed until the end of August.

The study team was able to conduct the scheduled face-to-face interviews. Regarding the MOH, the interviewees included specialists from the Departments of Medical Equipment and Construction, Planning and Finance, and Medical Services Administration. Two central hospitals participated in the study: Cho Ray Hospital in Ho Chi Minh City in the South and the National Hospital for Tropical Diseases in the North. The two provinces/municipalities selected for the study were Ho Chi Minh City in the South and Quang Ninh in the North, for each of which the study team conducted interviews with full-time staff of the respective PHD, one provincial hospital, and one district hospital. Thu Cuc, a private hospital in Ha Noi (in the North) was also interviewed.

The findings from these interviews are described below, broken down into the documentation system related to procurement, bidding, and management of medical equipment and supplies in Vietnam and the procurement and bidding system for such equipment and supplies.

Documentation system related to procurement, bidding, and management of medical equipment and supplies in Vietnam

Table 3 summarizes the various documents used in Vietnam for procuring and managing medical supplies.

Table 3. List of documents related to procurement, bidding, and management of medical equipment and supplies in Vietnam.

Type of document / issuance agency	No. / issuance date (month/day/year)	Short description	Effective date (month/day/year)	Note
Law by Assembly	43/2013/QH13 / 11/26/13	Bidding law, which provides for state management on bidding, responsibilities of concerned parties, and activities of bidding. This law is applicable for all kinds of bidding, including medical equipment bidding.	07/01/14	
Government decree	63/2014/NĐ-CP / 06/26/14	Detailing of some articles of the bidding law related to contractor selection.	08/15/14	
Government decree	36/2016/NĐ-CP / 05/15/16	Medical equipment management.	07/01/16	Partially expired
Government decree	151/2017/NĐ-CP / 12/26/17	Detailing of some articles of the law of management, use of public property.	12/26/17	
Government decree	169/2018/NĐ-CP / 12/31/18	Revision of / supplement to some articles of Decree No. 36/2016/NĐ-CP.	12/31/18	
Government decree	03/2020/NĐ-CP / 01/01/20	Revision of / supplement to Article 68 of Decree No. 169/2018/NĐ-CP.	01/01/20	
Decision of the Prime Minister	17/2019/QĐ-TTg / 04/08/2019	Allowance of some procurement packages that help continue agencies' routine activities to be procured following the method stated in Article 26 of the bidding law, which is the contractor selection in exceptional circumstances.	05/22/19	
Decision of the Minister of Health	437/QĐ-BYT / 02/20/02	Issuance of the list of medical equipment for provincial and district general hospitals, inter-district clinics, commune health stations, and hamlet health bags.	03/07/02	
Decision of the Minister of Health	2271/2002/QĐ-BYT / 06/17/02	Issuance of the standard design for health facilities at grassroots level – health-sector standard.	06/17/02	
Decision of the Minister of Health	16/2005/QĐ-BYT / 06/30/05	Issuance of seven health-sector standards on medical equipment.	07/15/05	
Decision of the Minister of Health	36/2006/QĐ-BYT / 11/14/06	Issuance of regulations on clinical trial of medical equipment.	12/28/06	
Circular of the Minister of Health	18/2013/TT-BYT / 07/01/13	Regulations on location, design, and conditions regarding infrastructure, technical aspects, and equipment of health facilities dedicated to treating infectious diseases.	08/15/13	

Type of document / issuance agency	No. / issuance date (month/day/year)	Short description	Effective date (month/day/year)	Note
Circular of the Minister of Health	49/2014/TT-BYT / 12/22/14	Issuance of the list of essential medical equipment for provincial medical forensic centers of provinces/cities directly managed by the government.	02/27/15	
Circular of the Ministry of Planning and Investment	05/2015/TT-BKHĐT / 06/16/15	Regulations on developing bidding documents for goods.	08/01/15	
Circular of the Minister of Health	30/2015/TT-BYT / 10/12/15	Regulations on the importation of medical equipment.	11/30/15	Partially expired
Circular of the Minister of Health	53/2015/TT-BYT / 12/28/15	Regulations on facilities, equipment, and means of assessment for public judicial assessment organizations in forensic medicine and forensic psychiatry.	03/01/16	
Circular of Ministry of Finance	58/2016/TT-BTC / 03/29/16	Regulations on bidding to purchase assets to maintain regular operations.	05/16/16	
Circular of the Minister of Health	39/2016/TT-BYT / 10/28/16	Detailed regulations on the classification of medical equipment.	12/15/16	
Circular of the Minister of Health	27/2017/TT-BYT / 06/28/17	Regulations on the management and use of ambulances.	09/15/17	
Circular of the Minister of Health	46/2017/TT-BYT / 12/15/17	Detailed regulations on implementation of a number of articles of Decree No. 36/2016/ND-CP on management of medical equipment.	02/01/18	
Circular of the Minister of Health	14/2018/TT-BYT / 05/15/18	Promulgating of the list of medical equipment with goods codes identified according to the list of exported and imported goods from and into Vietnam.	07/01/18	
Official Letter of the Ministry of Health's Department of Medical Equipment and Construction	5888/BYT-TB-CT / 10/29/20	Guidelines on the implementation of bidding for medical equipment according to Circular No. 14/2020/TT-BYT	10/29/20	
Circular of the Minister of Health	08/2019/TT-BYT / 05/31/19	Guidelines on standards and norms for using specialized machinery and equipment in the medical field promulgated by the Minister of Health.	08/01/19	
Circular of the Minister of Health	14/2020/TT-BYT / 07/10/20	Regulations on some content in bidding for medical equipment at public health facilities.	09/01/20	
Circular of the Minister of Health	28/2020/TT-BYT / 12/31/20	Regulations on the list of minimum equipment in commune health stations.	03/01/21	
Circular of the Minister of Health	33/2020/TT-BYT / 12/31/20	Regulations on the list of medical equipment subject to safety and technical inspection.	03/01/21	
Circular of the Minister of Health	13/2021/TT-BYT / 09/16/21	Regulations on the issuance of circulation numbers and importation of medical equipment for the prevention and control of COVID-19.	09/16/21	

Procurement and bidding system for medical equipment, supplies and medical oxygen

Procurement and bidding system in routine operation at public HFs

Vietnam has comprehensive legal and guideline documents related to the procurement and management of medical equipment and supplies for regular operations, as well as for epidemic prevention and control in emergency circumstances. These regulations apply to public HFs and agencies.

Agencies responsible for procuring for HFs

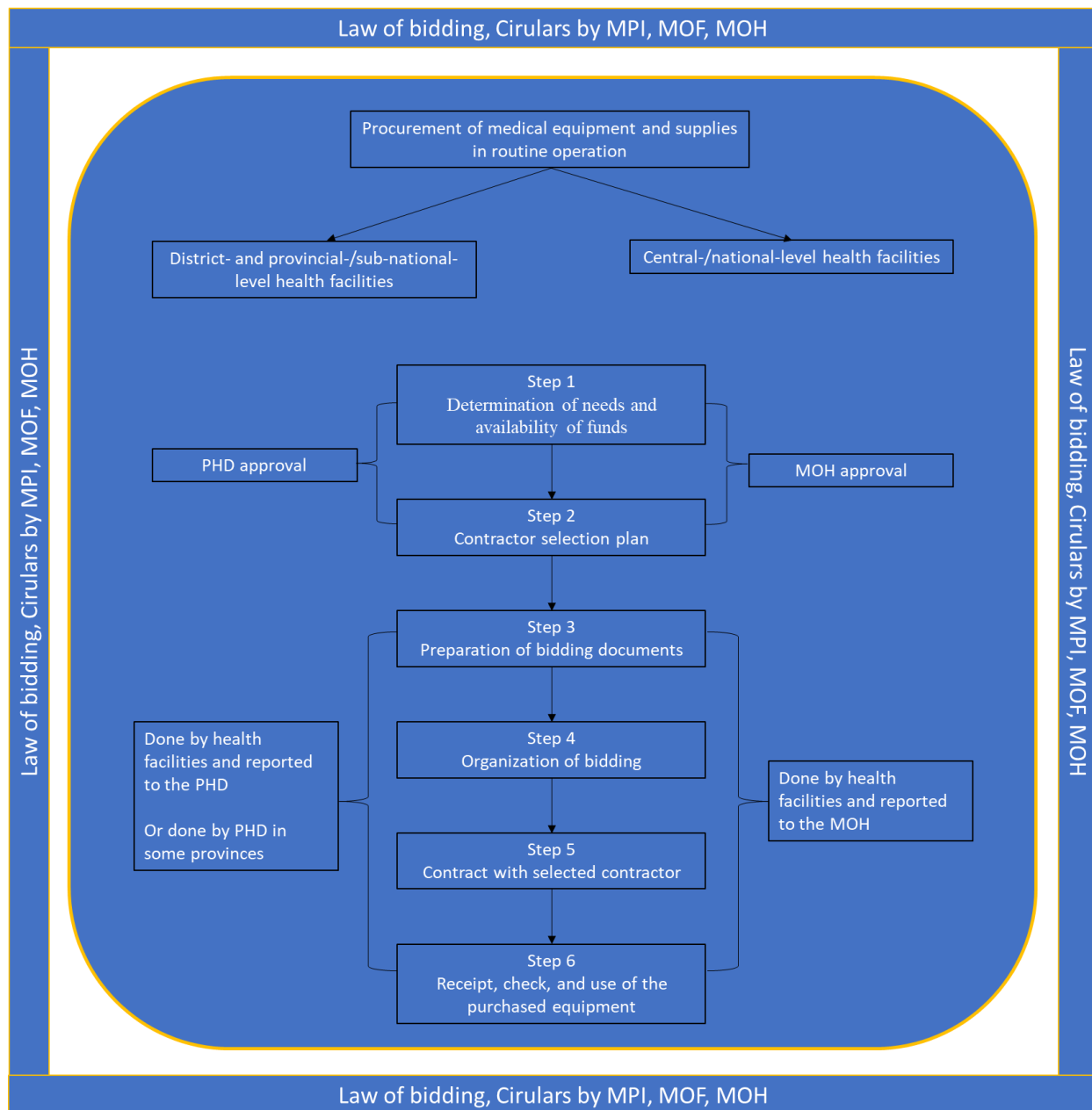
Vietnam does not conduct centralized procurement at the MOH for all HFs throughout the country. As a state management agency, it is not directly involved in the procurement of medical equipment and supplies. Most HFs, whether at the central or local level, carry out their own procurement, in compliance with regulations. However, in some provinces, procurement is undertaken in a centralized manner by either the Provincial People's Committee (PPC) or PHD.

For provinces where centralized procurement is carried out by the PHD, the Department of Planning and Finance acts as the focal point, coordinating with functional divisions and related agencies to organize the procurement of equipment and supplies.

For HFs that directly carry out the procurement, the Finance – Accounting Department is the focal point, coordinating with the Department for Medical Equipment and Supplies—specifically, in organizing the contract signing with the bid-winning agencies, performing the acceptance test, and conducting the payment of expenses according to current documents issued by the government. It also coordinates with related clinical/functional departments and offices in developing estimates and bidding documents and submitting them to leaders of hospitals and the MOH for approval; examining and drafting documents and contracts for the hospital director to sign with the bid-winning agencies after they have been approved by the MOH; distributing and dispensing medical equipment and instruments to agencies in the hospitals according to the approved plan and patients' use requests; and organizing the receipt of goods for, supervising the installation of, and guiding the use of the purchased equipment.

Figure 2 provides a visual chart for the process of procuring medical equipment and supplies in Vietnam.

Figure 2. Procurement of medical equipment and supplies in routine operation in Vietnam.



Abbreviations: MOF, Ministry of Finance; MOH, Ministry of Health, MPI, Ministry of Planning and Investment; PHD, provincial health department.

Role and coordination of regulatory agencies in procurement activities

In terms of management, the MOH assigned the Department of Planning and Finance to develop policies and guiding documents on bidding and procurement in general, while the Department of Medical Equipment and Construction is developing policies on the management of medical equipment and supplies specifically.

For agencies directly under the MOH (non-business agencies), the agencies make proposals for annual procurement plans and submit them to the MOH for approval and then summarize and submit approved

proposals to the Ministry of Finance (MOF) for budget approval. After the budget is allocated, the agencies actively carry out the procurement in accordance with regulations. The MOH, which is represented by the Department of Planning and Finance, summarizes, reviews, and submits to MOH leadership for approval the contractor selection plan for the affiliated agencies to carry out the procurement.

For HFs affiliated with the PHD, the facilities, based on their assigned professional activities and local disease patterns, propose their procurement needs to the PHD. The PHD then summarizes those needs and submits them to the PPC for approval and provides funding for procurement. If it is necessary, the PPC may consult the MOH.

Procurement plan/strategy

At the MOH level, every year agencies affiliated with the MOH will propose their needs for procurement of medical equipment and supplies based on disease patterns and medical examination and treatment needs. The MOH (represented by the Department of Planning and Finance) will summarize and submit such proposals to MOH leadership for approval and then to the MOF for consideration, budget balancing, and funding allocation. On that basis, the MOH assigns estimates for the agencies to conduct procurement of medical equipment and supplies according to regulations. To determine the amount of medical equipment and supplies to be purchased, the agencies affiliated with the MOH refer to the demand and amount of existing equipment to propose additional purchases.

At the provincial level, every year around May or June to prepare for the following year, HFs make a budget plan that includes the procurement of medical equipment and supplies, based on disease patterns and the demand for medical examination and treatment. The PHD summarizes and submits such plans to the PPC for approval and allocation of procurement funding.

Types of procurement

Procurement forms, regardless of the level, must comply with the Law on Bidding and Article 3 of Circular No. 58/2016/TT-BTC of the MOF, dated March 29, 2016, which details the use of state capital for procurement to maintain regular operations of state agencies, agencies of the people's armed forces, public non-business agencies, political organizations, sociopolitical organizations, sociopolitical-professional organizations, social organizations, and socio-professional organizations. Forms of contractor selection include open bidding, limited bidding, direct appointment, direct procurement, and competitive quotation, as well as self-execution and selection of contractors in special cases (Articles 20 through 26 in the Law on Bidding).

The most common forms of procurement are open bidding and shortened competitive quotations. The form of open bidding for one phase with one dossier package is applied to bidding packages with a cost estimate of less than 10 billion Vietnamese Dong (VND), and one phase with two dossier bags is applied to bidding packages with a cost estimate of over 10 billion VND. Procurement in the form of a shortened competitive quotation is applied when the bidding package has a cost estimate of less than 500 million VND. For bidding packages with a cost estimate from 50 million VND to under 100 million VND, the form specified in Circular No. 58/2016/TT-BTC applies.

Based on the annual budget expenditure estimate, the additional cost estimate for the year is assigned by the competent authority. The Decision on asset procurement issued by the competent authority is specified in Clause 1, Article 5 of the above Circular. The head/chief of the agency/unit shall apply the

specified form of contractor selection to organize the procurement of goods and services, in line with regulations.

Regarding bidding packages for the procurement of assets, goods, and services that are eligible for non-bidding forms of procurement, if the agency or unit considers it necessary to organize bidding with the aim of ensuring the effective management and use of the state budget, open bidding must be conducted according to regulations, and results of procurement of assets, goods, and services must be reported to the competent authority.

The procurement of supplies, equipment, and facilities for the prevention and control of COVID-19 is an urgent task eligible for the direct appointment of a contractor, as stipulated in Point a, Clause 1, Article 22 of the Law on Bidding.

Implementation steps

Agencies involved in the procurement of medical equipment and supplies need to follow procedures in the Law on Bidding and guiding documents listed above. A summary of the steps is as follows:

- Step 1. Determining needs: professional requirements, user needs, and funding sources.
- Step 2. Conducting the contractor selection plan, including the following steps: determining the name of the bidding package, bidding package price, capital source, form of contractor selection, contractor selection method, starting time of the contractor selection organization, type of contract, duration of the contract, and grouping.
- Step 3. Developing bidding documents, including the following steps: grouping; authorization; development of technical requirements, requirements for contractors and products, and requirements for contractors' handing over of results; installation; training; instruction of use; and support for domestic production.
- Step 4. Organizing the bidding.
- Step 5. Signing the contract.
- Step 6. Receiving, checking, and putting the purchased equipment and/or supplies to use.

List of medical equipment and supplies used by HFs to select products

When developing a list of items to be purchased, HFs must refer to the list issued by the MOH in Circular No. 08/2019/TT-BYT dated May 31, 2019.ⁱⁱⁱ This Circular provides guidance on standards and norms for using specialized machinery and equipment in the medical field. Particularly, Article 6 guides the formulation, approval, and adjustment of norms for using specialized medical equipment. It also stipulates the list of existing specialized medical equipment, together with specific quantities of medical equipment in each category. The list of products is listed in Annex 1 of this Circular.

Determining the price of goods for procurement

When estimating costs for procurement, HFs must refer to the winning bid price within the previous 12 months, which is published on the portal of the competent agency that had approved the contractor selection plan and of the MOH. The price reference and publicity of procurement needs must comply with

ⁱⁱⁱ Circular No 08/2019/TT-BYT: <http://vbpl.vn/boyte/Pages/vbpg-toanvan.aspx?ItemID=137237>.

provisions of the MOH's Circular No. 14/2020/TT-BYT^{iv}, dated July 10, 2020, on some content in the bidding for medical equipment at public HFs, and Official Letter No. 5888/BYT-TB-CT,^v dated October 29, 2020, which guides the implementation of bidding for medical equipment according to Circular No. 14/2020/TT-BYT.^{vi}

Typically, the price of goods after the bidding result announcement is the price that HFs will pay to the winning bidder. The discount, if buying in bulk, depends on negotiation results with the supplier.

Funding sources

In regular operations, procurement must comply with the Law on State Budget, Law on Bidding, and documents guiding the implementation of these laws, as follows:

- At the MOH: Based on HFs' autonomy, the MOH will allocate a partial budget for the procurement. HFs under the MOH's management will carry out the procurement using the following funding sources: the budget supported by the MOH; surplus budget from the unit's career development fund; funding from medical examinations and treatment, with social health insurance reimbursement; grant and financial support; official development assistance capital; etc.
- At local levels: Procurement is carried out according to the local decentralization system and annual budget allocation. Centralized shopping may be organized by the PPC/PHD, or HFs may procure with approval from and authorization of the PPC/PHD. Funding for the procurement comes from many sources, including the state budget allocation for recurrent expenditures; funds for targeted programs and projects; revenue from medical services; other lawful sources of revenue; funds for career development activities; and welfare funds.

Procurement for epidemic prevention and control activities in emergency circumstances at public HFs

Overview

In cases of emergency (e.g., for COVID-19 response), the procurement must be carried out in accordance with provisions expressed in Point a, Clause 1, Article 22 of the Law on Bidding. According to the provisions, HFs and agencies responsible for the procurement may directly appoint contractors. Accordingly, the MOH will purchase a certain quantity of medical equipment and supplies to support the locality in case it is beyond the local capacity to respond. At the local level, the PPC, PHD, or HFs themselves must balance the budget needed to organize procurement based on demand and the epidemic response situation in the locality. In emergency situations, equipment and supplies are either supported by the MOH or provided by the PHD. Very few HFs organize the procurement themselves because there is no readily available source of funding.

Procurement and bidding in the context of COVID-19 at public HFs

The procurement of medical equipment and supplies for the care and treatment of COVID-19 patients is organized by the MOH, localities, and agencies directly under the MOH through the direct appointment of contractors, as specified in Point a, Clause 1, Article 22 of the Law on Bidding. Procurement of medical

^{iv} Circular No. 14/2020/TT-BYT: https://dmec.moh.gov.vn/documents/10182/10030594/14_2020_TT-BYT_10072020.pdf/976a28e5-84bd-4a50-bfd5-69744ae59c0c

^v Official letter No. 5888/BYT-TB-CT: <https://dmec.moh.gov.vn/documents/10182/10030597/cvb-2020-5888-1.pdf/8288f409-903f-453a-ad56-73bed3db2b99>.

^{vi} Two MOH portals that health facilities can access to reference prices are <https://congkhaiyte.moh.gov.vn> and <https://congkhaiqiadmec.moh.gov.vn>.

equipment and supplies in emergencies should be completed as follows (applicable for COVID-19 pandemic prevention and control):

- **Prior to issuance of the National Assembly’s Resolution No. 79/NQ-CP,^{vii} dated July 22, 2021:**
 - Procurement was done following Decision No. 482/QĐ-TTg of the Prime Minister,^{viii} dated March 29, 2021, on principles of targeted support from the central to local budgets in prevention and control of the COVID-19 pandemic; Circular No. 58/2016/TT-BTC of the MOF^{ix}, dated March 29, 2016, which stipulates regulations on bidding to purchase assets to maintain regular operations; and Official Letter No. 4841/BTC-HCSN of the MOF,^x dated May 12, 2021, on funding sources and procurement mechanisms in the COVID-19 pandemic context. In urgent cases, localities may decide according to their capacity to directly appoint the contractor.
 - Regarding the procurement mechanism for vehicles, equipment, chemicals, supplies, and biological products for the prevention and control of COVID-19, the MOF proposed that the chairpersons of PPCs and centrally run cities direct and organize the implementation and assume full responsibility for the procurement in accordance with bidding law provisions and other relevant laws.
 - Regarding the form of contractor selection, based on the Prime Minister’s Decision No. 447/QĐ-TTg,^{xi} dated April 1, 2020, on the announcement of COVID-19 pandemic and pandemic situation development, direct agencies, and agencies under the state management are to organize bidding according to forms of contractor selection specified in Articles 20 through 26 of the Law on Bidding.
 - Regarding the bid package price included in the contractor selection plan, Official Letter No. 4841/BTC-HCSN of the MOF clearly stated that the bid package price shall be correctly and fully calculated, covering all costs to implement the bidding package, including contingency costs, fees, charges, and taxes.
- **After issuance of Resolution No. 79/NQ-CP:**
 - The procurement of medical equipment and supplies during the pandemic shall comply with the National Assembly’s Law on Bidding, Resolution No. 79/NQ-CP (and guiding documents), dated July 22, 2021, on the procurement of drugs, chemicals, supplies, equipment, and facilities to serve COVID-19 pandemic prevention and control; and the government’s Resolution No. 86/NQ-CP,^{xii} dated August 6, 2021, on urgent measures to prevent and control the COVID-19 pandemic and to implement the 15th National Assembly’s Resolution No. 30/2021/QH15,^{xiii} dated July 28, 2021, to respond promptly in COVID-19 pandemic prevention and control.
 - To support COVID-19 prevention and control, the MOH assigns budget estimates for the procurement in relation to COVID-19 prevention and control for agencies under and affiliated with the MOH to fulfill their responsibilities and actively use the assigned budget and other lawful funding sources to conduct COVID-19 prevention and control activities. The MOH has issued Decision No. 3680/QĐ-BYT, dated August 2, 2021, to designate an additional estimate of the 2021

^{vii} Resolution No. 79/NQ-CP dated July 22, 2021: <https://datafiles.chinhphu.vn/cpp/files/vbpq/2021/07/79.signed.pdf>.

^{viii} Decision No. 482/QĐ-TTg, dated March 29, 2021: <https://datafiles.chinhphu.vn/cpp/files/vbpq/2021/03/482.signed.pdf>.

^{ix} Circular No. 58/2016/TT-BTC, dated March 29, 2016: <https://datafiles.chinhphu.vn/cpp/files/vbpq/2016/05/58.signed.pdf>.

^x Official Letter No. 4841/BTC-HCSN:

http://www2.chinhphu.vn/portal/page/portal/chinhphu/hethongvanban?class_id=2&mode=detail&org_group_id=0&org_id=0&type_group_id=0&category_id=0&type_id=0&filters=&document_id=203229.

^{xi} Decision No. 447/QĐ-TTg: https://datafiles.chinhphu.vn/cpp/files/vbpq/2020/04/447.signed_01.pdf.

^{xii} Resolution No. 86/NQ-CP: <https://datafiles.chinhphu.vn/cpp/files/vbpq/2021/08/86.signed.pdf>.

^{xiii} Resolution No. 30/2021/QH15: <https://datafiles.chinhphu.vn/cpp/files/vbpq/2021/08/30.signed.pdf>.

state budget for COVID-19 prevention and control. Heads of agencies under and affiliated with the MOH are delegated to make procurement decisions, approve procurement lists and estimates, decide on the contractor selection plan, and organize the procurement. Agencies under and affiliated with the MOH are tasked with reviewing the existing quantity, with the possibility to mobilize support from other HFs to decide the purchase list, quantity, and categories.

Forms of contractor selection are as follows:

- **Direct procurement:** Possibly applicable using results of contractor selection from previous bidding packages of **other agencies under the MOH or other ministries, branches, or localities** if the previous bidding packages satisfy provisions of Clause 1 and Clause 2, Article 24, of the Law on Bidding.
- **Online open bidding:** According to Resolution No. 79/NQ-CP, the minimum time to prepare bids is ten days (*including bidding packages valued at over 10 billion VND, which is prescribed for at least 20 days*).
- **Direct appointment:** In pandemic emergencies, the direct appointment of the contractor shall be applied according to regulations. Factors to be considered include the reputation of the equipment and product supplier, the list of items determined by the professional council to be suitable for pandemic prevention and control, the price that the MOH deems appropriate, and the form of procurement.

The MOH's decisions regarding the category and quantity to buy for each unit are based on the number of people infected with COVID-19 and the equipment specified in the list of demands for equipment, supplies, and essential drugs for treatment areas of COVID-19 patients, in accordance with Decision 2626/QĐ-BYT,^{xiv} dated May 28, 2021.

Procurement policy related to medical oxygen

Medical oxygen is considered a common medical consumable, so procurement of medical oxygen is conducted according to the Law on Bidding and guiding documents. The unit that wins the bid will be the medical oxygen supplier.

Procurement portal

Currently, the MOH does not have a procurement portal for all medical equipment and supplies. The MOH is developing a portal to procure medical equipment for COVID-19 prevention and control. Equipment suppliers must publicize the list of items and provide information on prices and supply capabilities for procurement agencies to make purchase decisions.

The MOH publicizes contractor selection results and prices on the online public service system for medical equipment.^{xv} The portal provides medical equipment prices and synthesizes information on the equipment and supplies of the bid-winning agencies as a reference for HFs to organize procurement by themselves, according to regulations.

Procurement and bidding at private HFs

Private HFs are entirely autonomous in finance, subject only to the professional management of the MOH or PHD where HFs register to practice. Therefore, they do not have to comply with legal procurement and

^{xiv} Decision No. 2626/QĐ-BYT: <https://thuvienphapluat.vn/van-ban/The-thao-Y-te/Quyiet-dinh-2626-QĐ-BYT-2021-nhu-cau-trang-thiet-bi-thiet-yeu-cua-Khu-vuc-dieu-tri-COVID-19-475791.aspx>.

^{xv} MOH public introduction of medical equipment page: <https://congkhaigiadmec.moh.gov.vn/>.

bidding regulations in procuring medical equipment and supplies. Private HFs have an annual procurement plan and internal procurement regulations. In regular operations or urgent situations for disease prevention and control, the procurement by private HFs depends on the need for medical examinations and treatment and on financial capacity. Typically, the procurement steps in an HF with hospital beds are as follows: develop a procurement plan, and once approved, the department/office responsible for procurement negotiates the price with the supplier without applying forms of procurement or the sequence of steps specified in legal documents on procurement and bidding for public HFs.

However, during the procurement process, private HFs also survey price references on the MOH portal of publicized prices to negotiate prices with suppliers. In case a private HF is part of the system participating in care and treatment of patients covered by health insurance, the health insurance fund will only pay for drugs and medical supplies for that facility according to the bid-winning price of drugs and medical supplies for public HFs at the provincial level in the same geographical area.

Regarding the procurement of medical oxygen, there is currently no state regulation applying to private health care facilities. The selection of a medical oxygen supplier depends on the HF's need, financial capacity, and ability to negotiate the price.

Medical equipment, supplies, and medical oxygen management system

Equipment and supplies management system

Currently, Vietnam does not have a software system or portal for HF medical equipment, supplies, and medical oxygen management (hereinafter in this section referred to as simply “equipment and supplies”), which should be unified from the central to the local levels.

At present, only the MOH (the central level) has software to manage assets of affiliated agencies. The affiliated HFs update information for the MOH every year through this software.

Provincially, the PHDs do not have a software system or a portal for equipment and supply management for the HFs under PHD governance.

For HFs at all levels, equipment and supply management is conducted by recording data in books and in management software. Use of software depends on individual HFs: some hire vendors to develop specialized software, while others use Microsoft software, such as Excel. Monitoring of equipment and supplies in clinical departments depends on the HF level. Those at central and provincial levels are usually updated daily via computers with a network connection between clinical, supplies, and pharmacy departments. In some HFs at the provincial level and in HFs at the district level especially, the supplies department and pharmacy often update their equipment and supply usage based on handwritten reports/books from clinical departments that they manually enter into Excel or other Microsoft software.

Regardless of the level, the equipment and supply management at HFs is subject to (1) the government's Decree No. 36/2016/ND-CP,^{xvi} dated May 15, 2016, on management of medical equipment; and (2) the MOH's Circular No. 39/2016/TT-BYT,^{xvii} dated October 28, 2016, detailing the classification of medical equipment.

^{xvi} Decree No. 36/2016/ND-CP:

<https://dmecc.moh.gov.vn/documents/10182/10030594/Ngh%E1%BB%8B+%C4%91%E1%BB%8Bnh+36.2016.N%C4%90-CP+Qu%E1%BA%A3n+I%C3%BD+TTBYT.pdf/e6f528d0-46bc-4a21-b98f-926713a13b01>.

^{xvii} Circular No. 39/2016/TT-BYT: <https://dmecc.moh.gov.vn/documents/10182/10030594/Th%C3%B4ng+T%C6%B0+39.2016.TT-BYT+Ph%C3%A2n+l%E1%BA%A1+TTBYT.pdf/2fc0ef05-7361-4925-8a36-1657a844ab6d>.

Focal point for equipment and supply management

At the central level (the MOH), the Departments of Medical Equipment and Construction and of Planning and Finance are the focal point agencies, and they receive periodic reports from PHDs.

At the central and provincial levels, HFs' equipment and supplies are managed by departments of supplies, from receiving goods to monitoring usage and maintenance. However, at district HFs, equipment and machines are managed by departments of supplies, while supplies are managed by pharmacy departments.

Periodic report on the equipment and supply situation of HFs

HFs affiliated with the MOH report directly to the Department of Medical Equipment and Construction annually regarding their equipment and supply situation.

At the provincial level, affiliated HFs are responsible for submitting annual reports regarding equipment and supplies at their facilities as part of their financial statements to respective PHDs. The PHDs then collate the reports and send them to the MOH's Department of Planning and Finance, and Department of Medical Equipment and Construction.

Discussion

Procurement and bidding

Vietnam has a complete system of legal documents and guiding documents for equipment and supply procurement to maintain regular operations. The granting of autonomy in procurement to HFs, in accordance with the law, helps shorten the procurement process. In emergency circumstances for pandemic prevention and control, the Vietnamese government, as well as the MOH specifically, quickly issued regulations and guiding documents in response. However, most of the procurement is only planned and budgeted for regular operational needs, so when there is an emergency, HFs are often passive and dependent on the support of the PHD, MOH, and even charity organizations, although there are legal documents in place to fully support procurement. Therefore, the government, MOH, and PPCs need to have a reserve fund ready for equipment and supply procurement for pandemic prevention and control emergencies. The budget estimate should be based on a comprehensive epidemic prevention plan with different severity levels of the pandemic.

Currently, the health system has portals to support the procurement process by publicizing prices of medical services, including equipment and supply prices, and publishing bid results and prices of the bid-winning contractor. However, adequate information on equipment and supply categories needs to be provided. The MOH needs to coordinate with relevant ministries and sectors to establish a mechanism to compel equipment and supply trading companies to provide a list of goods and prices, making it easier to reference configurations and prices, promoting transparency in procurement and bidding.

Recently in mass media, there have been reports of fraud cases in equipment and supply procurement, causing significant financial losses to the state and possibly increasing medical expenses incurred by the patient.^{xviii} Perhaps, the health system's management agencies need to review each stage in the procurement process to apply stricter monitoring and management measures to avoid fraudulence cases.^{xix}

Management of medical equipment and supplies and medical oxygen

Given regular operation conditions, the equipment and supply management at HFs is acceptable. However, to manage it more effectively, the health system needs to have a unified nationwide portal or software system to monitor in real time the situation of equipment, supplies, and medical oxygen at all HFs. This will help health authorities quickly grasp the situation regarding the categories and quantities of equipment, supplies, or medical oxygen at the national and provincial levels, and even at the individual HF level. With such a system, in an emergency where it is necessary to mobilize or supplement medical equipment/supplies and oxygen, the health management agency can quickly and efficiently make informed decisions.

^{xviii} Examples of media reports of fraud: <https://cand.com.vn/Kinh-te/Phat-hien-nhieu-sai-pham-trong-viec-mua-sam-thiet-bi-y-te-o-benh-vien-i60646/>; https://thanhvien.vn/vu-thoi-gia-thiet-bi-tai-benh-vien-tim-ha-noi-gay-that-thoat-40-ti-dong-post1391967.html?fbclid=IwAR12QOr_N7dPQ3vadE39LkXw1c4CxVTceq7-chizhc5zbESED6oWCRlWmTY; and <https://tuoitre.vn/khoi-to-giam-doc-benh-vien-bach-mai-nguyen-quang-tuan-20211021122905362.htm>.

^{xix} See for example: https://thanhvien.vn/thanh-tra-chinh-phu-dau-thau-mua-sam-thiet-bi-y-te-chi-mang-tinh-hinh-thuc-post1043880.html?io_utm_social=fanpage&fbclid=IwAR0fQ6aXJEij7iTRa2Le5hat28sv-L_7e9UoQ0PHA2dFr8E7k01NC4Jun5U; <https://www.baogiaothong.vn/tuong-to-an-xo-danh-manh-vao-thu-doan-lap-san-sau-trong-dau-thau-d530657.html?fbclid=IwAR2R9YGC-VLl4Sam1xmUttUV-OqTBErnAG5K03uY4rsKVR9efPcvQuiDh6w>; and <https://phaply.net.vn/tu-cac-vu-an-thoi-gia-trong-mua-sam-thiet-bi-y-te-kien-nghi-bit-cac-lo-hong-lon-trong-luat-gia-va-luat-dau-thau-a239352.html>.

Recommendations

Procurement and bidding

The project team has the following recommendations based on the results of the COVID-19 Respiratory Care Response Coordination project in Vietnam:

- The government of Vietnam in general and the MOH specifically should have a mechanism to compel all companies trading and distributing medical equipment and supplies operating in Vietnam to list and update product prices on the MOH's public portal.^{xx}
- The MOH and PHDs should have a plan to monitor each step in the procurement and bidding processes of their affiliated agencies. Controlling commodity prices is especially important, particularly in emergency circumstances when the direct appointment of a contractor is applied.
- The MOH and PHDs should have a budget contingency plan to support their affiliated agencies in the procurement of equipment and supplies in case of a public health emergency circumstances.

Management of medical equipment and supplies and medical oxygen

The project team recommends that the MOH create an online real-time equipment management system that can track how much medical equipment and medical oxygen is in all HFs with patient beds. The system should be able to continuously track data during routine times and during a pandemic, which would help health authorities quickly mobilize and reallocate resources, make decisions regarding procurement, and monitor the equipment standards for timely and appropriate maintenance. A review of existing systems within Vietnam and other countries should be conducted first. Then, a pilot of the system(s) should be completed and, if successful, scaled up nationwide. The system should be able to not only track data on medical oxygen supply and use at the facility level but also forecast demand at the HF, provincial, and national levels to help coordination between manufacturers and distributors.

^{xx} MOH portal: <https://congkhaigiadmec.moh.gov.vn>.

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