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HUMAN RESOURCES FOR HEALTH RETENTION STRATEGY IN TIMOR-LESTE

Local Health System Sustainability Project

Task Order 1, USAID Integrated Health Systems IDIQ

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Local Health System Sustainability Project

The Local Health System Sustainability Project (LHSS) under the USAID Integrated Health Systems IDIQ helps low- and middle-income countries transition to sustainable, self-financed health systems as a means to support access to universal health coverage. The project works with partner countries and local stakeholders to reduce financial barriers to care and treatment, ensure equitable access to essential health services for all people, and improve the quality of health services. Led by Abt Associates, the five-year, $209 million project will build local capacity to sustain strong health system performance, supporting countries on their journey to self-reliance and prosperity.

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ACRONYMS

LHSS	Local Health System Sustainability Project
HRIS	Human Resource Information System
INS	Instituto Nacional de Saúde (National Institute of Health),
NDHR	National Directorate for Human Resources
NSPHRH	National Strategic Plan for Human Resources for Health
NHSSP II	National Health Sector Strategic Plan II 2020-2030
SISCa	Serviço Integrado de Saúde Comunitária (Integrated Community Health Services)
SDG	Sustainable Development Goals
TMIS	training management information system
USAID	United States Agency for International Development
UNTL	University of Timor Leste

1. BACKGROUND

The Government of Timor-Leste, through the Ministry of Health (MoH), and as ratified in its constitution, guarantees free universal health care coverage to all its citizens.[1] A productive, motivated, and well-trained workforce in Timor Leste is an essential component of providing high-quality, accessible health care to fulfill this right. The MoH, through its National Strategic Plan for Human Resources for Health (NSPHRH) 2020-2024, has identified effective planning and management of the health workforce as key areas that need to be addressed to realize the MoH's vision of providing universal health coverage in support of a "healthy East Timorese people in a healthy Timor-Leste."

MoH's National Health Sector Strategic Plan 2020-2030 (NHSSP II) also identifies insufficient policy guidance for motivation and retention as one of the HRH constraints that need to be addressed (MOH 2021). This retention strategy, along with the recruitment strategy, aims to support the MoH's stewardship and service provision roles to recruit and retain health workers in remote areas. The strategy focuses on remote areas because although data is unavailable, the health worker-to-population ratio in remote areas is assumed to be lower than the national average of 25 health workers per 10,000 people, which is already below the WHO's recommendation of 45 health workers per 10,000 people. Moreover, maternal, neonatal, and child health, and nutrition, are priority health areas that the country needs to address as outlined in the NHSSP II. Health outcomes for these indicators are poorer in rural and remote areas, further highlighting the crucial importance of recruiting and retaining health workers in rural and remote settings.

The primary audiences for this strategy are government officials responsible for the recruitment, retention, and deployment of health workers. This includes MoH officials at the national and municipal levels involved in human resources administration and the Civil Service Commission. The secondary audiences are other units within the MoH and beyond that support health worker production and rely on the availability of qualified and motivated health workers to deliver health services. These include the Cabinet of Quality Assurance for Health team, the Instituto Nacional de Saúde, the Human Capital Development Fund secretariat, and pre-service training providers such as the National University of Timor-Leste. The successful implementation of this strategy also requires the involvement of supportive ministries such as finance, education, and the Secretariat of State for Vocational Training Policy and Employment, who set policies and priorities that affect the training and employment of health workers; other donor agencies; and civil society partners involved in producing, continually training, motivating, and retaining the health workforce in Timor-Leste.

This document builds on the rural retention desk review conducted by USAID's Health System Sustainability Activity (the Activity). The desk review assessed WHO's recommendations (WHO 2010) on approaches to increase recruitment and retention of health workers in rural and remote areas considering the Timor-Leste context and the country's governing laws. The desk review also assessed the existing financial and non-financial incentives and the extent to which they are implemented, including an analysis of the barriers and enablers for effective implementation.

The current state of the health system does not afford access to high-quality care for all, especially for low-income and remote area residents. WHO data from 2017 shows that the skilled health workforce (doctors, nurses, and midwives) to population ratio is 25 per 10,000, which falls short of the global

1. Section 57 of the Constitution of the Democratic Republic of Timor-Leste states, "The State shall promote the establishment of a national health service that is universal and general. The national health service shall be free of charge in accordance with the possibilities of the State and in conformity with the law."

WHO recommendation of 44.5/10,000 (WHO 2018). Although data disaggregated by municipality and urban-rural distinction is not available, it can be assumed that the ratio for remote areas is much lower based on analysis conducted by the MoH that cites a shortage of skilled health workers in remote areas (source: NSHRH). Additionally, the aim of the MoH, under the universal health care law, is for all citizens to have access to health care within walking distance, with sparsely populated communities reached through mobile clinics and integrated community health services (SISCa), which includes volunteer community health workers, making the availability of skilled and lay health workers in remote areas essential to achieve health outcomes (Smitz et al. 2016).

The document is outlined as follows: Section II describes the scope and objective of the strategy; Section III outlines the existing and recommended financial and non-financial incentives to recruit and retain health workers in rural and remote areas; Section IV provides illustrative costs for each incentive along with the costing methodology and limitations of the costing data.

2. SCOPE AND OBJECTIVE OF THE STRATEGY

Scope

The scope of this strategy is to outline and assess existing financial and non-financial incentives and recommend new initiatives to help recruit and retain health workers to health facilities rural and remote areas. The strategy will cover doctors, nurses, and midwives as these are the cadres where sufficient information and data to inform policy recommendations can be obtained.

Objective

The strategy aims to outline the policy options and the cost implications for implementing a package of incentives to recruit and retain health workers in remote areas. Recognizing the challenges in access and quality to health services in rural and remote areas, the recommendations are developed with the goal of improving equitable and reliable access to quality services for rural and remote area residents, thereby supporting the MoH's goal of achieving NHSSP II and Sustainable Development Goals (SDG 3). Based on latest data available from UNICEF, Timor-Leste needs to accelerate progress to improve coverage of essential health services, where the index based on 2019 data measures 53 (out of 100) (UNICEF). Maternal neonatal and child health, and nutrition, are priority health areas that the country needs to support. Health outcomes for these indicators are poorer in rural and remote areas, further highlighting the crucial importance of recruiting and retaining health workers in rural and remote settings.

Understanding that there is no health care without health workers, the availability of qualified and motivated professionals is paramount to providing reliable, accessible, equitable, and quality services to all, especially the underserved population in hard-to-reach areas. As noted in the desk review, which includes the NSPHRH and NHSSP II, the underlying issues that make rural and remote areas unattractive are multi-faceted and span beyond the health sector. These include lack of adequate infrastructure and access to basic services such as sufficient water and sanitation, lack of schooling for children, employment for spouses, and desire to work in their place of origin or cities. However, issues that influence health workers' decisions and fall within the administrative purview of the MoH include lack of facility readiness (access to medical supplies and equipment), unclear pathways for career advancement, lack of supportive supervision, inconsistencies in the implementation of rural incentives, and lack of access to training and professional development.

Section III elaborates on these issues and recommends policy options to mitigate the challenges where applicable. Given the scope, this document will not address issues beyond the administrative influence and purview of the MoH. For example, given the complex and multi-year investments needed to address issues related to infrastructure, we will not propose specific solutions to this challenge.

3. RURAL RECRUITMENT AND RETENTION INITIATIVES

As a newly independent country that faced leadership transitions, civil unrest, and multiple natural disasters, institutional building has been a challenge in Timor-Leste. As with other ministries, until recently, the MoH did not have comprehensive managerial documents to guide its employees. One of these challenges is the lack of foundational documents and procedures for human resources management. Where policy and guidance documents exist, implementation has proven to be challenging for multiple reasons including limited financial and human resources, lack of political support, and changes in government priorities, and turnover of civil servant employees with periodic changes of government.

Opportunity to strengthen HR management support through policy development and implementation

With the support of USAID's Health System Sustainability Activity, the MoH is working to develop foundational documents to guide the management of the health workforce under the leadership of the National Directorate for Human Resources (NDHR). An example of this work is the development of a human resources management manual, which includes work instructions and policy guidelines for recruitment, performance assessment, job description development, transfer and mobility policy, and more. The Activity is currently implementing the job description development guidance by working with the MoH to co-develop standardized job descriptions for health workers at the primary health care level. The availability and implementation of ***established policies and procedures to manage health workers*** will address many concerns highlighted by health workers, including multiple root causes for rural health workplace attrition issues such as a lack of procedures to manage staff transfer and mobility as well as opportunities for career advancement.

This section outlines the rural recruitment and retention initiatives that the MoH currently has in place and additional initiatives recommended for consideration and incorporation into the existing package. The initiatives are organized into three categories, namely, education and continuing professional development, financial incentives, and management and social systems support.

4. EDUCATION AND CONTINUING PROFESSIONAL DEVELOPMENT

Government-sponsored scholarships for pre-service training

Timor-Leste has long implemented an initiative of recruiting and training health workers based on their place of origin. Post-independence, between 2004 and 2011, through the Cuba Medical Brigade program, doctors were selected for enrollment in medical school based on the recommendations of village

authorities. A strong preference was given to candidates of rural origin. Upon graduation, most of the doctors were placed in rural areas (Smitz et al. 2016). For nurses and midwives, admission to training programs at the University of Timor-Leste (UNTL) and other pre-service training institutions was and continues to be merit-based.

At this juncture, where Timor-Leste has made remarkable progress in health workforce production for primary health care service provision, the MoH's next frontier is to establish tertiary health care in the country, which necessitates the availability of specialist doctors. Although the need for specialist doctors at the tertiary level and general doctors at the primary health care centers in rural areas are different goals, making service in rural areas a mandatory prerequisite to be eligible to receive government-sponsored scholarships for specialization can help the MoH achieve both goals. There is an opportunity for the MoH to leverage this synchronicity by continuing to support existing and newly graduating general doctors through ***scholarships to pursue a specialization in priority medical practices*** with mandatory eligibility requirements that include service in remote areas. The Ministry of Education and Ministry of Health can coordinate to make six years of service in remote locations, in addition to performance factors, a pre-requisite for eligibility to receive the scholarship. This recommendation leans on findings from a discreet choice study conducted in Timor-Leste where doctors, especially single female doctors in urban areas, value opportunities for further training to pursue a specialization (Smitz et al. 2016). In addition to synthesizing the survey results, the study also conducted simulations to assess incentives that would increase doctors' interest to practice in remote areas and found that the opportunity of receiving additional education benefits to pursue specialization markedly increases the probability of their interest and willingness to serve in remote locations (Smitz et al. 2016). Additional research and key informant interviews also confirmed practicing doctors' interest to acquire advanced medical degrees for specialization (Smitz et al. 2016).

Although the MoH management at the central and municipal levels often sees the demand for specialist training and continuing professional development as a threat to Timor-Leste's rural retention of doctors (Asante 2014), the long-term benefit of having more specialists will outweigh the short-term negative effect. This is assuming health workers do not migrate to other countries in the long term, and so far, Timor-Leste has not experienced health worker migration as a challenge. Currently, the country has only 35 specialist doctors (NSPHRH, 2021). Moreover, if the opportunity for specialization is carefully managed through effective rotation programs, and merit-based selection to reward those who have served in remote posts for several years, it serves as an effective incentive to motivate, recruit, and retain high-performing health workers in remote areas for the duration of their posting.

In-service training

The National Institute of Health (INS), non-governmental organizations, and implementing partners provide a series of training for health workers. The INS is the primary institution that manages and monitors training for health workers. Documented research and key informant interviews show that health workers in rural posts highly value opportunities for training and continuing professional development. Smitz et al, 2016 found training and professional development as one of the main contributing factors to job satisfaction. Findings from the discreet choice study showed that the opportunity to receive additional short-term training increased nurses' and midwives' interest to practice in remote areas (Smitz et al. 2016). However, there are several challenges that exclude health workers in remote postings from participating in training.

Based on available data, which is paper-based, and interviews with the INS, training initiatives are sporadic and uncoordinated. The training management information system that was previously developed with support from USAID's Human Resources for Health in 2030 Program is unfortunately not being used by the INS due to staff capacity and systems limitations. Consequently, training data is

monitored by offering, and not by individuals, which results in unequal access to training opportunities, especially for health workers in remote areas. While some health workers may attend four trainings per year, others may not have the opportunity to attend one a year. To this end, ***revamping and instituting the use of the training management information system (TMIS)*** can help the INS and the MoH track the required information by individuals to ensure equal access to available opportunities. The TMIS can also help the INS centrally manage and coordinate training offerings provided by development partners and NGOs to ensure effective use of resources by minimizing duplicate training offerings and streamlining reporting. To help institutionalize equitable access and provide policy guidelines for managing health worker training, the Activity will include a chapter on the selection and nomination of health workers for training opportunities as part of the human resources management manual that is under development.

Training accessibility is also an issue for health workers in remote areas because training is conducted in urban centers. Municipal health directors, who are responsible for nominating staff in their purview to participate in training, usually select those in community health centers and urban areas because of staffing shortages in remote posts, and the inability to temporarily fill a doctor, nurse, or midwife's positions for the duration of the training where they will be away from their post. To increase access to training opportunities for health workers in remote posts, the MoH and INS can collaborate to manage training programs effectively and equitably by implementing the options outlined in the next paragraph.

Firstly, the MoH and INS should institute a policy to ensure municipal health directors provide fair opportunities for all health workers to participate in training irrespective of their post. This policy can be implemented in the form of a ***training participants selection decision guide*** with clear selection criteria for each available training. Adherence to and completion of the decision guide must be a requirement for each municipal health director or designee to complete as part of the training participant selection and nomination process. In addition, the MoH and INS, in collaboration with development partners and NGOs supporting in-service training for health workers, should consider ***establishing online training modules*** that can be accessed from mobile phones and computers. The training can be designed and delivered for synchronous or asynchronous learning. Another option recommended for consideration is to deliver training in remote areas. The MoH and INS can form ***partnerships with community-based organizations located in remote areas to deliver training***. Trainers from INS can use their facilities to deliver training to health workers in remote posts within a certain catchment area. The proximity of training centers to health posts will increase the accessibility to attend training for those in remote locations while also decreasing the cost of training provision for the MoH due to the reduction of transportation, per diem, and lodging costs associated with bringing health workers to urban centers. These approaches also alleviate the concern of health workers being away from their posts in remote areas for an extended period.

Establish clinical residency programs for medical students to practice in rural facilities

Currently, medical students complete their residency programs at national and referral hospitals. To increase the likelihood of rural practice upon graduation, it is recommended that MoH forms a collaboration with UNTL and the other five preservice education institutions to ***design and implement rural-based residency programs for doctors, nurses, and midwives.*** Although more research needs to be conducted, there is evidence that shows that rural-based medical education better prepares and incentivizes medical students to practice in rural areas (Budhathoki 2017). This recommendation also builds on current practice of recruiting health care professionals from rural backgrounds to ensure diversity in the student pool as well as support equitable distribution of the health workforce across and within municipalities.

5. FINANCIAL INCENTIVES

Salary

According to the MoH's policy, the starting monthly base salary for doctors is $610. Based on performance, it may increase to a maximum of $2,300 over time. Nurses and midwives' monthly salaries start at $450 and could increase up to $1,325 over time (MOH 2021). Relative to other civil servants' pay in Timor-Leste, the salary for doctors, nurses, and midwives is considered fair and adequate. Findings from the DCE confirm this assertion as doctors found the salary as an attractive attribute of their job (Smitz 2016). However, the policy is not practiced as written due to multiple barriers including lack of institutional support, budget constraints, and the absence of a performance evaluation system for special regime employees for the MoH to provide merit-based salary increases. Multiple interviews with doctors, nurses, and midwives who have served in their roles for at least 6 years, and others for much longer, confirmed that a majority if not all, health workers are still receiving the same salary as when they started. Therefore, their current salary is not reflective of the increased cost of living over time. To address this issue, it is recommended for the MoH consider a ***one-time cost of living adjustment***. Although the inflation rates over the past decade have been sporadic (11.6% in 2011 to -1.3% in 2011) (World Bank), the MoH can benchmark the employee hire date as the base year to calculate the average inflation rate to determine the appropriate cost of living adjustment amount.

Additionally, for health workers in remote areas, the law stipulates they are entitled to supplementary payment as a percentage of their salary based on the following scale: 15% for those in remote areas, 25% for those in very remote areas, and 40% for those in extremely remote areas. However, interviews with health workers and MoH confirmed that this incentive is not implemented even though it is included in their contracts and mandated by law. It is highly recommended that the MoH ***implement the rural supplemental payments as required by law*** as it is a key retention benefit for health workers and the communities they serve and can also stimulate local economies. To implement this incentive effectively, the MoH will need to improve its HRIS to gain visibility of staffing at the primary health care level and also ensure data is accurate, complete, consistent, timely, and valid data with each employee having a unique identification number. Moreover, once the Ministry of State Administration completes the mapping and designation of community health centers and health posts as remote, very remote, and extremely remote, this data also needs to be captured in the HRIS and updated as needed.

Allowances

The MoH also has transportation and housing allowances for health workers in remote locations. However, implementation is inconsistent or not implemented at all. For transportation, health workers are provided with a one-off transportation fee for mobilization that can range from $200-$400, along with motorbikes at the beginning of their tenure. However, they are not provided with funds to maintain the motorbikes. Additionally, there are no workshops to fix motorbikes or purchase parts when they break down. Consequently, most motorbikes are in an unusable state. Research also found that motorbikes were not an attractive incentive to doctors, but nurses and midwives valued them positively. However, based on the interviews conducted as part of this strategy development, motorbikes were distributed to doctors but not to nurses and midwives. To safeguard the MoH's initial investment in purchasing motorbikes for health workers, which they use for both personal and professional purposes, the MoH should consider ***establishing an equipment maintenance program.*** The implementation of such a program could be through partnerships with workshops and mechanics who can render their services, including by traveling to remote locations.

Along with motorbikes, health workers are also meant to receive cash for fuel subsidies. However, health workers reported that fuel was provided to them in-kind in jerricans. The delivery frequency and amount are also inconsistent. Consequently, health workers usually use their personal funds for fuel. As stipulated by law, the MoH should ***provide fuel subsidies for health workers in remote areas*** as they use their motorbikes not only for personal purposes but to travel to understaffed health posts and for home visits to provide care for patients who are unable to travel.

Housing is another issue that the MoH recognized as a challenge for health workers in remote areas and established an allowance for housing. Poor housing conditions make remote postings unattractive and challenging for health workers, especially for women and those with families. In some instances, health workers are required to share available housing with one another and thus do not have personal space. Health workers in remote locations should receive a monthly allowance of $100 if housing is not provided by the government. In areas where housing is provided by the government, the facilities are in very poor condition and lack basic amenities such as running water and toilets. Roofs and doors can be dilapidated exposing the house to the elements, leakage during the rainy season, and lack of security. MoH should support health workers in remote areas to gain access to safe and secure housing with basic amenities. Even though implementation could require intersectoral collaboration in some areas, per existing law, ***the MoH should support and incentivize health workers to remain in remote areas by implementing the $100 per month housing allowance***. This recommendation is supported by the results from the discreet choice experiment study which highlighted access to adequate housing as an incentive that doctors, nurses, and midwives find attractive (Smitz et al. 2016).

Pay for performance

One of the challenges expressed by the MoH and health workers is salary concerns. As mentioned in the salary section, health workers interviewed confirmed that they have not received base salary increases since their first salary offer at the beginning of their employment. On the policy and budget side, because workforce planning is not coordinated, the increasing wage bill is a concerning factor for public spending. Although the MoH must consider performance-based salary increases and promotions, as noted above, another incentive to consider is ***to implement performance-based payments to health workers***, which are akin to bonuses. In addition to increasing motivation and morale, this approach can improve health outcomes in terms of service utilization and quality because payment is tied to these indicators. Pay-for-performance schemes have had mixed results but have proven successful depending on the scope of the program as well as the health areas covered (Basinga et al. 2010) (Santos, Barsanti, and Seghieri). However, given that the system is based on health indicators, foundational elements for successful implementation, such as documentation, verification, and report of service delivery data in a transparent manner, ideally through an electronic health management information system or electronic medical record system are necessary. To this end, if the MoH decides to implement this initiative, the health program and indicators need to be selected strategically and the data reporting and management systems need to be in place. Additionally, the program should first be piloted in high-priority remote areas with low-performing health outcome indicators. Pilot-testing the initiatives before rolling out the package nationally will provide the MoH an opportunity to test the technical and financial feasibility of implementing the recommended initiatives. It will also provide sufficient evidence to scale up the initiatives nationally and advocate for the necessary financial and administrative resources required to implement the retention package effectively and efficiently.

6. MANAGEMENT AND SOCIAL SYSTEMS SUPPORT

Recruit health workers from rural backgrounds

The Ministry of Education aims to recruit prospective students who want to study medicine from various locations, including from all municipalities and remote areas within. However, according to interviews with key informants, most of the initial graduating cohort of medical doctors were primarily from three municipalities, namely, Dili, Baucau, and Viqueque. The necessity to adequately staff all municipalities with medical doctors consequently meant that most of the doctors were placed in remote areas that were not their places of origin. Most of the initial cohorts who were deployed between 2012 and 2014 are still in their original posts, primarily because they are unable to secure new posts in their places of origin or in central locations as the MoH is yet to develop a policy for staff transfer and mobility. For nurses and midwives as well, the MoH aims to recruit from remote areas, and when possible, has deployed them to serve in primary health care facilities located in their places of origin.

Given research from several countries and systematic review indicate that selecting students from rural backgrounds is consistently associated with increased rural retention, the MoH should maintain their effort to ***recruit health workers from remote areas*** (Russel et al. 2021). Additionally, to capitalize on the benefits of recruiting students from remote areas, the MoH should ***create a mechanism to also place new graduates from remote areas to primary health care facilities their places of origin***. Nonetheless, due to personal preferences and overall interest to live in urban areas, the MoH needs to ensure there are sufficient incentives to retain them in their remote posts. Currently, doctors, especially those who originate from urban areas and are female, prefer to practice in urban areas, so if they are deployed to remote areas retaining them at their posts can prove challenging (Smitz et al. 2016).

Support health facility readiness

Community health centers and health posts usually have the required medication and equipment to carry out their functions. In instances where there are shortages and challenges with equipment or medical supplies, it is because these challenges are present at the municipal or national levels. The MoH should ensure the availability of medical supplies and equipment is maintained once decentralization is implemented. Nonetheless, due to better living conditions, the opportunity to treat patients with more complex cases, and the availability of advanced medical supplies and equipment, doctors, especially female doctors who practice in remote areas prefer to work in community health centers rather than health posts (Smitz et al. 2016).

Institute an improved integrated, routine supportive supervision

Although the MoH has a supportive supervision program on paper, it is not implemented. In practice, facilities receive visits from the central and municipal levels sporadically, once every year or two, and for monitoring purposes only. Supervisors use a checklist to guide their visits but, based on interviews with doctors, nurses, and midwives, the information collected is not used to guide decision-making or problem-solving issues identified.

Given frontline health workers' interest to receive on-the-job coaching and mentoring from senior staff and specialist doctors, ***implementing the supportive supervision program with consistency*** will help increase motivation as well as their skills of practice. As effective supportive supervision programs also play a role in adherence to clinical guidelines and protocols, the intervention will likely also influence service delivery quality.

Increase inter-sectoral collaboration to improve the availability of basic infrastructure

Although doctors, nurses, and midwives prefer to work in urban areas, the underlying factor is not necessarily the location but the difficult living and working conditions they must confront. The poor state of the facilities, especially health posts, in rural areas and government-sponsored housing are multi-sectoral in nature and must be addressed as such. Moreover, access to basic infrastructure and services such as water and sanitation, schools, transportation, electricity, and telecommunications are also challenges that the MoH can address only in collaboration with other ministries.

A simulation that adjusted for living conditions (better infrastructure, availability of equipment, and good housing) found that improvements in those conditions would make marked improvements in doctors, nurses, and midwives' desire to work in remote areas. Additionally, improved infrastructure, including access to safe housing, would significantly increase women health workers' interest to practice in remote areas [2]. Beyond convenience, better living conditions are a necessity for women in terms of safety and the obligation to fulfill caregiving duties for their children and other family members. Moreover, given that 100 percent of midwives in Timor-Leste are women, and HRIS shows a severe shortage of midwives in remote areas, it is crucial that the MoH and relevant government entities pay special attention to this matter given midwives' pivotal role in addressing maternal and neonatal health. Therefore, it is recommended that the MoH advocates for the creation of and participates in an intersectoral technical working group to highlight the impact of these issues on service delivery access and quality vis-à-vis the availability of health workers in remote areas.

Institute staff mobility and transfer mechanisms

Currently, the MoH does not have a policy or guidance document to manage staff transfer or mobility. Allocation and transfer are managed on an ad-hoc basis by the municipal health director. Staff movement is not tracked or reported centrally, so the information that is available at the NDHR is usually outdated. Consequently, some health workers can remain in remote health posts for a long period, while new graduates are assigned to community health centers, referral hospitals, or the national hospital. This does not only affect the motivation of health workers who remain in remote locations for long periods of time, but it also affects service delivery quality and efficiency. By design, health workers at the community health centers and hospital levels need to have the experience and skills to handle more complex cases referred from health posts, and they acquire and fortify through years of experience practicing their craft and being exposed to patients who present various symptoms.

A transfer and mobility policy is also important to ensure remote health facilities have sufficient coverage when health workers need to be away from their posts temporarily. This could be for health reasons that may cause short-or long-term disability or accommodation for pregnant and breastfeeding women as well as maternity leave.

The Activity is working with the MoH to ***institute a transfer and mobility policy*** as part of the overall human resources management manual. Although the specifics have not been determined, the general parameters will provide guidance on expected duration of service in remote health centers, conditions and prerequisites that need to be fulfilled to request for transfers, including years of service and seniority levels.

[2] ibid

Institute flexible contract opportunities for part-time work

Health workers who are posted in remote areas usually live apart from their families and must travel to different locations to spend time together. For those who have a family, the need to live in separate locations is not optional because of limited availability for spouse employment and education for their children. Research in Timor-Leste shows that health workers with more than two years of work experience and those who are married are less likely to take an extremely remote position (Smitz et al. 2016). Consequently, the NDHR has observed issues with absenteeism and health workers reporting to their post late, leaving early, and not fulfilling their duties as expected. Given this reality, the municipal health directors and the community health center chiefs may be able to allocate and manage their health workers more effectively if, in addition to the existing full-time health workers, they have ***additional employees with flexible contracts that allow them to work on a part-time basis***. This option allows health workers the flexibility to spend time with their families as well as serve in remote areas and earn a living.

7. COSTING OF INTERVENTIONS

OVERVIEW AND PARAMETERS

Costing is essential for the selection, planning, implementation, and evaluation of the proposed initiatives. Recognizing the limited resource setting and competing budget priorities, not all the initiatives proposed in this strategy have additional financial implications for the MoH to consider. Therefore, this section includes estimated costs for recommended initiatives that will cause the MoH to incur additional costs and thus have budgetary implications.

Additionally, for initiatives implemented at the municipal level and below, the costs estimated assume a period of three years of implementation beginning with the government's decentralization initiative rollout. Given decentralization will first be piloted in four municipalities – Bobonaro, Aileu, Baucau, and Liquica – the suggestion is to implement the recommended initiatives in remote, very remote, and extremely remote areas located in these same municipalities.

In developing the costing, we reviewed the recommended initiatives and selected ones that will cause the MoH to incur new, previously unbudgeted, or unaccounted costs. The exception to this approach is the exclusion of costs associated with establishing online training modules as the scope, the number of courses, website hosting, course content development, availability of equipment to access training, and other cost inputs are required inputs that are yet to be determined in discussion with the INS and MoH. The costs associated with institutionalizing integrated supportive supervision is the other exception, as the frequency, modality, number and profile of supervisors are yet to be defined.

The costing approach also assumed the systems, human resource, and technical capacity to implement the recommended initiatives already exist within the MoH. Some of the initiatives will require technical assistance which will be covered through the partially embedded HRH advisor's support through the Activity.

It should be noted that some of the initiatives listed in the table are based on MoH's policies established in 2010 but have not been implemented. Consequently, the MoH has not incurred costs and they are included in the table below to provide an estimated cost of implementation. For each initiative, the team worked to identify key inputs and resource requirements for implementation and determined whether the costs will be one-off or reoccurring. Where applicable, the governing laws are referenced.

Table 1: Estimated Costs for Implementing Recommended Initiatives

	Category	Initiative	Target	Total cost	Assumption/Notes
1	Pre-service education	Scholarships for medical students to pursue a specialization	5 percent of medical doctors	$171,600	There are 35 general doctors in the four municipalities under consideration, and approximately 5 percent results in two scholarships. Scholarship costs are calculated based on previous costs for doctors sent for training in Indonesia's Universitas Gadjah Mada for a duration of four years, including travel, living allowance, and tuition.
2	In-service training	Revamp and implement the TMIS	12 months consultant agreement	$60,000	The TMIS and supplementary training guidance documents have already been developed with all the required modules and functionality. The information systems administrator consultant will be engaged for a period of a year, with the option to extend the contract, to revamp the existing system, and support its rollout to the municipal level. The salary is based on the current average rate for this profession in Dili.
3	Salary	One-time cost of living adjustment	One-time payment of 2.88% increase per year for COLA*	$31,572	The cost-of-living adjustment (COLA) increase rate is based on the average inflation rate from 2011-2021 as reported by the World Bank. The base salary used for each cadre – doctors, nurses, and midwives – is based on Decree Law no. 13/2012 of March 7, Careers of Health Professionals.
4	Allowance	Remote supplemental payments	15% remote, 25% very remote, 40% extremely remote	$161,084	The supplemental payment rates are outlined in Decree law 20/2010 of December 1.
5	Allowance	Motorbike maintenance program	$50 per quarter	$12,750	Currently applies to doctors, nurses, and midwives. The subsidy should be distributed to health workers so they can offset maintenance costs.
6	Allowance	Fuel subsidies	4 kilometers travel or $5.80 per day	$539,835	Based on current petrol costs of $1.45/liter
7	Allowance	Housing allowance	$100 per month	$306,000	The housing allowance rate is outlined in Decree law 20/2010 of December 1.
8	Allowance	One-time mobilization	$300	$25,500	Mobilization costs can range from $200-$400 based on Decree law 20/2010 of December 1. This calculation assumes an average of $300 to be paid to health workers retroactively.
9	**$1,308,341**				Note this amount is a total of one-time and reoccurring costs proposed for three years of implementation.

*Assumes an average of five years of employment in remote areas in the four municipalities.

8. LIMITATIONS

The costing performed for this strategy has limitations. The baseline data used to determine the number of doctors, nurses, and midwives in the four municipalities are based on the current HRIS which may not be accurate as data is not updated routinely. Moreover, the categorization of community health centers and health posts as remote, very remote, and extremely remote may have been updated by the Ministry of State Administration but not in the HRIS database.

Unit costs for certain inputs, such as fuel, are based on current rates and not adjusted for incremental cost increases over time given the implementation time horizon is not defined. Some of the allowance rates, such as the $100 housing allowance, were determined based on 2010 market rates, which when the governing decree law was passed. These costs are not adjusted to reflect the current market rate because updating the allowance would require amending the law, which is not determined a feasible approach in the current state. Similarly, for salary payments, due to data limitations, the calculation assumed the starting rate for all health workers.

The data presented in the table only considers remote area health workers in four municipalities. Therefore, the cost implications are specific to these geographic areas and limited to one-time and reoccurring costs for a period of three years. Once the recommended initiatives are discussed with the MoH and the implementation plan is co-developed, a more comprehensive costing exercise can be performed to include additional details or considerations for each category or remove included costs if there are concerns or hindrances to implementation.

Lastly, there is a risk that implementation may not move forward as planned given the parliamentary elections planned to take place in mid-2023, which could potentially affect the policies used to guide the development of this strategy and the champions at the MoH leading the charge.

9. CONCLUSION AND NEXT STEPS

The retention strategy provides an overview of existing and recommended initiatives to recruit and retain health workers in remote areas of Timor-Leste. Recognizing the limited resources available and competing budget priorities for the MoH, the initiatives recommended are a mix of financial and non-financial incentives. Moreover, given the government of Timor-Leste's interest to implement and scale evidence-based policies, it is recommended to first pilot the implementation of these policies in four municipalities - Bobonaro, Aileu, Baucau, and Liquica. These municipalities are selected as they will be the same municipalities where the government's decentralization policy will be piloted, and the reality of municipal-level health managers having the most visibility and power to manage the health workforce within their catchment areas. The suggested timeframe for implementation, and the costing that was performed, assumed a period of three years to allow sufficient tracking of relevant indicators to monitor policy effectiveness in recruiting and retaining health workers in remote areas without holding up the scale-up process for too long.

The MoH may consider implementing the following initiatives:

1. Make remote practice a pre-requisite for eligibility to enroll in government-sponsored scholarships for general doctors to pursue a specialization in priority medical practices.
2. Hire an information systems specialist to revamp and institute the use of the training information management system (TMIS), including rolling out to municipalities.

3. As an alternative to in-person training offerings available in urban areas, establish online training modules that are available for asynchronous learning.
4. Develop and roll out a decision guide to help municipal directors select training participants to ensure health workers in remote areas are not disadvantaged and have equal access to attend training opportunities in urban areas.
5. Deliver training in remote areas through partnerships with community-based organizations in municipalities to minimize costs associated with bringing health workers to urban areas and reduce the absence of health workers from their posts to attend training.
6. Design and implement rural-based residency programs for doctors, nurses, and midwives.
7. Provide health workers with a one-time cost of living adjustment in recognition of the lack of salary increases since the beginning of their employment and the rising cost of living.
8. Implement the rural supplemental payments as required by law.
9. Establish an equipment maintenance program to ensure motorbikes that were purchased and distributed to health workers are functional.
10. Provide fuel subsidies for health workers in remote areas as stated by law.
11. Implement the $100 per month housing allowance for health workers in remote areas as stated by law.
12. Design and implement performance-based payments for health workers.
13. Collaborate with the Ministry of Education to recruit prospective students planning to study medicine from rural areas.
14. Create a mechanism to deploy new graduates from remote areas to primary health care facilities in their places of origin.
15. Implement the integrated supportive supervision program.
16. Establish and institute a transfer and mobility policy to ensure health workers who choose to be transferred from rural to urban areas and vice versa have clear guidelines and procedures.
17. Consider using established personnel contracting mechanism to hire health workers interested in flexible contracts that allow them to work on a part-time basis.
18. Establish and roll out a human resources management manual to guide managers at the municipal and district levels in implementing policies and procedures as it applies to health workers under their purview.

The Activity will work with the NDHR to develop a time-bound implementation plan with monitoring indicators. It is recommended that an oversight group with members from the NDHR, relevant municipal health directors, and representatives for doctors, nurses, and midwives at the community health center and health post levels be established to monitor implementation and adjust interventions as needed.

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