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## Immigration medical examination at the Regional Referral Hospitals: strengthening health system capabilities

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### ABSTRACT

Bhutan has a three-tiered healthcare system with the majority of services remaining Thimphu-centric. At the height of public demand for Immigration Medical Examination services, the two regional referral hospitals put in their efforts to establish the services in Gelephu and Mongar. The Regional Referral Hospitals enabled accessibility to IME services and improved efficiency at the National Referral Hospital by decongesting the number of clients. In this article, we describe how the regional referral hospitals established IME services that meet the standards of the destination country.

**Keywords:** health system; health services; health accessibility; human migration; medical examination

### INTRODUCTION

Medical examination is an integral part for migration across borders and is a part of requirements imposed by agencies that provide visas and travel permissions. These examinations are not only vital for safe-guarding public health but also for determining an applicant's eligibility for a visa. In the case of Bhutan, migrant workers from the neighbouring countries seeking employment in the country are required to undergo mandatory medical screening. These are done at the border points of entry in Phuentsholing, Gelephu, Samtse and Samdrup Jongkhar. The primary objectives of medical screening are to detect individuals with infectious diseases, identify those with medical conditions that may preclude them from performing the job after employment and to safeguard the overall wellbeing of the individuals migrating into Bhutan. Individuals are evaluated with basic medical examination including Blood Pressure and Body Mass Index assessment, testing for malaria, HIV and Hepatitis B and C and Chest X-ray. Prior to the pandemic, all physical examinations were conducted in person. Since September 2022, the medical examination is partially conducted by the private diagnostic centres and the reports are reviewed by medical officers through the Bhutan Labour Market Information System.

For Bhutanese requiring immigration medical examination

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(IME) for studies and work in other countries, services had been available at the Jigme Dorji Wangchuck (JDW) National Referral Hospital only. As travel restrictions were lifted after the COVID-19 pandemic, there was a surge in the number of Bhutanese availing IME services resulting in long waiting list at the JDW National Referral Hospital.<sup>1</sup> Between 01 January 2018 and 22 March 2023, 13,583 Bhutanese had left for Australia through Paro Airport<sup>2</sup> with the majority having undergone IME within Bhutan. The demand for IME services continues with Australia topping as the most preferred destination. To meet the demand, the Ministry of Health empanelled the two regional referral hospitals for IME services. The panel of tests performed for IME and the standards of medical evaluation and recordings must meet the standards of the respective governments. While the demand for Australian visa medical examination has declined by May 2024,<sup>3</sup> this article describes how IME services were established at the two regional referral hospitals with a health system perspective on accessibility of health services.

### ESTABLISHMENT OF IME SERVICES

As per instructions from the Ministry of Health, the Central Regional Referral Hospital (CRRH) in Gelephu and the Eastern Regional Referral Hospital (ERRH) in Mongar undertook a series of steps to get empanelled as one of the centres capable of performing IME. This empanelment process included three major steps.

The first step was the empanelment of these two hospitals

as an IME clinic. A detailed description of the facilities and services available at the hospital including photographic and document evidences and hospital floor plan were submitted to the Department of Home Affairs, Australian Government. Based on the verification response from the Australian Government, we made changes to the service set up to meet their standards. The facilities required for the IME are digital chest x-ray and appropriate means to export the images into the online system, tuberculosis diagnostic and treatment capacity (sputum smear and GeneXpert testing), space for pre-medical registration, assessment of anthropometry, visual acuity tests and clinical examination by a Panel Physician.<sup>4</sup> The Royal Centre for Disease Control (RCDC), Thimphu, was identified as the reference laboratory for tuberculosis testing and culture of *Mycobacterium tuberculosis*. Officials from the Australian High Commission in New Delhi visited the two hospitals for physical evaluation of the facilities in December 2022.<sup>5</sup> The two referral hospitals were approved as IME clinics in January 2023.

The second step was the empanelment of doctors into the Australian Offshore Panel Physicians Network. This required the recognition of the competencies of the doctors to perform the IME as per the standards required by Australian Government. The Panel Physicians and Radiologists are required to complete an e-learning module before getting certified to perform IME. One of the panel doctors and one of the panel radiologists serve as the clinic administrator taking the overall responsibility for smooth functioning of the services. The overall coordination in establishing these services were provided by the respective Medical Superintendents.

The third step involved a training session at the JDW National Referral Hospital in January 2023. The session provided an understanding on management of client flow and the delivery of services. The two clinics however designed their own service delivery and client management systems for efficient utilization of local resources. The CRRH initiated a Google Form for registration of clients and management of appointments but later switched to telephonic call and Google Sheet. The ERRH has been managing client appointments through telephonic call and Google Sheet.

There was no specific fund available nor new equipment provided to establish the IME services. The electronic equipment such as laptop, additional internet connections, mechanisms to export the chest x-ray images and client management forms were all managed from within the existing resources including the use of personal laptops and existing internet connections. For taking photographs of clients, CRRH uses one smart phone that was earlier used in the COVID-19 intensive care unit. Although the ERRH had a computed radiography (CR), there was no software to transport the digital images to the radiologist's workstation and compress the image before upload. The Ministry of Health supported by directing a private company for the installation

of the software (ScanDoc) which enabled the compression of chest x-ray images. In the initial stages, the ERRH used personal smartphones to take photographs of clients but was later replaced with a digital camera, supported by JDW National Referral Hospital.

As per directives of the Ministry of Health, the registration for IME services were launched on 06 February 2023. Both CRRH and ERRH started provided client services from 08 February 2023. The services were provided after routine hospital hours from 3 pm onwards on weekdays with no impact on the routine patient care. The fee for the IME services is Nu 1500 per client as per the Specialist Consultation and Off-hour Services Guidelines 2022 for the JDW National Referral Hospital. The fees collected by the two clinics are deposited to the JDW National Referral Hospital revenue account. Between February 2023 and April 2024, the CRRH had provided IME services to 3077 client visits including some repeat clients generating a revenue of Nu 4.6 million and ERRH had provided services to 1937 client visits generating a revenue of Nu 2.9 million.

In July 2023, the Department of Home Affairs, Australian Government did away with the requirement of urine test and introduced blood test for renal function assessment. This switch in the test panel required orienting the laboratory technicians in generating Glomerular Filtration Rate reports for upload onto the online system. Both the clinics independently made a smooth transition to the new panel of tests reflecting their own capability to deliver to the standards required by the Australian Government. With the adoption of the Electronic Patient Information System by the end of 2023, blood reports required for IME are retrieved from the electronic medical records of the clients.

### LESSONS FOR THE HEALTH SYSTEM

The IME services provided through these referral hospitals reflect their capability of delivering services that meet international standards. These services were established at the heights of public demand for timely IME services and allowed easier access to services for clients residing in districts away from the capital city. As the clinics started handling more number of clients, their efficiency in client flow management and the time required for performing the IME improved. The volume of clients that availed the services in these two centres reflect their trust in these two new clinics. This initiative has helped shorten the waiting list for IME at the National Referral Hospital thereby improving efficiency of service delivery at the health system level.

The IME services were provided after routine outpatient services were delivered without any interruption. Staff from the reception team; laboratory, radiology and ophthalmology technicians, radiologist and panel physician are put on roster and are provided remuneration as per existing financial rules for Specialist Consultation Services. While IME services are additional work,

the respective hospital administrations have adopted local policies and means of encouragements to continue providing the services.

As these were non-patient related services, the clinics had to improvise an in-house training of all its team members on customer care and cater to customer needs: receptionists, telephone operators, radiology technicians, laboratory technicians and panel doctors and radiologists. The majority of our clients were young and educated with easy access to electronic communications. Clients often booked appointments for IME at multiple clinics and attended to the clinic that served the earliest dates. Some clients registered their names for IME but did not turn up – this led to wastage of time and resources in having to readjust appointment dates for other clients. Should there be continued demand for IME services, a central online appointment system may be designed to manage appointments in all the three clinics efficient utilization of resources.

The IME services were provided through prior appointment system where clients were scheduled in batches or multiples of eight individuals. This allowed the hospitals to time client services taking into account availability of staff such as radiologist in station and the functional capacity of the equipment. The appointments for IME were given based on a systematic registration through first-come first-served basis.

During the COVID-19 pandemic when there were travel restrictions, people residing away from Thimphu could not access health services that were available only at the JDW National Referral Hospital. This clearly demonstrated the need to establish services in other health centres. Keeping such scenarios in mind, the two clinics were not seen as a duplication of services but as an improvement in accessibility to services.

Another important lesson learnt through this experience is that like in any other health and medical education provided to patients, clear and effective communication, both verbal and emails, were key in improving client satisfaction and avoiding miscommunications.

## CONCLUSION

The roll out of immigration medical services in Gelephu and Mongar demonstrates the capabilities of the two regional referral hospitals to deliver services that meet international standards. These services were started with no additional infrastructure or fund and are sustained to cater to the needs of clients in the districts. This case study demonstrates that clients may be diverted to the regional referral hospitals to improve the overall efficiency in service delivery at the national referral hospital.

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### AUTHORS CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

**TD:** Concept, design, data collection and analysis, manuscript writing and review.

**CG:** Concept, design, data analysis, manuscript editing and review

**UP:** Concept, design, data analysis, manuscript writing, editing and review

**NP:** Concept, design, data collection, manuscript editing and review

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Author agree to be accountable for all respects of the work in ensuring that questions related to the accuracy and integrity of any part of the work are appropriately investigated and resolved.

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None

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