



Sultanate of Oman  
Ministry of Health  
Directorate General for Diseases Surveillance & Control



Version 1. February 2022

## Introduction

A referral management system is a unique and powerful tool for health providers to keep track of their patient referrals throughout the care continuum. Its main goal is to improve and streamline communication among primary, secondary and tertiary care institutes including the private sectors involved in a patient's care.

With appropriate Referral policy in place, Oman can achieve high quality care to patients at all levels, and ensure early detection, early treatment and hence reduce the transmission in the community and minimize duplication, reduce overcrowding in tertiary hospitals and ensure accessibility, equality and equity in health. It will also introduce accountability, transparency and responsiveness among health professionals and institutions.

In order to facilitate the tracking of the cases, public health low mandate notification of communicable diseases by healthcare staff. Thus, any confirmed case of active TB disease is required to be reported within **24 hours** to the TB and Acute Respiratory Diseases Section, Department of Communicable Diseases, DGDSC as per Communicable Disease Law. Additionally, highly suspected pulmonary TB cases should be notified as presumptive TB without waiting for laboratory confirmation by presumptive TB e-notification form while sending all specimen required.

## Aim /Goal

The goal of this policy is to bring about a well-functioning referral system for TB patients in Oman that is characterized by appropriate health and social services utilization, enhancing access to medical care services within the country.

## Objectives:

To outlining the main aspects of the referral system for TB patients, which include: referral criteria, communication between different levels of health care institutes and transportation of referred patients.

## TB REFERRAL SYSTEM

### Referral Criteria

- Patients with signs, symptoms or radiological evidence suggestive of TB disease or laboratory evidence of infection are considered presumptive TB cases and required to be referred to an institute to confirm TB as per national policy and to be started on TB treatment promptly.
- Patients with confirmed laboratory tests (**SMEAR MICROSCOPY OR PCR**) should be escorted to nearest designated institute for starting TB treatment promptly and to

notify using e-notification through Tarassud as per national policy by healthcare staff according to Communicable Disease Law.

- All infection prevention and control (IPC) measures should be observed and ensured during the process of referral and transfer.

## TB disease

### 1. Referring patients from Primary or Private health care Institutions to TB management facility :

- In all health facilities , all patients must be wearing mask and be segregate according to presence of acute respiratory symptoms at entry .
- When a TB diagnosis is suspected take all necessary IPC measures while examining the patient which includes the following :
  - a. examine patient in a close well ventilated room with isolation precaution sign on the door
  - b. Give patient surgical mask to wear, if not already on.
  - c. The examining physician/nurse should wear fitted N95 mask or equivalent
  - d. Limit number of personnel exposed to the patient to the minimal required
  - e. Limit exposure time to minimal required for care especially in no airborne isolation setup in the facility or its' not possible to open window in isolation room.
  - f. If first sample positive hold the patient and arrange for admission immediately for further management and starting appropriate treatment in the nearest government health institution or other designated institution
  - g. If the first samples is negative, second sample should be collected according to national policy and patient may allow to leave (depends on his/her clinical condition evaluation by the attending physician) after **collecting contacts details** ensuring taking all IPC measures bending the investigation results with subsequent calling the patient upon getting the results.
  - h. If TB confirmation made in a primary health care institute or private health institution communication and arrangement should be made for admitting the patient immediately and starting appropriate treatment in the nearest government health institution or other designated institution.
  - i. Mandatory collection of patient's resident identity card and/ or passport copy, attendee's resident identity card or attendee's identity card copy. Accurate contact information collection is responsibility of the health institute where the patient has attended in order to proceed with the follow up action required afterwards.

- j. The Directorate of Disease Surveillance and Control (DDSC) at the governorates must be informed and appropriate admission plan should be ensured through the governorate hotline
- For escorting the suspected or confirmed TB patients to other health care institutions ensure the following
  - a. Implementation of appropriate IPC measure which include:
    - i. ensuring patient wearing surgical mask
    - ii. limit staff exposed to minimal required for care
    - iii. Asymptomatic family member from same household can accompany patient/ drive him to referral center while ensuring wearing surgical mask.
    - iv. during transport ensure opening the vehicle window and accompanying staff, if required, need to wear a fitted N95 mask or equivalent including driver if no physical barrier between him and the patient
- Inform the TB focal point at the receiving health institution in order to arrange for appropriate isolation with IPC measures in place.
- For presumptive TB cases the institute managing the patient should follow the national diagnostic algorithm (Annex 1) and refer patient /sample to the appropriate facility where the test available while ensuring notifying the receiving institute and observing IPC measures.
- For Extrapulmonary cases specimens should be obtained from the appropriate site and subjected to microbiological investigation (eg AFB stain, NAAT (Xpert MTBRIF), culture and DST) and / or histopathological investigation. Communication with appropriate specialty (depend on site of TB) should be made verbally and in writing for the purpose of diagnosis and treatment to ensure starting treatment on time.
- Treatment of extrapulmonary TB cases should be arranged between specialist concerned (e.g. TB eye , TB bone etc...) according to the affected site and TB focal point at institute/ directorate to insure starting the appropriate regimen and doses, assigning treatment site, follow up appointments arrangement , side effect monitoring, need for inpatient treatment if required , treatment monitoring in terms of toleration and response) and assigning the outcome.
- If a patient is suspected to have TB by clinical or radiological or laboratory investigation then the patient should be escorted immediately to the nearest government health institution or other designated institution where investigation and/or treatment support is available. (Annex 2)

## 2. Referring patients from Medical Fitness Centre (MFC) of the Governorates

- If the clinical samples are bacteriologically confirmed by AFB, MTB/RIF Assay (GeneXpert) or culture, the MFC in charge or the equivalent should trace the patient and inform the following:
  - Directorate of Disease Surveillance and Control at the governorate through hotline. (Annex 3)
  - Directorate/Hospital focal point at the governorate. (Annex 4)
- The sponsor should be contacted to bring the patient immediately to the designated institution for admission.
- If a TB case is detected during screening at MFC, the MFC in-charge or the equivalent coordinates with the Directorate of Disease Surveillance and Control (DDSC) at the governorate should arrange for referring the patient directly for admission and ensure implementation of all IPC measures.
- If the patient cannot be traced then appropriate legal action to be initiated immediately with concern authorities through public prosecution office at the governorates.

## 3. Referring patients to or from Non-MOH care hospitals

- If a patient suspected or confirmed having TB being referred to or being diagnosed at one of the Non-MOH hospitals, the patient should receive the appropriate care according to the national policies and guideline.

The institution should ensure the following:

  - Ensure IPC measures at all time
  - Mandatory notification through Tarassud as per national policy
  - Inform the DDSC at the governorate level (Annex 4) regarding discharging or transferring the patients with sufficient time before discharge in order to arrange Direct Observation Therapy (cDOT) and treatment follow up

## 4. Referring patients from Secondary to Tertiary Care Hospitals

- If a presumptive or confirmed TB patient required further care in a tertiary or specialized care facility for any medical and management issues e.g. complication during TB treatment, second opinion from a specialist for underlying disease, treatment for a resistant strain and other medical issues **he/she should be dealt with similar to other** medical problems and communication initiated with the

relevant specialty e.g. Adult ID, Pediatric ID, psychiatry, orthopedic, surgical services etc. through their routine referral system while ensuring IPC measures.

## **Latent TB infection**

### **1. Contacts of a confirmed case**

Contacts (including children) confirmed having Latent TB infection (LTBI) should be referred to the nearest primary care by coordinating with the DDSC at the governorates and according to national policy. Referral to Pediatric/Adult ID consultant can be made for the following situation: further investigation for confirming the diagnosis, the index case diagnosed with resistant strain (INH or MDRTB resistant), anticipating drug to drug interaction, any underlying condition requiring specialist input.

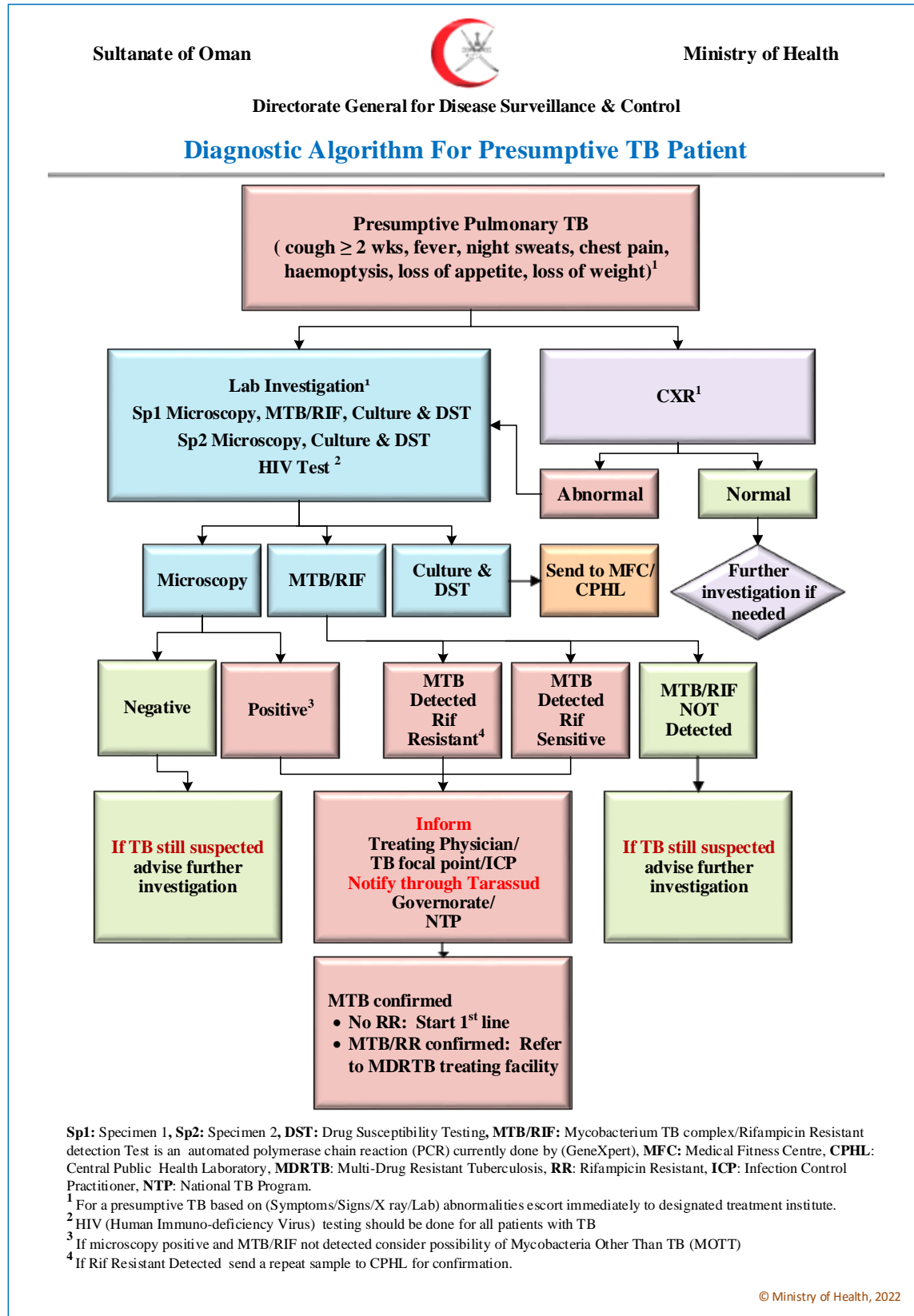
### **2. Healthcare workers as part of screening policy**

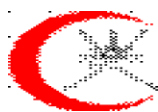
Healthcare workers who found to have evidence of LTBI should be referred to designated unit/department for management according to the Policy for Screening and Immunization of Healthcare Workers. All HCW confirmed having LTBI should be notified by e-notification in Tarassud. Treatment outcome if started should be assigned.

### **3. Other at risk groups**

For other at risk groups e.g. PLHIV referral to designated unit/department in their institutions in the governorates should be made and can be managed according to National guidelines.

## Annex 1





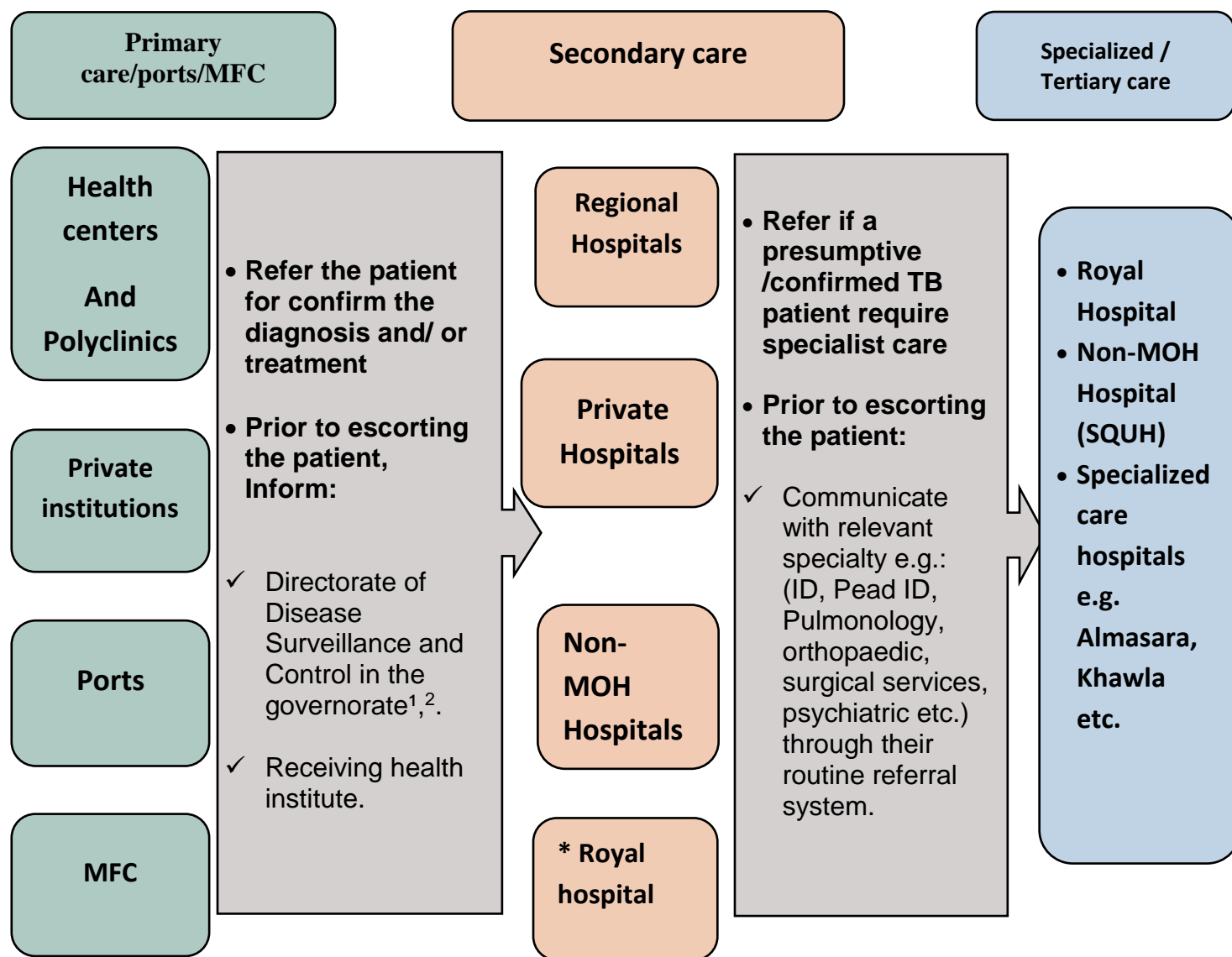
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## Annex 2:

### Schematic diagram for referral system of presumptive and confirmed TB patients



**Appropriate IP&C measures should be maintained while escorting the patient**

<sup>1</sup>See Incident Command Chain Hotline Numbers List

<sup>2</sup> See TB Focal Points List

\*Royal hospital is a tertiary hospital at Muscat governorate yet may receive cases for diagnosis confirmation and treatment





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**Annex 3: Incident Command Chain**  
**Hotline Numbers**

National level	Hotline	Fax
National Hotline	92199389	22357541
Surveillance (DS)	99138286	22357541
Communicable Disease (DCD)	99465774	22357539
Infection Prevention & Control (CDIPC)	91313315	22357542
Central Public Health laboratory (CPHL)	91313316	24793899
Environmental & Occupational Health (EOH)		24563121

Governorates	Hotline	Fax
Muscat	90924212	24707264
South Al Batinah	72145603	26877470
North Al Batinah	98818166	26845168
Al Buraimi	71555520	25657147
AL Dhahira	91789500	25685912
AL Dhakhliyah	90922261	25228493
North AL Sharqiyah	99101292	25403477
South AL Sharqiyah	71742120 25543996	25540188
Al Wusta	99342885	23436055
Dhofar	93531812	23230559
Musandam	99820729	26730147



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**Annex 4**

**TB Focal Points**

Governorate	Name	Designation	Institution	Tel office	GSM	Fax	Email ID.
Directorate General for Disease Surveillance and Control. Department of Communicable Disease TB & ARI Section	Dr.Fatma AlYaquobi	Head of TB and Acute Respiratory Diseases Section	DGDSC TB/ARI Section	22357505	99825262	22357540	omantb20@gmail.com
	SSN.Khalsa Al-Thuhli	SSN National TB Supervisor	DGDSC TB/ARI Section	22357521	99624331	22357540	omantb20@gmail.com
Directorate General of Health Services <b>Muscat Governorate</b> Directorate of Disease Surveillance and Control	Dr.Lamiya Al Baloushi	Director of Disease Surveillance and Control, Muscat	DDSC Muscat Gov		94111563		surv.mct.oman@gmail.com
	Dr.Jeffrey Singh	GP	DDSC, Muscat Gov		91427651		surv.mct.oman@gmail.com
	SSN.Nada Al Mahrazi	NOIC of Al-Rahma Hosp and TBFP	Al-Rahma Hospital	24815132	92226665		
	SSN.Khawla Al-Rahbi	Regional TB focal point	Al-Rahma Hospital	24815132	92372491	24810383	
	SSN.Hana Al-Amri	SSN adult	Royal Hospital	24599000 3176	92169009		
	SSN.Amal Al-Habsi	SNN Pediatrics	Royal Hospital	24599353	92384191		

	Dr.Yaqoob Al-Mahrooqi	Chest Consultant	Royal Hospital		99427669		
	Dr.Hilal Al-Hashami	Consultant Pead ID	Royal Hospital		99211152		
	Dr.Feryal Al-Lawati	Senior Consultant ID	Royal Hospital		99384896		
	Dr.Zakariya Al-Balushi	Consultant ID	Royal Hospital		95162898		
	Mohammed Ibrahim	Specialist Medicine	Khoula Hospital	22501000 1471	98557465		
	SSN.LisyR.Bangera	SSN	Khoula Hospital	22501000 5238	91234219	22501121	
	Haleema Al-Sawafi	SSN	Al-Nahdha Hospital	22503232	95271317		
	Ghaniya Al-Oufi	SSN	Al-Nahdha Hospital	22503232			
	Dr.Sultan Al-Lawati	Medial Specialist	Al-Nahdha Hospital		95271817		
	Dr.Hana Al-Oraimi	Senior Specialist Microbiology	ROP	24683109	99477968	24696518 24699113	
	SSN.Marwa Al-Mamari	Infection Control Officer	ROP	24683109	97990942	24696518 24699113	
	Dr.Khawther Al-Amri	Consultant ID	AFH	24331351	99371710	24331801	
	Saada Al-Riyami	Infection control Officer	AFH	24331351	94373749	24331801	
	Najma Al-Hbsi	SN	AFH	24331351	98162003	24331801	
	Bader Al-Busaidi	ID Clinical Nurse Specialist	SQUH		95433512		
Directorate General of Health Services <b>Dhofar Governorate</b> Directorate of Disease	Dr.Salim Al-Khathiri	Director of Disease Surveillance & Control, Dhofar	DDSC DHO				Surv.dfr.oman@gmail.com
	Dr.Nasser Alawaid	Chest Physician Consultant	SQH	23231320	95144626		n.alawaid@gmail.com
	Ahmed Al Mallak	SSN Regional TB focal point	DDSC DHO		99099717		Surv.dfr.oman@gmail.com

Surveillance and Control	Tafool khashoob	SSN	SQH	23216110	99281012	32316069	chestclinic6@gmail.com
Directorate General of Health Services <b>North Batinah Governorate</b> Directorate of Disease Surveillance and Control	Dr.Fatma Al-Hashmi	Director of Disease Surveillance & Control, NBG	DDSC, NBG	26850071 26845285	99434333	26845168	surv.nbg.oman@gmail.com
	Ruqaya Al-Mamari	SSN (Regional TB Focal point)	DDSC NBG	26845285	91400669	26845168	surv.nbg.oman@gmail.com
	Khamis Salim AL-Hosni	SSN	Sohar Hospital	26841529	92768684	26844017	
Directorate General of Health Services <b>South Batinah Governorate</b> Directorate of Disease Surveillance and Control	Mr.Nasser Said Al-Shaqsi	Director of Disease Surveillance & Control, SBG	DDSC SBG	26875434	92823343	26877470	surv.sbg.oman@gmail.com
	Dr.Rashid Al-Malki	GP Regional TB Focal Point	DDSC SBG	26875434	96152332	26877470	surv.sbg.oman@gmail.com
	Dr.Hamid	Specialist A	Rustaq Hospital	26875055 4122	99157390	26877152	
	Ibtisam Al-Aufi	SSN	Rustaq Hospital	26875055 5252	95088036	26877152	
Directorate General of Health Services <b>North Sharqiyah Governorate</b> Directorate of Disease Surveillance and Control	Dr.Sultan Al-Busaidi	Director of Disease Surveillance & Control, NSG	DDSC NSG	25403490	98279977	25403477	surv.nsg.oman@gmail.com
	Dr.Parag Shah	Regional Epidemiologist	DDSC NSG	25403448	98242415	25403477	surv.nsg.oman@gmail.com
	Ms. Hanan Al Rashdi	SSN – Regional TB FP Nurse (DDSC, NSG)	DDSC NSG	25403449	91393303	25403477	
	Mr.Musabah Al Maskari	SSN - Ibra Hospital FP	Ibra Hospital	25587010 5214	95644626	2587121	
	Ms. Handa Al Fazari	SSN - Sinaw Hospital FP	Sinaw Hospital	25524749	9727782	25524330	
	Dr.Iyad Omer Mustafa	Epidemiologist	DDSC	25543996	99031272	25540388	surv.ssg.oman@gmail.com

Directorate General of Health Services <b>South Sharqiyah Governorate</b> Directorate of Disease Surveillance and Control		Deputy Director of Disease Surveillance & Control, SSG	SSG				
	Said Al Gheilani	SSN	DDSC SSG	25543996	99007080	25540388	surv.ssg.oman@gmail.com
	Zainab Al-Balushi	SSN	Sur Hospital		92541773	25561560	
Directorate General of Health Services <b>AL Dhakhliyah Governorate</b> Directorate of Disease Surveillance and Control	Dr.Mohammed Al-Toobi	Director of Disease Surveillance & Control, DHK	DDSC DHK	25411549	95148822	25411546	surv.dak.oman@gmail.com
	Dr.KishorDuthade	Regional Epidemiologist	DDSC DHK		96659741		surv.dak.oman@gmail.com
	Sumiya Mohammed Ambusaidi	SSN	Nizwa Hospital	25211085	99531863		
Directorate General of Health Services <b>Al-Dhahira Governorate</b> Directorate of Disease Surveillance and Control	Dr.Mahmood Al-Sekati	Director of Disease Surveillance & Control, DHA	DDSC DHA	25788181	99426261		surv.dhr.oman@gmail.com
	Huda Al-Yaquobi	SSN Regional TB Focal Point	DDSC DHA	25788167	99850909		surv.dhr.oman@gmail.com
Directorate General of Health Services <b>Al-Buraimi Governorate</b> Directorate of Disease Surveillance and Control	Dr.Ahmed Al-Balushi	Director of Disease Surveillance & Control, BUR	DDSC BUR	25652107	92361634		surv.bur.oman@gmail.com
	Dr.MuhammadMuqeet ullah	Regional Epidemiologist	DDSC BUR		99051654		surv.bur.oman@gmail.com
	Aisha Salem Al Quraini	Regional EPI/TB focal Point Nurse	DDSC BUR		99000845		surv.bur.oman@gmail.com

Directorate General of Health Services <b>Al-Wusta Governorate</b> Directorate of Disease Surveillance and Control	Dr.Mohamed Lotfy Khater	Superintendent of Disease Surveillance & Control, WUS	DDSC WUS	23437237	79415154	23436055	surv.wus.oman@gmail.com
	Shyby P Kuttappan	Regional TB Focal Point Nurse	DDSC, WUS	23436237	91322054	23436055	surv.wus.oman@gmail.com
Directorate General of Health Services <b>Musandam Governorate</b> Directorate of Disease Surveillance and Control	Dr.Nawal Al-Shehi	Director of Disease Surveillance & Control,MUS	DDSC MUS	26730697	98199933	26730697	surv.mus.oman@gmail.com
	Dr.Nilanjana Kumar Mitra	Regional Epidemiologist	DDSC MUS		91345394		surv.mus.oman@gmail.com

**DGDSC: Directorate General of Disease Surveillance and Control**

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