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**Original Article** 

# Challenges Faced by People Affected with Leprosy During the COVID-19 Pandemic: A Questionnaire Based Study

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This study aims to assess the continuity of medical care, the impact on disease condition and to highlight the major challenges faced by people affected by leprosy during the pandemic. Telephonic questionnaire-based survey was conducted among previously registered patients of leprosy at referral hospitals in India. Leprosy affected people aged >18 years, either on treatment or who had completed treatment with access to phone and willingness to participate were included. The questions were asked pertaining to demographic details, baseline disease characteristics and various problems faced during lockdown relating to livelihood, finances, treatment, and mental status. A total of 196 patients consented to participate in the study. Mean age of study participants was 37.31 (13.86) years, male participants (n=123, 62.7%) were more than females (n=73, 37.2%). Overall, 101 patients (51.5%) experienced exacerbation, 21 patients (10.7%) reported improvement and 74 patients (37.8%) reported no change in disease status during the pandemic. Most common difficulty faced was the procurement of medicines (115 patients, 58.6%) followed by difficulty in diagnostic testing (61 patients, 31.1%). Course of treatment was interrupted in 16 patients. Most of the patients (n=147, 75%), agreed that teleconsultation services would aid in management of their disease. The majority of patients (88.2%) were able to continue some form of treatment. Two patients (1%) tested positive for COVID-19. Nearly all patients (n=189, 96.4%) were informed regarding the risks and preventive measures related to COVID-19. Fifty percent of the patients reported deterioration in mental health due to the pandemic. The present study highlights the gaps in healthcare delivery and social inequalities along with their impact on the health, livelihood and mental status of people affected by leprosy during the current COVID-19 pandemic.

Keywords: Leprosy, Hansen's Disease, COVID-19, Telehealth, Access, Remote Care, Challenges

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### Introduction

The coronavirus disease (COVID-19) pandemic has had a devastating impact on everyone, with a greater impact on vulnerable social groups. India was among the countries which implemented an early lockdown in March 2020 for non-essential services. Most of the public and government responses to the pandemic missed taking into account the socioeconomic inequalities of our society, as many of the vulnerable groups do not have access to basic amenities such as housing, clean water and sanitation. People affected by leprosy are often on the lowest rungs of the socioeconomic ladder because of disability, stigma and discrimination, and the isolation due to the disease. They often work in the informal economy, working as daily wage labourers, or running small shops, or are involved in jobs that are particularly vulnerable to economic instability (Kerr-Pontes et al 2004). Many people have been rendered homeless due to poverty, unemployment, and inability to pay rent and this further predisposes them to other problems like infections, wounds, worsening of ulcers, deformities, and increased chances of getting infected with COVID-19.

People affected by leprosy are dependent on the government healthcare facilities for their treatment. The consequences of health centers having restricted access to general health care services during pandemic for patients including persons affected by leprosy included delay in diagnosis, interruption of ongoing multidrug therapy, and management of reactions and complications. Telemedicine consultations were started at several centres but were not very useful for leprosy affected individuals as majority of these are poor and do not have access to smartphones and internet. To the best of our knowledge there are no studies till date that have assessed the impact of the pandemic on leprosy affected individuals, hence we conducted this study to assess the continuity of medical care, to measure the impact of pandemic on disease severity and to highlight the major challenges faced by people affected by leprosy.

#### Methodology

**Setting:** This telephonic questionnaire-based survey was conducted among previously registered patients in the leprosy clinic of the tertiary care institutes from 4 centers across different parts of India.

Study design and participants: This was a crosssectional descriptive study conducted using a purposive sampling technique. Leprosy affected people aged > 18 years, either on treatment or completed treatment with access to phone and willingness to participate were included in the study. An online semi-structured questionnaire was developed after reviewing the literature and consulting the experts in the field of leprology. The questionnaire tool consisted of multiplechoice as well as open-ended questions regarding socioeconomic status, disease status prior to and during the lockdown, challenges faced and awareness of COVID appropriate behaviour. Content validity of the tool was established by consultation with various experts in the field of dermatology and leprosy. Data was collected via phone call made to all patients who had been registered over the past three years and were on follow up in respective hospitals prior to the initiation of pandemic associated restrictions. The subjects were recruited in the study only after their verbal consent. Patients willing to fill the questionnaire online were sent a link of Google form via WhatsApp, in some cases where the

participants were unable to fill the questionnaire, the investigators also helped to fill and submit the questionnaire after noting the responses of the participants. The questions were asked pertaining to demographic details, baseline disease characteristics and various problems faced during lockdown relating to livelihood, finances, treatment, and mental status (Supplementary material).

Study protocol was approved by Institute Ethics Committees (PGIMER Chandigarh: INT / IEC / SPL-1379 dated 26-10-2020, AIIMS Gorakhpur: IHEC / AIIMS-GKP / BMR / 39 / 2021, NHLMMC Ahmedabad approval dated 11-09-2020).

**Statistical analysis:** Statistical analysis was performed using the IBM SPSS software version 23. Mean and standard deviation were calculated for quantitative variables. Qualitative variables were expressed as percentages.

### Results

#### Socio-demographic Characteristics :

A total of 196 patients consented to participate in the study. Institution-wise distribution of participants and total number of patients registered in each institution has been summarized in Table 1. Mean age of study participants was 37.31 (13.86) years (range- 14 to 75 years), male participants (n=123, 62.8%) being more than females (n=73, 37.2%). A total of 149 patients (76%) were living in their own houses while 47 patients resided in rented housing (24%). With regards to educational status, 3 patients (1.5%) were postgraduates, 13 were graduates (6.6%) and 51 had passed 12<sup>th</sup> standard (26%). Eighty-eight patients (44.9%) could read and write while 44 patients (20.9%) were illiterate. Daily wage labourers (n=57, 29.1%) and homemakers (n=49, 25%) comprised more than half of the study population. Nearly half of the patients (n=88, 44.9%) had an income of less than 2640 rupees per month. Further, 145 patients (74%) reported income loss during the pandemic. Sociodemographic characteristics of the study population are summarized in Table 2.

#### **Baseline Disease Characteristics:**

A total of 88 patients (44.9%) were on multidrug therapy. Among 108 patients (55.1%) who had completed multidrug therapy, 50 were still visiting hospitals for various reasons mentioned in Table 3. Fifty-four of 108 patients had more than one reason for visiting the hospital. Eighty-six (43.8%) of these patients believed that their disease was not completely cured. Forty patients (20.40%) suffered from comorbidities

Institution	Number of recruited participants	Total number of patients registered in 2020 (implying active cases)	Total number of patients registered during 2018-2020 (implying eligible patients)
PGIMER Chandigarh	64	82	408
AIIMS Rishikesh	56	45	267
AIIMS Gorakhpur	48	64	98
NHLMMC Ahmedabad	28	42	212
Total	196	233	985

Table 1 : Institution-wise distribution of the patients

Parameter	Category	Number of patients (%)
Gender	Male	123 (62.8%)
	Female	73 (37.2%)
Place of residence	Own house	149 (76%)
	Rented property	47 (24%)
Educational status	Post graduate	3 (1.5%)
	Graduate	13 (6.6%)
	12th standard	51 (26%)
	Literate	88 (44.9%)
	Illiterate	41 (20.9%)
Occupation	Daily wage labourer	57 (29.1%)
	Homemaker	49 (25%)
	Private job	25 (12.8%)
	Unemployed	25 (12.8%)
	Business	20 (10.2%)
	Student	16 (8.2%)
	Government job	4 (2%)
Monthly income prior to	<2640	88 (44.9%)
lockdown (in rupees)	2640-8000	47 (24%)
	8001- 13500	33 (16.8%)
	13501-20,000	21 (10.7%)
	20001-26500	3 (1.5%)
	26501- 52733	3 (1.5%)
	>52734	1 (0.5%)

Table 2 : Sociodemographic characteristics of the study population

like tuberculosis (2 patients), diabetes (6), hypertension (3) and cardiac disease (2). Prior to the lockdown period, 135 patients had been visiting the hospital every month (68.9%), 22 patients were visiting every two months (11.2%), and 6 patients (3.1%) were visiting every six months. Rest of the 33 patients (16.8%) were visiting whenever their disease worsened.

### Impact of COVID-19 Pandemic on Disease:

Seventy-five patients (38.3%) had undergone testing for coronavirus disease at least once and 2 patients (1%) reported to have been tested

positive. When asked about leprosy status, 101 patients (51.5%) experienced exacerbation, 21 patients (10.7%) reported improvement and 74 patients (37.8%) reported no change (Fig. 1). Worsening of skin lesions and nerve function impairment was reported by 33 patients (16.8%) and 26 patients (13.2%) respectively, likely related to the non-availability of medical attention and follow up. Development of fever and joint pains was reported by 29 patients (14.8%). A total of 137 patients (69.9%) reported facing difficulties in management of leprosy during the lockdown.

Parameter	Category	Number of patients (%)
Duration of leprosy	<6 months	25 (12.8%)
	6 months- 1 year	40 (20.4%)
	1-5 years	104 (53.1%)
	>5 years	23 (11.7%)
	Not known	4 (2%)
Multi Drug Therapy	Completed	108 (55.1%)
	Not completed	88 (44.9%)
Reasons of hospital visit in patients	Treatment of reactions	50 (46.29%)
who had completed multidrug therapy	Treatment of trophic ulcers	30 (27.77%)
(n=108, >1 reason of visiting	Persisting motor weakness	64 (59.25%)
hospital=54)	Persistent skin lesions	53 (49.07%)
	Belief that disease was	86 (79.62%)
	not completely cured	
Frequency of hospital visit prior	Every month	135 (68.9%)
to pandemic	Two monthly	22 (11.2%)
	Six monthly	6 (3.1%)
	Whenever disease worsened	33 (16.8%)

<b>Fable 3 ։ Baseline </b> զ	disease	characteristics of	of the	study	population
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	Table 4 :	: Mental h	ealth s	tatus re	ported by	/ study	participants
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Mental status	Number of patients (%)
Anxious/depressed	63 (32.1%)
Frightened	39 (19.9%)
Stressed	40 (20.4%)
Same- no change	90 (45.9%)
Relaxed	8 (4.1%)

Most common difficulty faced was procurement of medicines (115 patients, 58.6%) followed by difficulty in getting investigations done (61 patients, 31.1%) (Fig. 2). Other reported difficulties included delay in diagnosis (22 patients, 11.2%) and getting adequate treatment of complications (33 patients, 16.8%). Difficulty in management of wounds/trophic ulcers and availability of MCR footwear and splints were experienced by 12 patients (6.1%) and 2 patients (1%) respectively. Various reasons were cited for these difficulties, such as travel restrictions, closure of outpatient departments, inability to contact healthcare workers and non-availability of MDT at local dispensaries. When enquired about management of their disease during the lock-down, 93 patients (47.4%) reported continuing the same medicines as were prescribed, 54 patients (27.5%) reported obtaining teleconsultation with doctor by WhatsApp or phone call



Fig. 1 : Leprosy disease status as reported by the study participants



Fig. 2 : Frequency of various difficulties in disease management faced by the study participants

and 46 patients (23.4%) consulted a local doctor or dispensary. Ten patients (5.1%) started natural remedies while 23 patients (11.7%) stopped treatment altogether. Only 7 of these 23 patients had completed multidrug therapy; course of treatment had been interrupted in 16 patients. Most of the patients (n=147, 75%), agreed that teleconsultation services would aid in management of their disease. Apart from disease related difficulties, 38 (19.3%) patients faced loss of employment, 82 patients (41.8%) had difficulty in obtaining food and 20 patients (10.2%) experienced difficulty in maintaining hygiene.

Awareness regarding COVID-19 Appropriate

#### Behaviour:

Nearly all patients (n=189, 96.4%) were informed regarding the risks and preventive measures related to COVID-19. Sources of this information included newspapers and television channels (n=160), health workers (n=79), doctors (n=78) and social media (n=58). Majority of the patients (n=149, 76%) had stopped going to work during the lockdown. Nearly all patients reported using masks (n=193, 98.5%) and practicing hand hygiene (n=191, 97%). While triple-layer and surgical masks were being used by 25 patients (12.8%) and 59 patients (30.1%) respectively, 109 participants (55.6%) were using measures like cotton scarfs to cover their nose and mouth. Fiftyone patients (26%) reported sharing reusable masks with their family members. Most of the patients (n=133, 67.9%) were using soap and water to clean their hands, 55 patients (28.1%) reported using a hand sanitiser. While a total of 143 patients (73%) reported practicing social distancing, only 86 (43.9%) were aware of the correct social distancing norm of 2 meters.

#### Impact of Lockdown on Mental Health:

A total of 88 patients (44.9%) believed that they were at increased risk of developing COVID-19 due to leprosy. Nearly one-third of patients (n=66, 33.7%) experienced decreased sleep during the lockdown period and 46 patients (23.5%) reported reduced appetite. Fifty percent of the patients reported deterioration in mental health due to the pandemic (Table 4).

#### Discussion

The impact of the current pandemic ranges from access to health care to sustenance of livelihoods. Diversion of financial and human resources from Hansen's disease programs to fight against COVID-19, interruption of key activities for early diagnosis and management and non-availability of Hansen's disease care in healthcare centers has threatened the continuum of care for leprosy patients. A setback in the interruption of transmission and early diagnosis is hence expected, as pointed out by the special rapporteur on the elimination of discrimination against persons affected by leprosy and their family members (Cruz 2020).

As more and more hospitals were being converted to COVID-19 facilities, access to health care became difficult for patients during that period. While the impact of the pandemic has been reported on several dermatological diseases (Gisondi et al 2020, Tejera-Vaquerizo et al 2020, Balestri et al 2020), similar data pertaining particularly to people affected by leprosy is lacking. The situation was especially dire for leprosy patients, who relied on government institutions for medications and care, dressings, and splints. In the present survey, 58.6% of patients reported difficulty in the procurement of medicines. This highlights the urgent need to address the gap in public health infrastructure.

Additionally, regular follow-up is essential in these patients for monitoring nerve function and for diagnosis and management of reactional episodes. Over half of participants reported worsening of disease, and 14.8% reported fever and joint pains, likely due to severe reactions. Treatment of leprosy reactions is a major concern as most of these drugs are given for a stipulated period and the dose has to be adjusted depending on the severity of the reaction, side effects and co-morbidities, hence patients need to visit the health facility for follow-up. Delay in management of these episodes will result in a rise in the number of deformities and disabilities if the pandemic and its restrictions continued for longer period.

A recent study from Brazil reported four cases of leprosy and COVID-19 co-infection (Santos et al 2021). Incidence of COVID-19 in leprosy patients was 1%, all four patients had lepromatous leprosy and died due to the infection. Two of the patients (1%) in the present study had been diagnosed with COVID-19 infection. No mortalities were reported in this study, although this may be due to the telephonic nature of the survey and similar findings have been reported in some more studies (Santos et al 2021, Cerqueira et al 2021). The sharp rise in pandemic as noted in the subsequent waves will further increase the cases of co-infection, especially in endemic countries like India. Larger studies are needed to assess the outcome of COVID-19 infection in leprosy patients.

Various measures for the prevention of viral transmission have been suggested by health agencies all over the world, including isolation, social distancing, frequent hand washing and use of face masks. Nearly 85% of the study participants were below poverty line prior to the pandemic and three-fourths further reported income loss during the pandemic. These individuals may not have decent housing, access to clean water and soap or income security with which to ensure subsistence during the quarantine, as well as to purchase masks and other hygiene and protection items. Use of cotton scarfs and reusable cloth masks is a practical approach in this population. Majority of patients (55.6%) in our study were in fact using cloth scarves to cover their faces, however, sharing these with family members (reported by 26% of participants) is a worrisome aspect that needs to be advised against.

Different countries and places have been trying different methods to provide services to the patients of leprosy despite the restrictions. Telemedicine service by the physicians was a common practice during the initial phase of COVID-19 pandemic related restrictions. Threefourths of the participants in the present study agreed that it might be a useful approach. However, majority of the leprosy-affected people are very poor and may not have access to smartphones and the internet and some are not aware of utilizing technology optimally, using applications like WhatsApp and forwarding clinical images. Other challenges with telemedicine are misdiagnosis resulting from poor photo quality (leprosy patients need to be examined in daylight and all the sites should be checked), non-availability of electronic medical records, communication gap between treating dermatologist and patients, inability to examine nerve function and inherent problems in carrying out investigations like slit skin smear and skin biopsy (Kumar et al 2020). Telemedicine is a good tool for maintaining the continuum of care, but we need to improve it and make it more user friendly.

Persons affected by leprosy face extreme healthrelated stigma (Patil et al 2019, Van't Noordende et al 2019) and these inequities present a further challenge during the current pandemic (Mahato et al 2020). Additional stigma against people affected by COVID-19 may compound the matter, preventing them or their family from receiving needed assistance. Also, a large number of patients (44.9%) believed that leprosy made them more prone to contract COVID-19 infection. Half of the patients reported feeling anxious, depressed, stressed or frightened during the pandemic in the present study. Consternation regarding been placed in quarantine, losing livelihood, healthcare costs and risk of mortality may be the factors contributing to the disturbance in mental status. Hence, we also need to

address these issues, and although telemedicine may not help us in making the correct diagnosis for skin, but we can use screening tools to assess mental health and address these issues by listening to the problems and counseling. It can also be a good tool for teaching self-care to patients.

The national leprosy programs and government have diverted the funds and staff to the fight against COVID-19 which has resulted in a substantive reduction on leprosy related active initiatives, such as key activities for early diagnosis and concomitant prevention of physical impairments (such as active case detection and chemoprophylaxis); provision of multidrug therapy; management of leprosy reactions, and complementary care essential for the prevention of physical and psychosocial disabilities, such as wound care or self-care groups. Netherlands Leprosy Relief Indonesia suggested prescribing MDT for longer than one month to improve drug availability during the pandemic. However, the officials reported a 40% reduction in the detection of new cases, indicating resources for new case detection had been shifted elsewhere. This threatens the continuum of care for people affected by leprosy and may eventually lead to a setback in the early diagnosis and treatment at this critical juncture and thwart our effective collaborative action towards zero leprosy. This interruption in leprosy services may result in an increase in the number of leprosy cases in children, as well as increase in cases of children diagnosed with irreversible physical impairments. Global partnership for zero leprosy (GPZL) leadership team identified similar issues of interrupted MDT supply chain, reduced access to health care and difficulty in management of leprosy reactions and wound care in 34 participant countries (Cavaliero & Quao 2020). Actions taken for mitigating these issues included

streamlining the MDT supplychain, engagement of family members in examining household contacts, use of mobile phones to obtain consultations and mobile apps for daily leprosy control activities, such as SkinApp and LEARNS. COVID-19 call centers have been established in some countries to provide psychological support to patients. Due to the economic crisis, several non-governmental organizations (NGOs) and civil society organizations (CSOs) working with leprosy patients prior to pandemic broadened their mandate to provide humanitarian services such as food, water, and hand hygiene.

The current global crisis calls upon us to develop short, medium and long term action plans and need to identify the key impact of the current pandemic and its related measures on the people affected with leprosy. While medical treatment of leprosy during the pandemic has been addressed in literature (Abdelmaksoud & Gupta 2020, Rathod et al 2020), practical aspects of management including procurement of medicines and diagnosis and treatment of complications has not received adequate attention. We also need to address the issues of mental health of leprosy affected people by teleconsultation or tele counseling. Possible dire consequences of leprosy and COVID-19 co-infection further underscores the need for implementation of preventive measures in people affected by leprosy. The need of the hour is modification in programmes and measures that are more relevant to this community.

A few suggested measures include follow up of patients via telephone calls, social media or text messages by health care workers and ASHA workers. Accompanied MDT should be considered for all registered patients. The Ministry of Health should be requested to inform state and district health centres to make provision for extra quantity of MDT blister packs in order to prevent interruption of the supply chain. Health centres must be advised to dispense treatment to all leprosy patients regardless of previous registration status. Leprosy patients who develop acute signs and symptoms of lepra reaction/new nerve function loss during the course of regular treatment or any drug allergy or adverse effects must immediately consult the closest functioning leprosy treatment facility/general health centre for appropriate management.

### Conclusion

Current health care guidelines have missed taking into account the marginalized communities such as people affected by leprosy who have been facing difficulties in obtaining health care as well as the implementation of preventive measures. The present study highlights the gaps in healthcare delivery and social inequalities along with their impact on the health, livelihood, and mental status of these patients during the current COVID-19 pandemic.

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### Supplementary material

### Questionnaire (English/Hindi/Punjabi)

The challenges faced by people affected with leprosy during the COVID pandemic a questionnaire based study

- 1. Your name / आपका नाम / ਤੁਹਾਡਾਨਾਮ\*
- 2. Your age / आयु / ਤੁਹਾਡੀਉਮਰ\*
- 3. SEX / लिंग / **ਲਿੰਗ**\*
- Female / **ਨਾਰੀ**
- Male / ਨਰ
- Prefer not to say / ਨਾਕਹਿਣਾਪਸੰਦਕਰੋ
- Other / **ਹੋਰ**:
- 4. Residence / रहने का स्थान / **ਨਿਵਾਸ**\*
- Where do you live now a days? आजकल आप कहा रहते हो **ਤੁਸੀਂਅੱਜਕੱਲਕਿਥੇਰਹਿੰਦੇਹੋ**?
- Own house /अपना मकान / **ਆਪਣਾਘਰ**
- Rented house / किराये का घर / विउाप्टे टा
   भवाठ
- Have no place to live, stay on road, temporary shelters / रहने के लिए कोई जगह नहीं है, सड़क, अस्थायी आश्रयों पर रहते हैं / विच्हिलप्टीवेप्टीनगुग्तर्गी, मज्जवरे, अमम्पष्टीयताचगां
- Others / ਹੋਰ
- 6. EDUCATION / शिक्षा / সিঁধিਆ\*
- Post graduate / पोस्ट ग्रेजुएट / यॅमटग्रैनुप्टेट
- graduate / स्नातक / **ਪੋਸਟਗ੍ਰੈਜੁਏਟ**
- 12th Standard / 12 वीं कक्षा / 12 दींनभाउ

- can read and write / पढ़ और लिख सकते हैं / 12 दींनभाउ
- illiterate / अशिक्षित / अनपढ़ / **ਅਨਪੜ**
- 7. Occupation / व्यवसाय / धन्धा / विंउ
- business / व्यापार/ दुकानदार / वार्चेघार
- government job / सरकारी नौकरी /
   मठवराठीठेवठी
- Job in a private firm / एक निजी कंपनी में नौकरी / **ਇੱਕਪ੍ਰਾਈਵੇਟਫਰਮਵਿੱਚਨੈਕਰੀ**
- unemployed / बेरोज़गार / **घेनुऩगान**
- daily wage labourer / दिहाड़ी मजदूर /
   ििਹਾੜੀਮਜ਼ਦੁਰ
- student / ন্তার / বিনিশেত্রদী
- homemaker / ਸੁहनी / ਘਰਦਾਕੰਮ
- What was your monthly income before the lockdown? / लॉक डाउन से पहले आपकी मासिक आय क्या थी? / उालार्घंटी टें पਹिलांटु राडी भरी तादा जाभरत ोविंती मी?
- <2640/
- 2640-8000
- 8001-13500
- 13501-20,000
- 20001-26500
- 26501-52733
- >52734
- Have you suffered financial or income loss in the last few months? / क्या आपने पिछले कुछ महीनों में पैसे या आमदनी कम हुई है ?

# / ਕੀਪਿਛਲੇਕੁਝਮਹੀਨਿਆਂਵਿੱਚਤੁਹਾਨੂੰਵਿੱਤੀਜਾਂ ਆਮਦਨੀਦਾਨੁਕਸਾਨਹੋਇਆਹੈ?\*

- Yes / हाँ / **ਹਾਂ**
- No / नहीं / **ਨਹੀਂ**
- 10. What is your monthly income now? / अब आपकी मासिक आय क्या है ? / **ਹੁਣਤੁਹਾਡੀ** ਮਹੀਨਾਵਾਰਆਮਦਨੀ ਕਿੰਨੀਹੈ?.....
- 11. During the last few months were you tested for Corona virus / पिछले कुछ महीनों के दौरान आपको कोरोना वायरस के लिए परीक्षण किया गया था / **ਪਿਛਲੇ ਕੁਝ ਮਹੀਨਿਆਂ ਦੌਰਾਨ ਤੁਹਾਡਾ ਕੋਰੋਨਾ ਵਾਇਰਸਲਈਟੈਸਟਕੀ ਤਾਗਿਆਸੀ**\*
- Yes / हाँ / **ਹਾਂ**
- No / नहीं / **ਨਹੀਂ**
- 12. If yes then what was the result? / यदि हाँ

   तो परीक्षण का परिणाम क्या था? /

   नेਹਾਂਤਾਂਨਤੀਜਾਕੀਹੋਇਆ
- Positive / पॉजिटिव / **मवाराजभव**
- Negative / नेगेटिव / **तवाराउभव**
- 13. How long (Years/months) have you<br/>suffered from leprosy / आप कुष्ठ रोग से<br/>कितने समय (वर्ष/महीने) से पीड़ित हैं /<br/>ट्रमींविंਨेमभें (मारुगं / भग्गीतिਆं)ठॅंबेंड्र्उॅंभीइडराँ\*
- less than 6 months / 6 महीने से कम / 6
   भਹीਨੇਤੋਂਵੀਘੱਟ
- 6 months to 1 year / 6 महीने से 1 साल तक /
   6 भगीते 1 माल
- 1-5 years / 1-5 साल / 1-5 **माल**
- >5 years / 5 साल से अधिक / 5 **मालउेंदय**

- Have you completed your 6 months/1 year MDT treatment course / क्या आपने अपना 6 महीने / 1 साल का एमडीटी कोर्स पूरा कर लिया है / वीट्रमींभाभ्यष्टा 6 भर्रातिभां / 1 मालस्टा MDT ਇਲਾਜ਼ਦਾਕੋਰਸਪੂਰਾਕੀਤਾਹੈ?
- Yes / हाँ / **ਹਾਂ**
- No / नहीं / **ਨਹੀਂ**
- 15. If yes, then why do you go to hospital now? यदि हाँ, तो अब आप अस्पताल क्यों जाते हैं ? नेਹਾं, उांगुटडुमींग्रिभ्रेडास्ट्रिनांटेंग्रे?
- For treatment of reaction / प्रतिक्रिया (reaction) के उपचार के लिए / भूडीवउभर्टेष्टिलग्लष्टी
- You feel your disease is not cured fully / आपको लगता है कि आपकी बीमारी पूरी तरह से ठीक नहीं हुई है / ट्रमींभਹिमुमवर्ट्येघिभार्ची धूर्वीउत्तुंठीवरुर्योंठै
- For treatment of foot or hand wounds or ulcers / पैर या हाथ के ज़ख़्म के उपचार के लिए / **ਪੈਰਜਾਂਹੱਥਦੇਜ਼ਖ਼ਮਾਂਜਾਂਅਲਸਰਦੇਇਲਾਜਲਈ**
- For treatment of Weakness in hands or feet / हाथों या पैरों में कमजोरी के उपचार के लिए / **उॅमांनांभैठांदिंचवभन्नेठीटेप्टिलानलप्टी**
- Others Specify / कोई और कारण /
   ਹੋਰ.....
- Do you suffer from some other disease also / क्या आप किसी अन्य बीमारी से भी पीड़ित हैं / वीट्रमींविमेਹੋਰघिमाਰीठेंदीਪीइउठे
- diabetes / मधुमेह / **ਸ਼ੂਗਰ**
- heart problem / हृदय की समस्याएं /
   चिल्लटीमभॅमिभा
- hypertension or high BP / उच्च रक्तचाप या हाई बी.पी. / **उाष्टीਪਰਟੈਨਸ਼ਨਜਾਂਉੱਚਬੀ.ਪੀ**.

 chest problems like asthma, infection or tuberculosis / छाती की समस्याएं जैसे अस्थमा, संक्रमण या तपेदिक / टभा,

# ਸੰਕਰਮਣਜਾਂਟੀਵੀਵਰਗੀਆਂਛਾਤੀਆਂਦੀਆਂਸਮੱਸਿ ਆਵਾਂ

- idont suffer from any other illness / मैं किसी अन्य बीमारी से पीड़ित नहीं हूं / भैंकिमेਹੋਰਬਿਮਾਰੀਤੋਂਪ੍ਰੇਸ਼ਾਨਨਹੀਂਹਾਂ
- Other / अन्य / **ਹੋਰ**:
- 17. How frequently did you used to visit skin OPD for follow up, before lockdown / लॉक डाउन से पहले आप फॉलोअप के लिए कितने समय बाद जाया करते थे /

# ਤੁਸੀਂਲਾਕਡਾਉਨਤੋਂਪਹਿਲਾਂ,ਫਲੋਅਪਕਰਨਲਈਕਿੰ ਨੀ ਵਾਰਚਮੜੀਦੀਓਪੀਡੀਦਾਦੇਰਾਕੀਤਾ\*

- every month / हर महीने / **ਹਰਮਹੀਨੇ**
- Every two months / हर 2 महीने / ਹਰਦੋਮਹੀਨੇਬਾਅਦ
- Every 6 months / हर 6 महीने में / ਹਰ 6 ਮਹੀਨੇਬਾਅਦ
- Whenever the disease is out of control / जब भी बीमारी नियंत्रण से बाहर होती है / नर्स्टेंदीघिभावीतिर्मंउवटठेंघाਹवर्तुंसीवै
- 18. How was your disease during the lockdown period / लॉकडाउन अवधि के दौरान आपकी बीमारी कैसी थी / **उाਲार्घर्टीटेभਰमेर्टेउा**

### ਨਤੁਹਾਡੀਬਿਮਾਰੀਕਿਵੇਂਸੀ\*

- improved / काफी बेहतर / मुयाउ
- worsened / बदतर हुई / **दिवाद्र विभा**
- experienced increase in redness and pain in skin / त्वचा में लाली और दर्द में वृद्धि / लालीअउेचभज्ञीदिचट्उट्दिचद्य्याउेष्टिभाउै

- developed fever and joint pains / बुखार और जोड़ों का दर्द / **घुधाउभउनेज्ञांटेटवट**
- developed pain and increasing weakness and sensory loss / दर्द में वृद्धि और बढ़ती कमजोरी और सूनापन / **दिवमउट्उट्भउेट्य** उठीवभत्तेठीਅउेमँदेट्ठाट्रभवठ्ठवमठ
- same as before lockdown / लॉक डाउन से पहले जैसा / उालार्घटीठेंभाठिलांदांग
- How did you manage your skin condition during the lockdown / लॉकडाउन के दौरान आपने अपनी बीमारी का कैसे ख्याल रखा / उालार्घटीटेंठाठट्रमींभायटीछभद्वीटीमविडी टाविहेंपृर्धयतवीडा\*
- continued the same medicines as were prescribed / वही दवाइयाँ जारी रखीं जो बताई गयी थी / ਨਿਰਧਾਰਤਕੀਤੀਆਂਗਈ ਆਂੳਹੀਦਵਾਈਆਂਜਾਰੀਰੱਖੋ
- teleconsultation with doctor by whatapp or phone call / व्हाट्सएप या फोन कॉल द्वारा डॉक्टर के साथ टेलीकॉन्सेशन / **इटमऔयनां**

### ਫੋਨਕਾਲਦੁਆਰਾਡਾਕਟਰਨਾਲਟੈਲੀਕਾੱਨਸਲੇਸ਼ਨ

- stopped all or few medicines / सभी या कुछ दवाओं को बंद कर दिया / माउी भांनांवु इट्राप्टी भांर्घटव ठटिंडीਆं
- started natural remedies / प्राकृतिक उपचार शुरू किया / **वुट्टवडीਉਪਚਾਰਸ਼ੁਰੁवीडे**
- consulted a local doctor or dispensary / एक स्थानीय चिकित्सक या औषधालय से परामर्श किया / मम्रातवडावटतनांडिमर्थेंग्रती उंग्रेलग्रलष्टी
- other / अन्य / **ਹੋਰ**......
- 20. Do you think Teleconsultation is helpful? / क्या आपको लगता है कि Teleconsultation

# मददगार है ? **वीਤੁਹਾਨੂੰਲਗਦਾਹੈਕਿ**

Teleconsultation **ਮਦਦਗਾਰਹੈ**?

- Yes / हां / **ਹਾਂ**
- No / नहीं / **ਨਹੀਂ**
- 21. Did you face any difficulty during the last 3 months related the lock-down? / क्या आपको पिछले 3 महीनों के दौरान लॉक-डाउन से संबंधित किसी कठिनाई का सामना करना पड़ा है ? वीਪਿਛਲे 3 ਮਹੀਨਿ ਆਂਦਰਾਨ ਤੁਹਾਨੂੰਲਾਕ-

# ਡਾਉਨਨਾਲਸਬੰਧਤਕਿਸੇਮੁਸ਼ਕਲਦਾਸਾਹਮਣਾਕਰ ਨਾਪਿਆਹੈ?

- Yes / हां / **ਹਾਂ**
- No / नहीं / **ਨਹੀਂ**
- 22. What were the Practical problems YOU faced during lockdown regarding the treatment ? उपचार के बारे में लॉकडाउन के दौरान आपके सामने क्या व्यावहारिक समस्याएं थीं ?

### ਇਲਾਜਦੇਸਬੰਧਵਿੱਚਲੈਕਡਾਉਨਦੇਰਾਨਤੁਸੀਂਕਿਹ

# ੜੀਆਂਵਿਹਾਰਕਸਮੱਸਿਆਵਾਂਦਾ**ਸਾ**ਹ

### ਮ**ਣਾਕੀਤਾ**ਸੀ\*

- difficulty in getting the tests done/ परीक्षण, खून की जांच कराने में कठिनाई / टैमटवउद्द ਉ्टद्छिभुम्नवस्ठ
- Difficulty in Procurement of medicines/ दवाइयाँ लेने में कठिनाई / ट्राष्ट्रीਆं टी भ्वीट दिन्म मुब्ब क्र
- Delay in diagnosis of the condition / बिमारी का निदान / डायग्नोज़ नहीं हो पाया / मविडीर्टेतिरुग्तदिरुरेवी
- Difficulty in starting the treatment for the disease/ बीमारी का इलाज शुरू करने में कठिनाई / घिमावीरेप्टिलानमुनुवरतदिचमुम्रवल

 Difficulty in getting the wound care, dressing of ulcers/ घाव की देखभाल, अल्सर की ड्रेसिंग प्राप्त करने में कठिनाई / स़झमर्टी

### ਦੇਖਭਾਲ, ਅਲਸਰਾਂਦੇਡਰੈਸਿੰਗਕਰ

### ਵਾਉਣਵਿਚਮੁਸ਼ਕਲ

 Difficulty in getting the splints, MCR footwear or protective footwear/ स्प्लिन्ट्स, MCR फुटवियर या सुरक्षात्मक जूते पाने में कठिनाई / **मਪਲਿੰटम**, **ਐਮਸੀਆਰਫੁटਵੀਅ**

# ਰਜਾਂਸੁਰੱਖਿਆਵਾਲੀਆਂਜੁੱਤੀਆਂਪ੍ਰਾਪਤਕਰਨਵਿਚ ਮੁਸ਼ਕਲ

- other / कोइऔरपरशानी/**ਹੋਰ**......
- 23. Please mention what other difficulty you faced during lockdown/ कृपया यह उल्लेख करें कि लॉकडाउन के दौरान आपको और क्या कठिनाई का सामना करना पड़ा /

### ਕਿਰਪਾਕਰਕੇਦੱਸੋਕਿਤਾਲਾਬੰਦੀਦੇਰਾਨ

ਤੁਹਾਨੂੰਕਿਹੜੀਆਂਹੋਰਮੁਸ਼ਕਲਾਂਦਾਸਾਹਮਣਾਕਰਨਾ ਪਿਆ

- Lost your job/ अपनी नौकरी खो दी / **भाਪਣੀਨੈਕਰੀਗਵਾਦਿੱਤੀ**
- Difficulty in getting food items / खाने का सामान प्राप्त करने में कठिनाई /

### ਖਾਣਪੀਣਦੀਆਂਚੀਜ਼ਾਂਪ੍ਰਾਪਤਕਰਨਵਿਚਮੁਸ਼ਕਲ

 Difficulty in getting clean water and basic hygiene/ साफ पानी और बुनियादी स्वच्छता प्राप्त करने में कठिनाई /

### ਸਾਫਪਾਣੀਅਤੇਮੁਲੀਸਫਾਈਲੈਣਵਿਚਮੁਸ਼ਕਲ

- Others/ কोइ और परशानी /
   টব.....
- 24. Were you informed about the risks and preventions measures related to Covid-19?/ क्या आपने कोविद-19 से संबंधित जोखिमों और रोकथाम के उपायों के बारे में बताया था?

# ਕੀਤੁਹਾਨੂੰਕੋਵਿਡ -19 ਨਾਲਜੁੜੇਜੋਖਮਾਂਅਤੇਰੋਕਥਾ ਮੳਪਾਵਾਂਬਾਰੇਜਾਣਕਾਰੀਦਿੱਤੀਗਈਸੀ?

- Yes / हां/**ਹਾਂ**
- No / नहीं/**ਨਹੀਂ**
- 25. Who informed you about COVID and its preventive strategies?/ आपने COVID और इससे बचने के तरीके के बारे में किसने बताया ? **उ्**टार्ਨੂवैदीडਅउंष्टिमटीਆंठेवषाभठहतीडीਆं घाठेविमतेनाहवाठीटिंडी?
- Health worker/ स्वास्थ्यकर्मी /
   **गिਹਤਕਰਮਚਾਰੀ**
- Doctor/ डॉक्टर / **ਡਾਕਟਰ**
- Newspaper and TV channels / अखबार और टी.वी. / **ਅਖਬਾਰਅਤੇटीਵੀਚੈਨਲ**
- Whatsapp, google,face book etc / व्हाट्सएप, गूगल, फेसबुक आदि / **स्टमभैध**,

### ਗੂਗਲ, ਫੇਸਬੁੱਕਆਦਿ

- Others/ अन्य / **ਹੋਰ**.....
- 26. Did you go to work during the lockdown? क्या आप लॉकडाउन के दौरान काम पर गए थे? / बीट्रमींउग्लग्धंटीर्टेंठग्तबंभडेग्रोटेमी?
- Yes/ਗੈਂ/**ਹਾਂ**
- No / नहीं/**ਨਹੀਂ**
- 27. Did you wear mask to protect yourself from infection/ क्या आपने अपने आपको संक्रमण से बचाने के लिए मास्क पहना था / वीउ़मींभा भटेभा भर्तुला रोघा मास्क पहना था हि घीभा मवभा प्रे
- Yes/ਗ਼ੱ/**ਹਾਂ**
- No / नहीं/**ਨਹੀਂ**
- 28. What type of mask did you use ? आपने किस प्रकार का मास्क पहना था? टुमींविमविमभट्टाभामवर्थाचरिरुभामी

- triple layer surgical mask / ट्रिपल लेयर सर्जिकल मास्क
- cloth mask / कपड़े का मास्क/ **वॅथज्रेटाभामव**
- Any type of mask / किसी भी प्रकार का मास्क / विमेदीविमभटाभागव
- other
- 29. If you used reusable mask, like cloth towel, did you share it with your family members?
- Yes/हाँ/**ਹਾਂ**
- No / नहीं/**ਨਹੀਂ**
- How did you practise hand hygiene / आपने अपने हाथ कैसे साफ़ रखे /
   उुमींभाथहेर्ट्यमबिर्देमाढर्ट्ये
- Plain water सादापानी **मारूपाटी**
- Soap and water / साबुन और पानी / माघटभाडेपाटी
- Alcohol based sanitizer / अल्कोहल वाला सैनिटाइजर / **अलवॆठलदालगमैतीटाधित्तव**
- did not practise hand hygiene / हाथ की स्वच्छता का अभ्यास नहीं किया / **उँषमढाधीटालजिਆमठावीउा** /
- 31. How much distance should be maintained to protect yourself from COVID 19 / COVID 19 से खुद को बचाने के लिए कितनी दूरी बनाए रखनी चाहिए / **भाਪहेभाधर्तुवेदीड** 19

# ਤੋਂਬਚਾਉਣਲਈਕਿੰਨੀਦੂਰੀ ਬਣਾਈਰੱਖਣੀ ਚਾਹੀਦੀਹੈ

- No distance / कोई दुरी नहीं
- One meter/ 1 मीटर
- Two meter / 2 मीटर
- Don't know / नहीं मालूम
- 32. Did you practice social distancing
- Yes/हाँ/**ਹਾਂ**
- No / नहीं/**ਨਹੀਂ**

- 33. If no, Give reason / यदि नहीं, तो उसका कारण बताएं / **नेतर्ठी**, **डांप्टिमच्य्य्यतर्टमे**.......
- 34. How did you feel during the lockdown? / आपको लॉकडाउन के दौरान कैसा महसूस हुआ ? उग्लग्धंटीरटेंठाठट्रमींविदेंभਹिमुमवीउग?
- Anxious/depressed / चिन्तित / उदास /

   **चिंउउ** / **ਉਦਾਸ**
- Relaxed / कोई तनाव या चिंता नहीं / अग्ठाभर्टाष्टिब
- frightened / डरा हुआ / **ਡਰੇਹੋਏ**
- Same- no change /समान- कोई परिवर्तन नहीं /
   ਇੱਕੋ- ਕੋਈਤਬਦੀਲੀਨਹੀਂ
- stressed / तनाव ग्रस्त /**उटाभ**
- 35. Did you feel that you are at increased risk of getting infected due to your disease ? क्या आपको लगता है कि आपको अपनी बीमारी के कारण संक्रमित होने का खतरा ज्यादा है ? वीट्ट रार्टु कार टौविट्ट रार्टु भा पटि विमारी वार तरु रार्स रार्ट से स्ट्रिय के स्वार के स्वार के स्वार के स्वार करा संक्रमित होने का खतरा ज्यादा है ? वीट्ट रार्ट् का स्ट्र के स्वार के स्वा
- Yes/ हाँ/**ਹਾਂ**
- No/ नहीं/**ਨਹੀਂ**

36. How was your sleep during lockdown / लॉकडाउन के दौरान आपकी नींद कैसी थी

### / ਤਾਲਾਬੰਦੀਦੈਰਾਨਤੁਹਾਡੀਨੀਂਦਕਿਹੋਜਿਹੀਸੀ\*

- increased sleep / ज्यादा नींद आती थी / **ਨींਦਵੱਧਗਈ**
- decreased sleep / कम नींद आती थी / तींस्थॉटराष्टी
- no change / नींद में कोई बदलाव नहीं /
   वेधीउघटीलीतर्ठा
- 37. What was the effect of lockdown on your diet or eating habits? आपके आहार या खाने की आदतों पर तालाबंदी का क्या प्रभाव था? उुराडीभुरावनांधाष्ट्रीष्टरीआंआएउांडेडा लार्घटीरावीयूडादमी?\*
- Ate more / अधिक खाने लगे / **ਹੋਰਖਾਧਾ**
- Ate less/ कम खाया / **ਘੱਟਖਾਧਾ**
- No change in dietary pattern / खाने पीने में कोई बदलाव नहीं /
   भठावर्थैटठतदिछवेधीउघरीस्रीतर्ग्रां

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