

# Plenary IV: Telemedicine and digital health tools for COVID-19 and beyond

## Bangladesh

**Sukhendu Shekhor Roy**

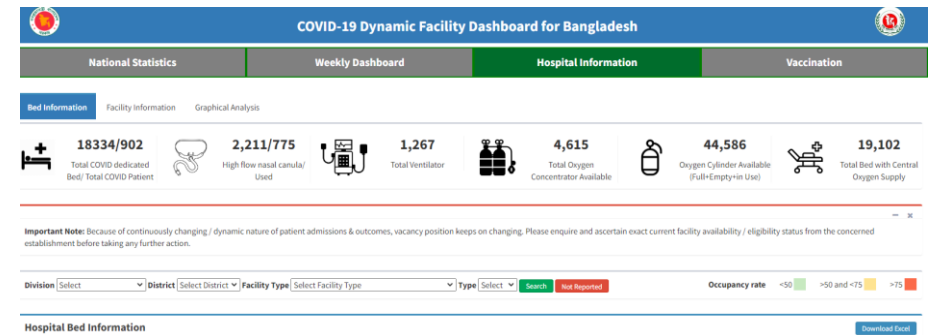
Sr. System Analyst

On behalf of Bangladesh Team

**Key telemedicine interventions and digital health tools developed to mitigate impact of COVID-19 pandemic**

# Digital Tools during Covid-19

- Implementation of Covid-19 Surveillance System (DHIS2) to provide QR code based test result and Certificate by SMS and online verification system
- CoronaBD App
- Realtime Corona Situation dashboard
- Realtime Hospital readiness dashboard
- Corona Tracer App for Contact tracing
- Surokkha Vaccination App



# Mobile based Telehealth

# Telehealth during COVID-19



## **SHASTHO BATAYON # 16263** *National Telehealth Service Centre*



**Sep 2015 - Ongoing**

### **Key Services**

- Doctors Advice & Treatment
- Hospital Information
- Ambulance Info & Booking
- Complaint & Suggestions
- Accident Information Services
- Corona Related Services
- Adolescent Health Services
- Family Planning Service
- Referral Services

**COVID-19 Service provided**  
**16,253,738**



## **COVID-19 TELEHEALTH CENTER** **# 0966777222**



**June 2020- April**  
**2021**

### **Key Services**

- COVID 19 positive patients assessment, treatment, advice & Counselling services
- COVID 19 positive patients follow up services
- Emergency Ambulance services
- Emergency Hospitalization
- Emergency Food & medicines
- Burial support
- Referral services

**Covid-19 Service provided**  
**947,960**

# Telehealth during COVID-19



**MA TELEHEALTH CENTER**  
**# 09666888888**

## Key Services

- Pregnant Mothers, treatment, Counselling & referral services.
- Lactating mothers & treatment of her child up to 02 years of age, Counselling & referral services
- General Health & Mental Health Services for Pregnant & Lactating mothers.
- Provide information about nutrition of pregnant and Lactating mothers & her child
- Corona Related Services

**COVID-19 Service provided**  
**209,321**



**June 2020-**  
**Feb 2021**



**Bangabandhu Sheikh Mujib**  
**Medical University(MSMMU)**  
**Specialized Telemedicine Centre**  
**# 09611677777**

## Key Services

- Provide specialised doctors advice, Counselling & treatment.
- Referral Services

**Specialised Health Service Provided**  
**during Covid-19**  
**102,963**



**April 2020 -**  
**Nov 2021**

# Institutional Telemedicine

# Present Facility based Telemedicine System

- Specialized Hospital-9
  - Medical College Hospital-9
  - District Hospital-11
  - Sub District Hospital-64
- (Remote and Hard-to-reach)



**94 Telemedicine Center  
including 1 (one)  
Monitoring Center**

- Processing almost done for Scaling up 150 Subdistrict Hospitals



# Present Facility based Telemedicine System

Telemedicine done through Video Conferencing

## Key Services

- Specialized Doctor (Professor and Consultant) available through Roster Duty
- All sorts of Consultation available in Telemedicine
- Remote and hard-to-reach telemedicine centers connect to tertiary facilities

Single Point Camera



Tertiary Hospital

Multi Point Camera



VPN Connection



Hospital-1



Hospital-4



Hospital-2



Hospital-3

Primary & Secondary Hospital

How was it implemented? What  
was the result of the  
implementation of the tool?

# KEY FEATURES OF SHASTHO BATAYON 16263



## e-Prescription

- Doctors Name and BMDC Registration
- Prescription ID
- Prescribed Drugs, Dosage formulation and Schedule
- Patient history captured



## Automated IVR Call

- Health Advice
- Awareness about health issues
- Emergency Announcement
- Important Health promotion

## SMS Promotion

- Information dissemination & expansion
- Notification
- Reminder
- Maternal and Child Health and N.C.D
- Complaint Management Service



<http://16263.dghs.gov.bd/report>





# SHASTHO BATAYON 16263



Doctors Advice,  
Treatment &  
ePrescription



1

Ambulance Info &  
linkages with 999



3

Accident  
Information



5

**NEW**  
Chronic diseases (NCDs)  
+ Mental Health



7

Specialists services,  
referral system



9

Health Information/  
Counselling/



2



Complaint  
Management  
System

4

**NEW**  
Corona related advice,  
Treatment & referral  
& **Vaccine info**



6

Adolescent SRH &  
Family Planning  
Services



8

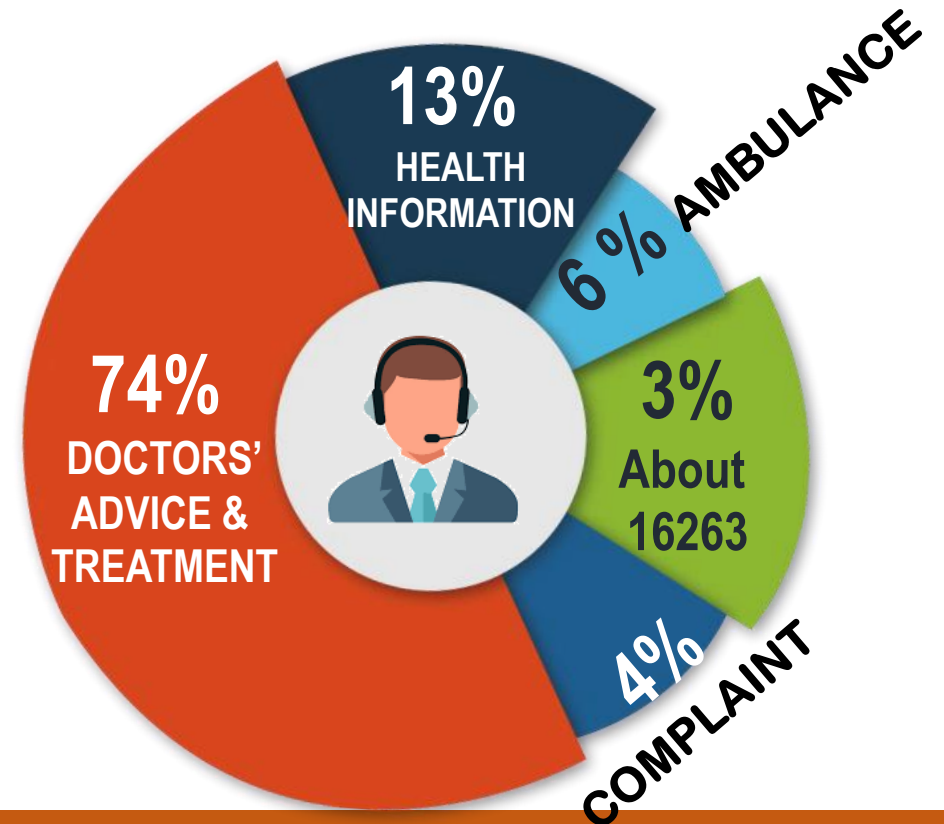
**NEW**  
Medical Assessment,  
follow up calls,  
ePrescription & referral



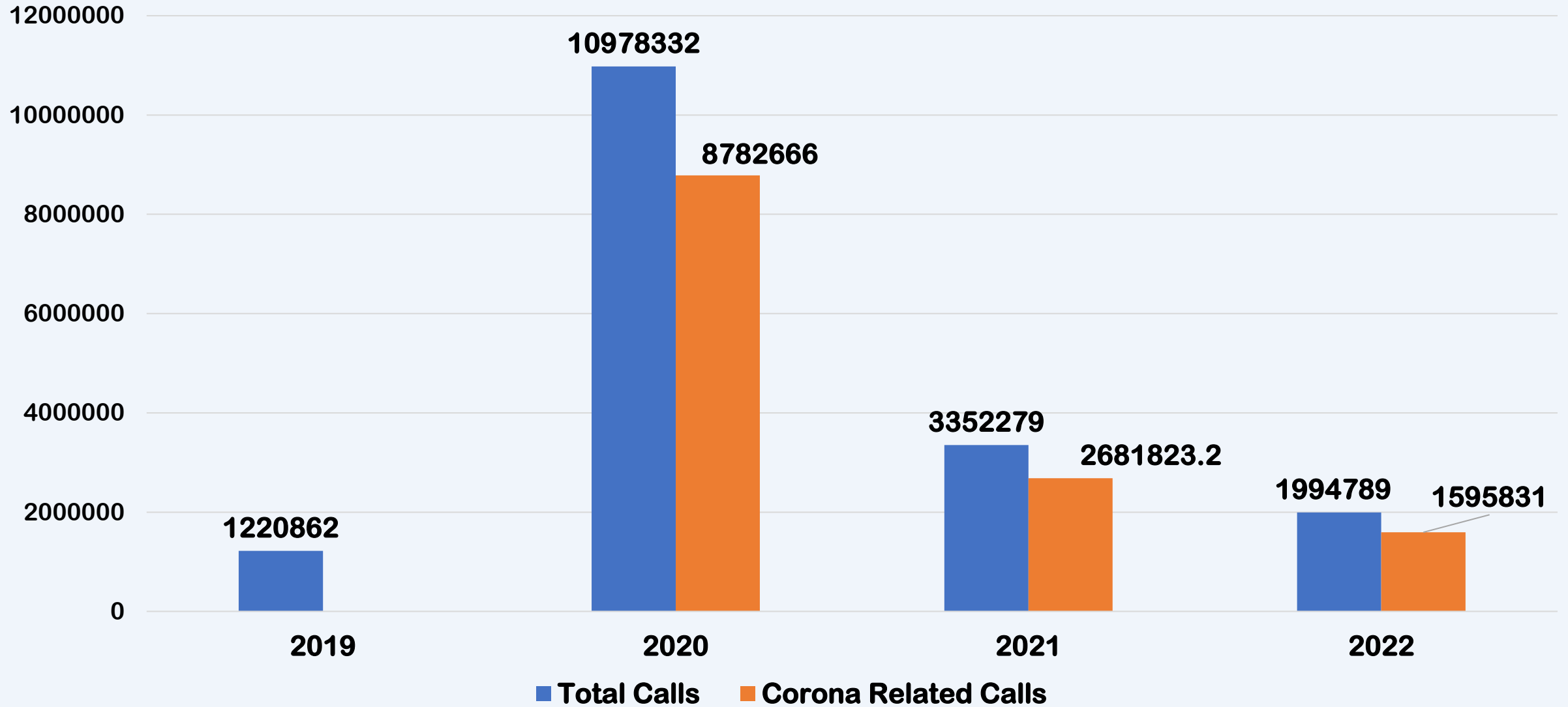
10



# IMPACT: Service Provided From Shastho Batayan (16263)

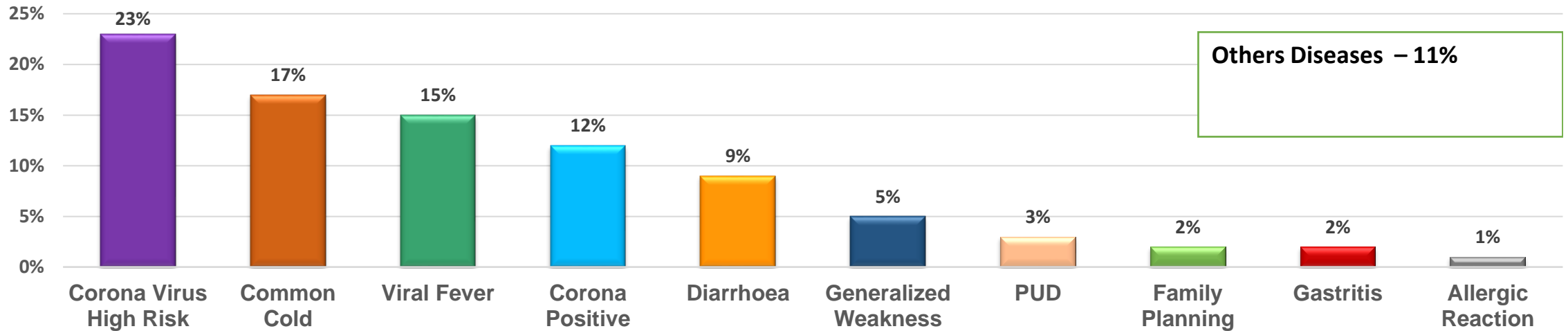


# TOTAL CALL VOLUME STATISTICS: (2020 - 2022)

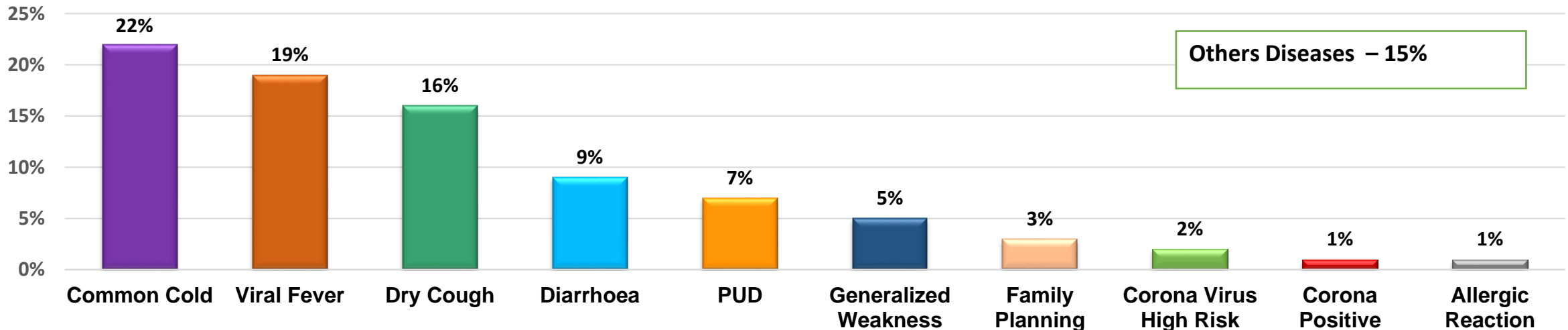


# Distribution of Top 10 Diseases/Conditions

Time Period : 8<sup>th</sup> March,2020 to 31st December, 2022



Time Period : 1<sup>st</sup> January,2023 -- 31<sup>st</sup> January, 2023





# Integrated CRM & e-Prescription



Customer Relationship Management (CRM), is a set of integrated tools, that consists patients information and his history, previous medication and it can generate prescription through mobile phone (e-Prescription)

The screenshot shows a web browser window with a URL: 192.168.101.203/trc/Home/home\_latest?callid=1531045206.57835&req=01964016581. The form contains the following fields:

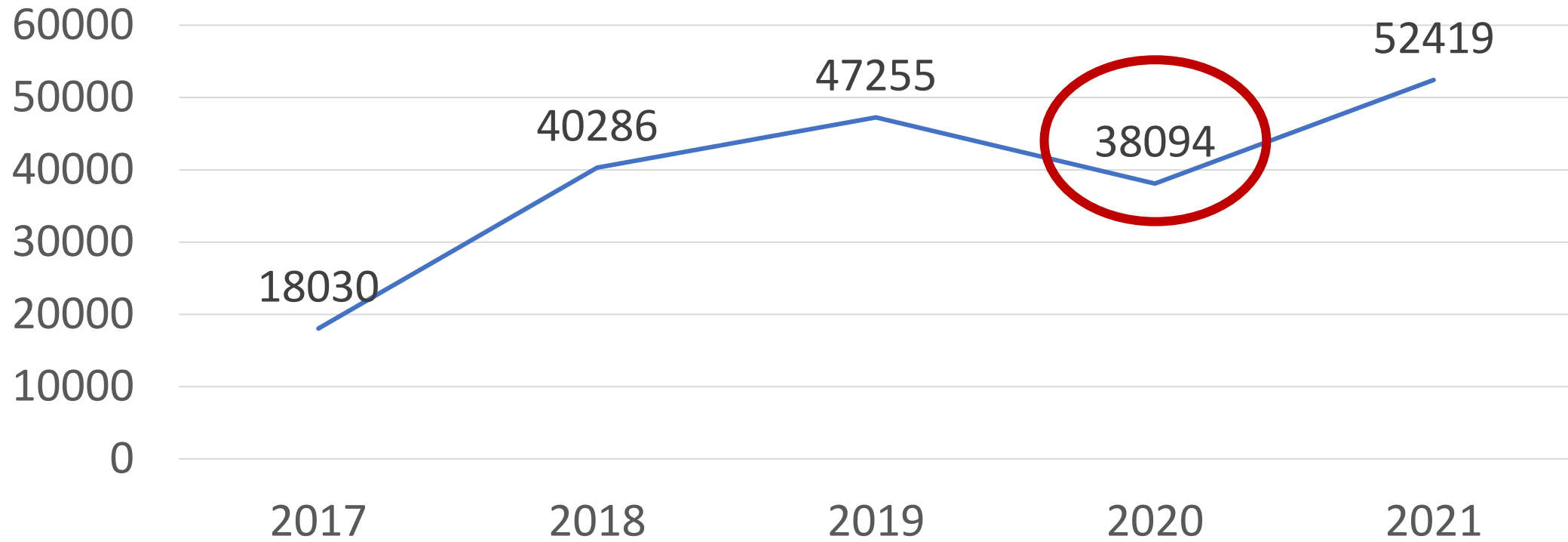
- Presenting complaints\***: Joint pain
- Duration(day)\***: 8yrs
- Provisional Diagnosis\***: Joint pain
- Service Given\***:  Advice Only  Medicine and Advice
- Medicine\***:
  - Calcium + Vitamin D3, Tablet Calbo D, 500 mg + 200 IU, 0+1+0, 15, after meal
  - Nicotinamide + Pyrido..., Tablet Bicozin, 20 mg + 2 mg + 2.75 m..., 0+0+1, 30, at night after meal
- Prescription(Review)**:
  1. Tablet Calbo D, 500 mg + 200 IU, 0+1+0, 15 Days after meal
  2. Tablet Bicozin, 20 mg + 2 mg + 2.75 mg + 5 mg + 10 mg, 0+0+1, 30 Days at night after meal
- Referred To\***:  G.Practitioner  Hospital  Specialist  No Referral
- Specialist Type**: Orthopaedics
- Campaign Type\***:  Repeat  SMS  TV  News Paper  OBD  Friend & Family  Social Media  Radio
- Email**: Enter Your Email
- Is Satisfied\***:  Yes  No  Not Defined





# Year wise Facility Based Telemedicine Service

No. of patient consultations through telemedicine service



# Covid-19 Statistics in Bangladesh



## COVID-19 Dynamic Dashboard for Bangladesh



### National Statistics

### Weekly Dashboard

### Hospital Information

### Vaccination



**15,247,014**  
Lab Test



**2,037,543**  
Confirmed



**1,992,694**  
Recovered



**29,442**  
Death



**135,108,210**  
2nd doses  
administered

কোভিড-১৯ নমুনা পরীক্ষা, চিকিৎসা ও হাসপাতাল সংক্রান্ত তথ্যের প্রয়োজনে ফোন করুন - ০১৩১৩৭৯১১৩০, ০১৩১৩৭৯১১৩৮, ০১৩১৩৭৯১১৩৯, ০১৩১৩৭৯১১৪০, ০১৩২১১৭৩৮৬৫

**Note:** Data draws from the DHIS2 system. Data quality may vary due to reporting rates, accuracy and completeness. This data will be updated regularly and may change as facility data is submitted.

While data quality may vary, trend analysis compared to the previous month and year is useful in determining whether health service uptake has been affected relative to past trends. This does not in anyway imply causality but does offer a useful proxy measure to gauge what could be happening across different health services during this period, and areas for further investigation

Division  District  Period  Type

### Last 24 hours

**2474**  
Lab Test

**11**  
Confirmed

**3**  
Isolation

**247**  
Recovered

**0**  
Death

# Key enablers and barriers in implementing the tools during the pandemic

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## Key enablers:

- Mobile Operator
- Television
- Social Media
- Print Media
- Contagiousness of the Covid encourages physicians to consult through telehealth

## Barriers:

- Lack of Transport Communication during Lockdown
- Less knowledge of Digital Literacy among elder people

# Lessons learned as way forward

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- During any emergency condition Mobile telehealth can reach rapidly to the people than facility based telemedicine
- Integrated Telemedicine Software
- Telemedicine and Telehealth service information will be linked to present initiative of Shared Health Record (SHR)
- Different Services will be integrated to Present National Health Call Center (16263)
- Facility based Telemedicine will be rolled out to Community Level Health Care through integrated telemedicine software
- Tele-gadgets will be integrated with the existing telemedicine system

A **Record Shared (SHR)** facilitates clinical information sharing of health information between systems to enable better patient care. The SHR is a means of allowing different services to share health data stored in a **centralized data repository**.

Thank You!

