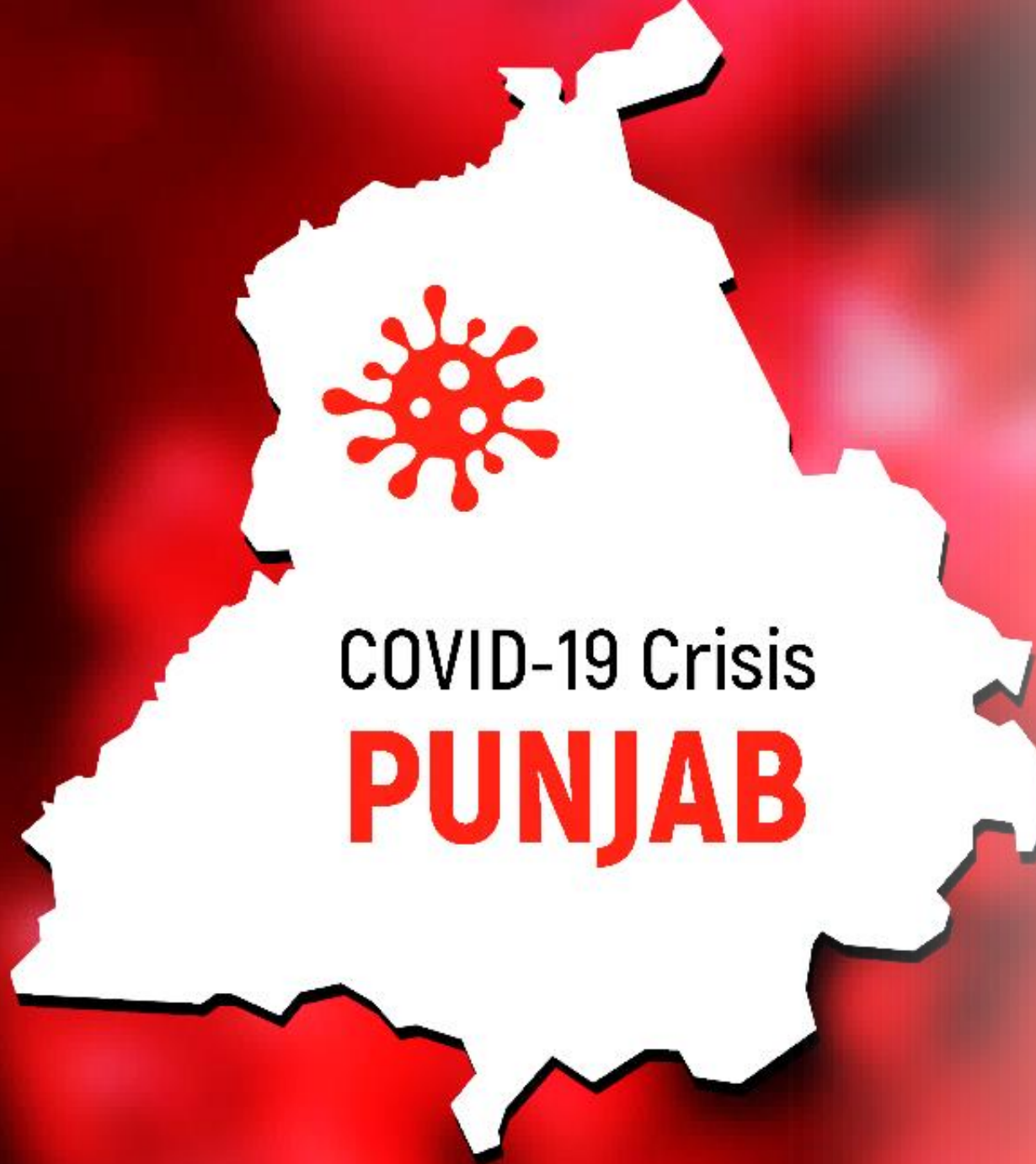




Impact Of COVID-19 Pandemic On TB Notifications In Punjab - *A Descriptive Analysis*

***Organization: NHM,
Punjab.***

OVERVIEW



INTRODUCTION



METHODOLOGY



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CONCLUSION



RECOMMENDATIONS



INTRODUCTION:

- Tuberculosis (TB) and COVID-19 are both infectious diseases that attack primarily the lungs.
- Both diseases have similar symptoms such as cough, fever and difficulty breathing. TB, however, has a longer incubation period with a slower onset of disease.
- While experience on COVID-19 infection in TB patients remains limited, it is anticipated that people ill with both TB and COVID-19 may have poorer treatment outcomes, especially if TB treatment is interrupted.
- TB patients should take precautions as advised by health authorities to be protected from COVID-19 and continue their TB treatment as prescribed.

STATE PROFILE:



- There are 23 districts in Punjab, and they are divided into four regions:
 - **Majha:** Amritsar, Gurdaspur, Pathankot, Tarn Taran
 - **Doaba:** Hoshiarpur, Jalandhar, Kapurthala,
 - **Malwa:** Barnala, Bathinda, Ferozepur, Fazilka, Faridkot, Ludhiana, Moga, Malerkotla, Mansa, Sri Muktsar Sahib, Patiala, Sangrur, and
 - **Puadhi:** SAS Nagar (Mohali), Rupnagar and Fatehgarh Sahib.
- The capital city of the state is Chandigarh and largest city of the state is Ludhiana.
- The major cities:
Ludhiana, Amritsar, Jalandhar, Mohali, Patiala and Bathinda.

PURPOSE OF RESEARCH:

The coronavirus (COVID-19) pandemic has caused enormous health, social and economic impacts in 2020 and 2021. This includes impacts on the provision of and access to essential tuberculosis (TB) services, the number of people diagnosed with TB and notified as TB cases through national disease surveillance systems, and TB disease burden (incidence and mortality).

A widely available indicator that can be used to assess the impact of disruptions caused by the COVID-19 pandemic on essential TB services at country level is the national number of monthly or quarterly notifications of people diagnosed with TB.

This indicator reflects impacts on access to diagnosis and treatment on both the supply side (e.g., capacity to continue to provide services) and the demand side (e.g., willingness and ability to seek care in the context of lockdowns and associated restrictions on movement, concerns about the risks of going to health care facilities during a pandemic, and stigma associated with similarities in symptoms related to TB and COVID-19).

In India, all tuberculosis notifications are electronically communicated through the NIKSHAY platform maintained by the Government of India.

AIMS AND OBJECTIVES

AIM: To study about how the pandemic of COVID-19 has impacted the Tuberculosis notifications in the state of Punjab from the time period of January to December in four years of 2019-2022.

RESEARCH OBJECTIVE:

- To analyze the impact of Covid-19 on the number of TB notifications against the yearly targets as set by the Govt of India.
- To analyze the Presumptive TB examination Rate (PTER) and TB Notification Rate of the given period of each of the 22 districts of the state of Punjab.
- To understand the reasons behind the change in the notification rate in the given period.
- To analyze the impact of covid on the death rate of the individuals in every district of the state of Punjab.
- To figure out the default rate in the Tb notifications in the given period.
- To analyze the treatment success rate in every district throughout the given period.

METHODOLOGY

Study Design: Descriptive

The time period is 2019 to 2022. The study was conducted during the period of March'22 to June'22 at the Directorate of Health and Family Welfare (Parivar Kalyan Bhawan), Punjab.

Study Population: included the population of all the twenty-two districts of the state of Punjab. The sample size is inclusive of both public and private sector TB notifications of all the twenty-two districts of Punjab.

Inclusion Criteria: includes the data of all the districts irrespective of the type of TB and the age and gender of the individuals.

Exclusion Criteria: Patients detected with drug resistant tuberculosis are owing to their extended treatment regimens which may/may not change during treatment.

The data for district Malerkotla has not been taken separately and is included in District Sangrur since the district is newly formed (2021) and the data is not yet segregated and available on the NIKSHAY portal.

Analysis of Data: Softwares used are MS-Excel and Tableau



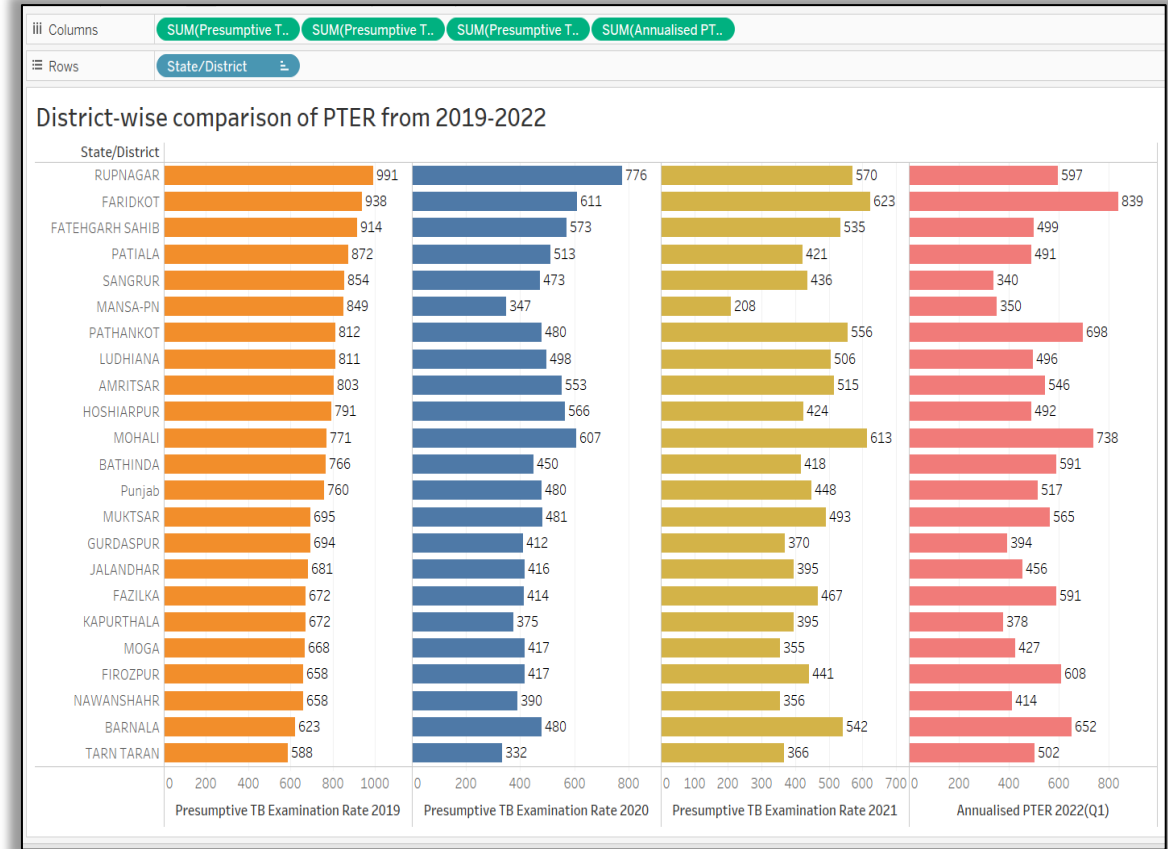
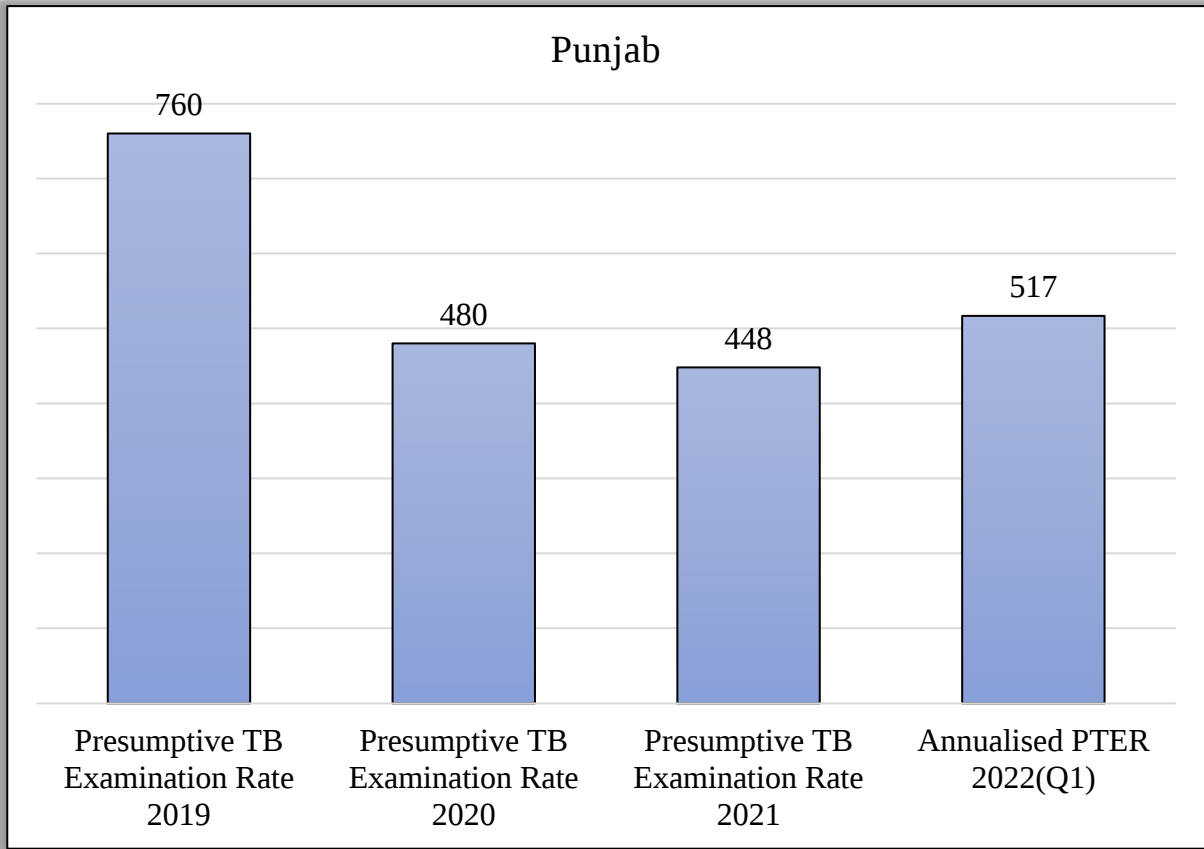
FINDINGS

1) PTER

Presumptive TB refers to a patient who presents with symptoms or signs suggestive of TB (previously known as a TB suspect). The calculation is integral to understand the data of the Tuberculosis notifications over the given period.

It is calculated as = (Total Presumptive cases tested in the year) / Total Population in the year (in Lac.)

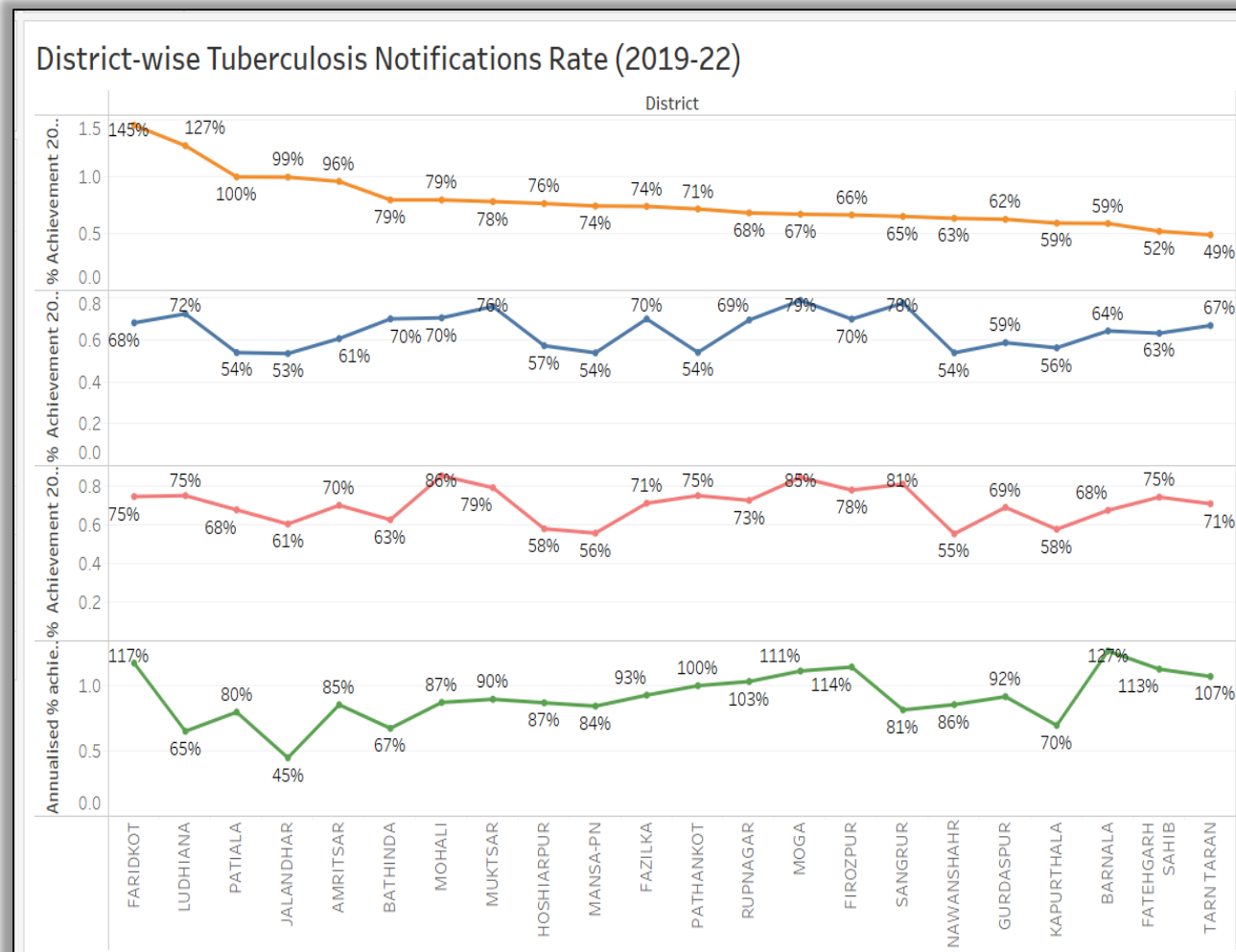
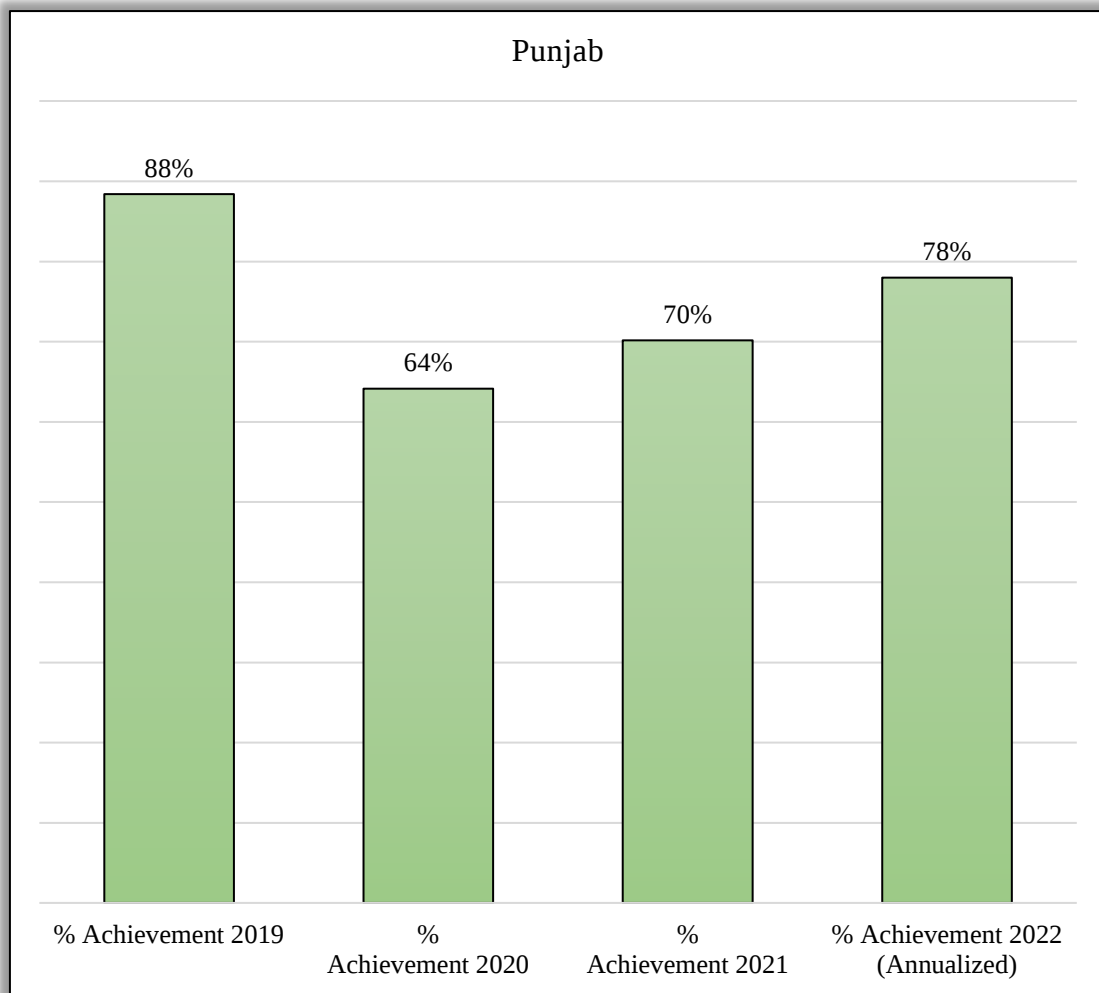
NOTE: Data for the year 2022 has been annualised for the ease of analysis as the data is available for only the first quarter (January-March) on the NIKSHAY portal.



2) Tuberculosis Notification Rate:

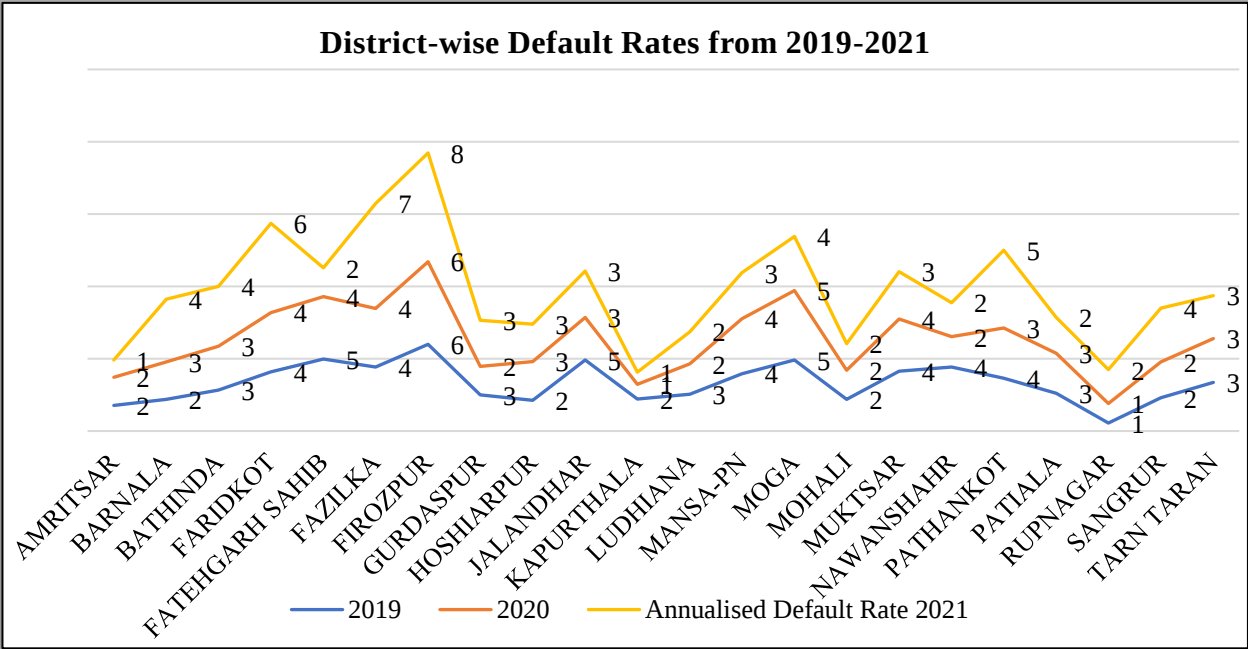
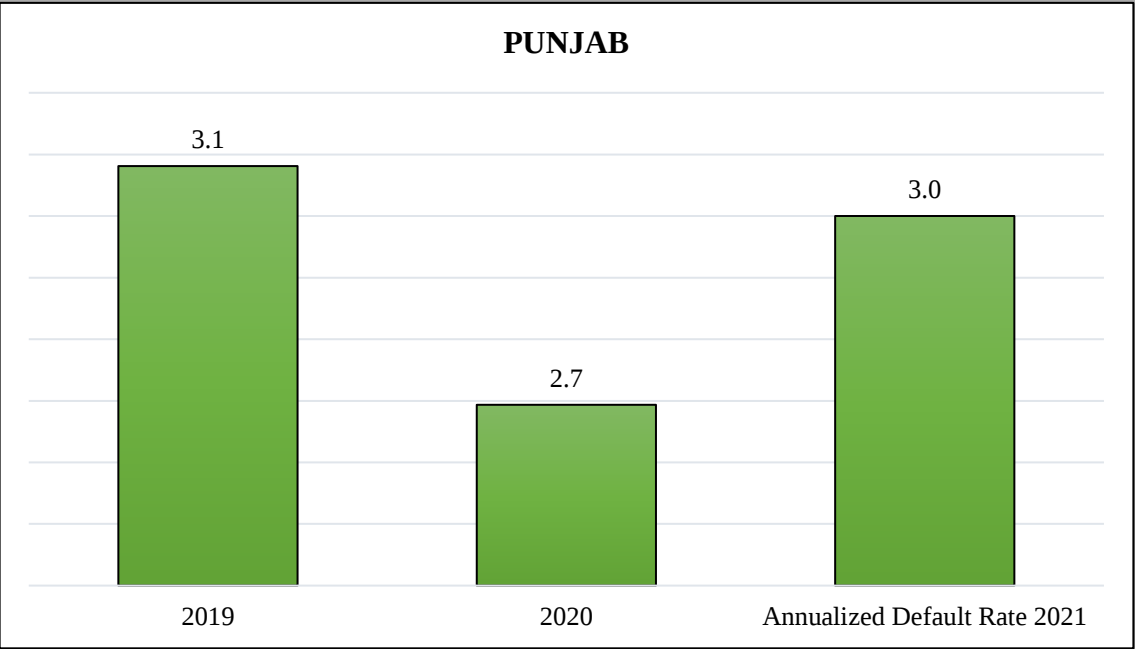
This indicator depicts the number of TB cases (new and relapse) notified to the national health authorities during a specified period of time per 100,000 population.

NOTE: Data for the year 2022 has been annualised for the ease of analysis as the data is available for only the first half of the year i.e, six months (January-June) on the NIKSHAY portal.



Outcome Indicators:

a) Default Rate: The indicator measures the number of affected/notified individuals who have been lost to follow up. It is calculated as = (People lost to follow up)/ (Total Notified people) * 100



NOTE:

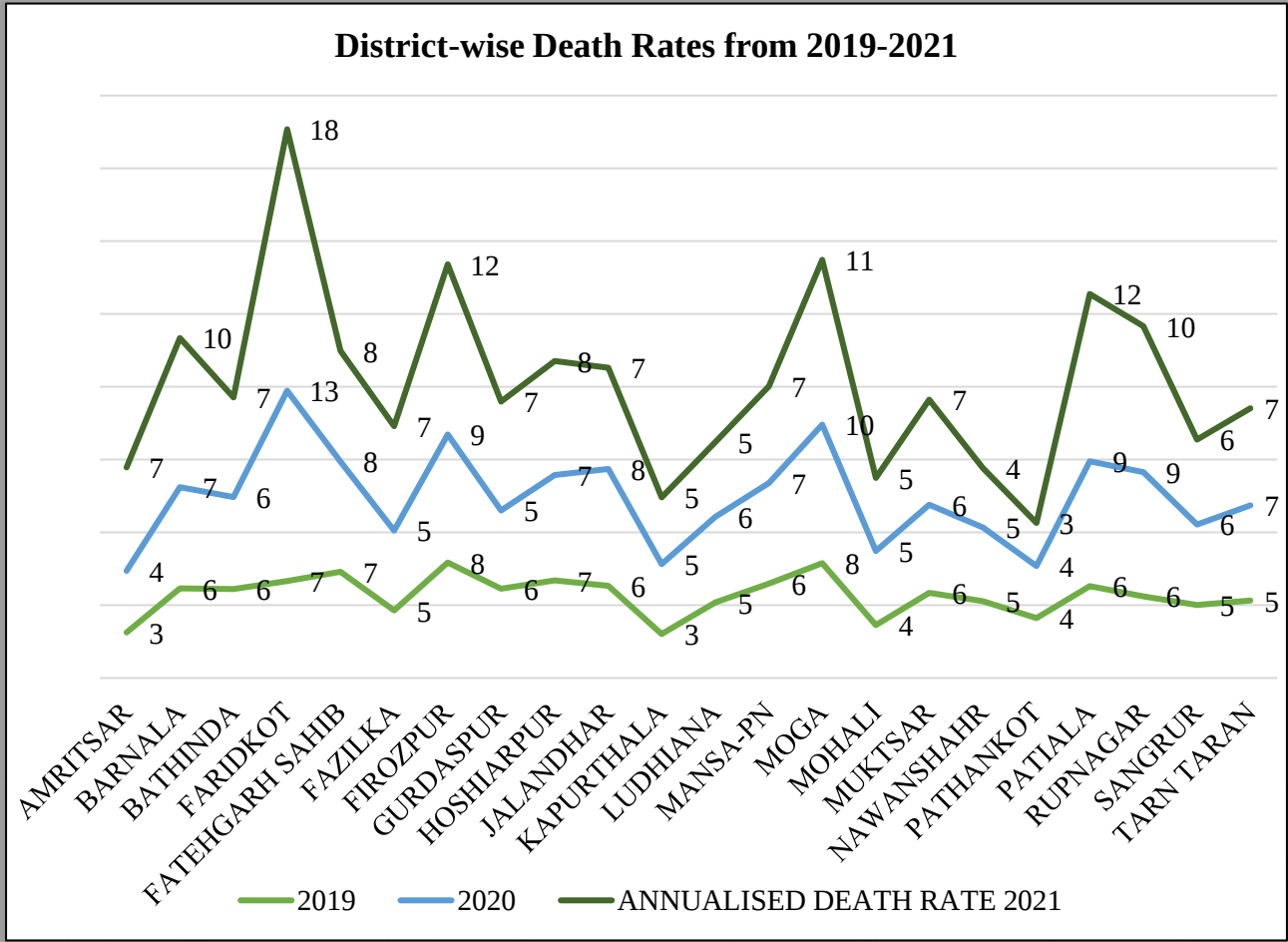
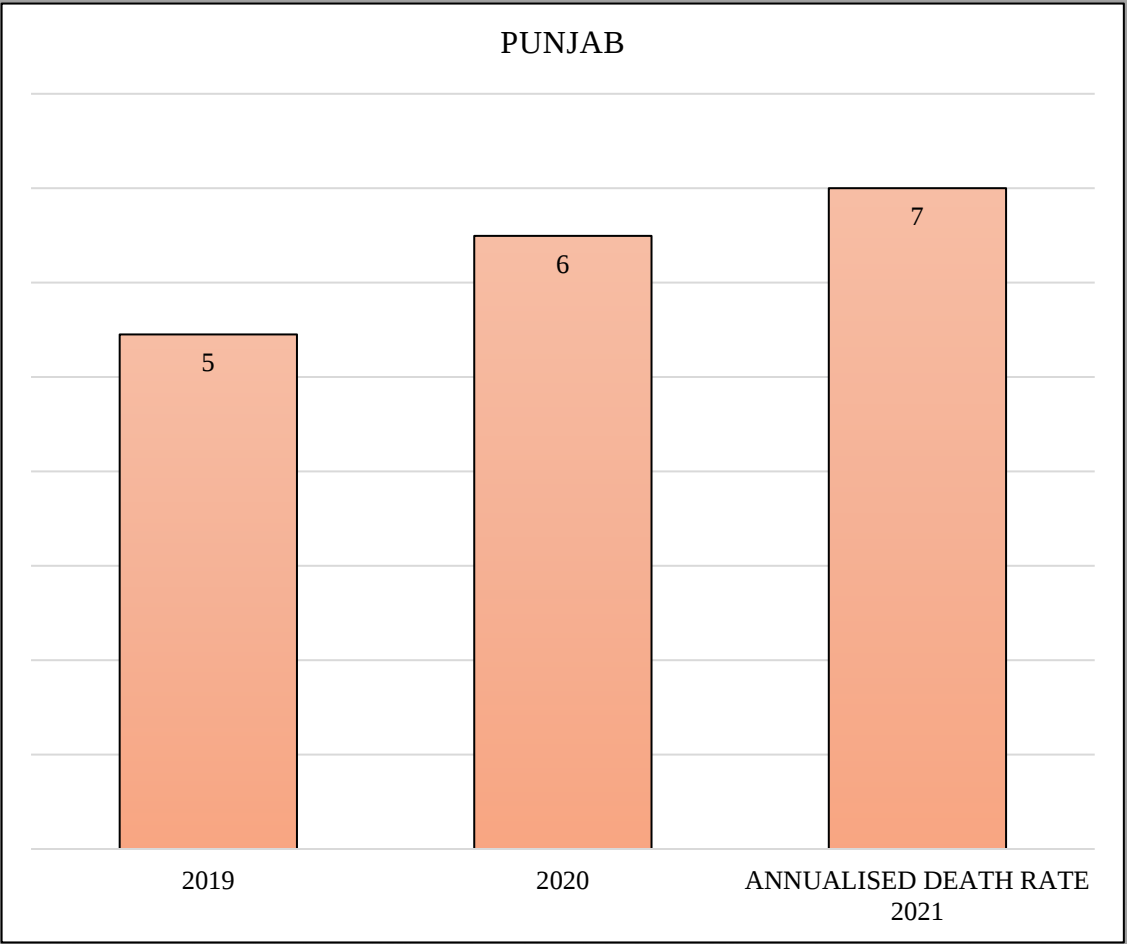
The following outcome indicators are calculated for the cohort of 2021.

Reason: Treatment of drug sensitive TB usually lasts for six months or can be extended up to further two months as per the clinician’s assessment and patient’s need. Therefore, for instance, most of the patients who were initiated with the treatment from January to September 2021 would have completed the regime as of now. Those who were initiated in the fourth quarter of 2021 and in 2022 would still be on treatment. Therefore, the outcome indicators could only get assessed until the year 2021 and the year 2022 is excluded from the analysis.

b) Death Rate:

The indicator means to know about the total deaths occurred amongst the total notified people whether with or without the treatment initiation.

It is calculated as = (Total people died after treatment initiation+ total people died without treatment initiation)/ Total Notified * 100

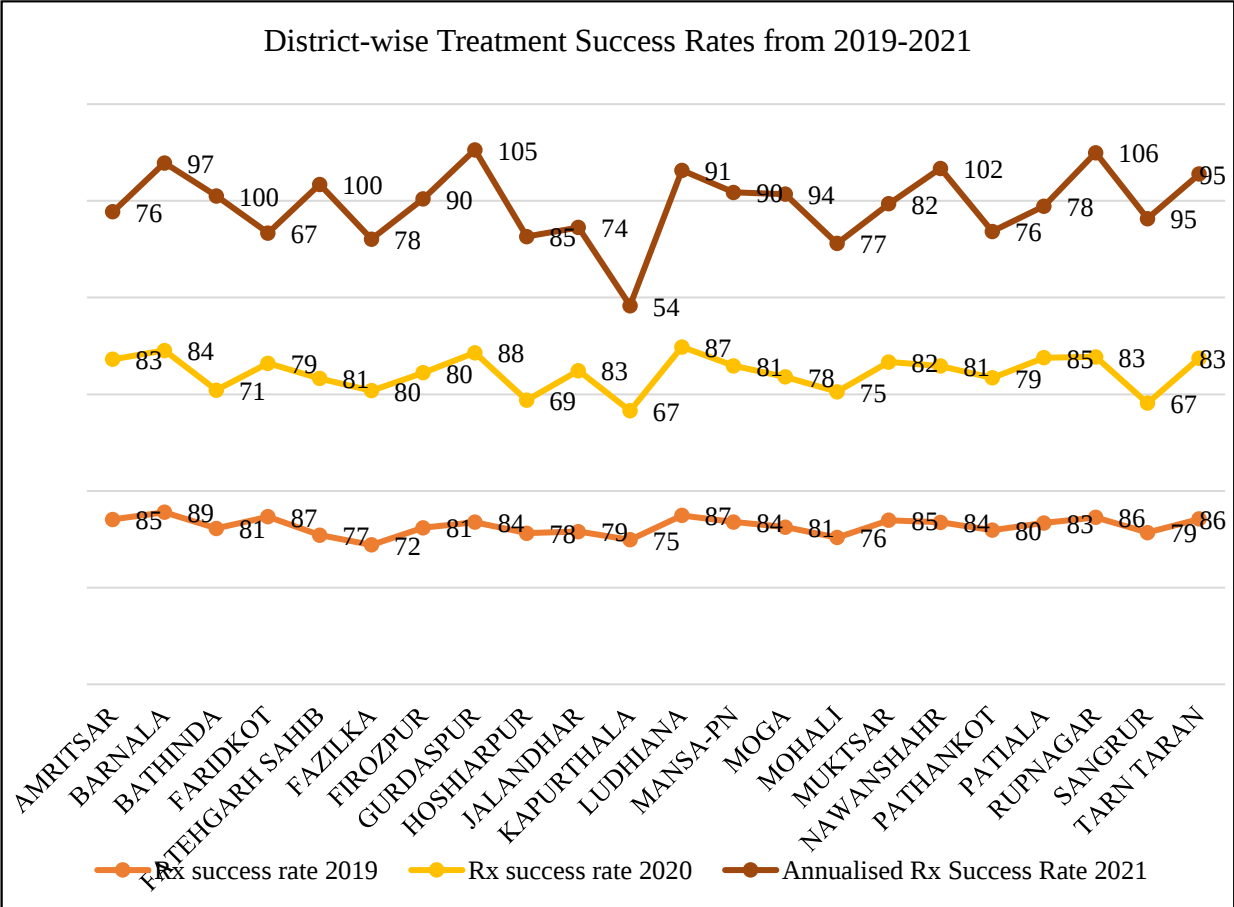
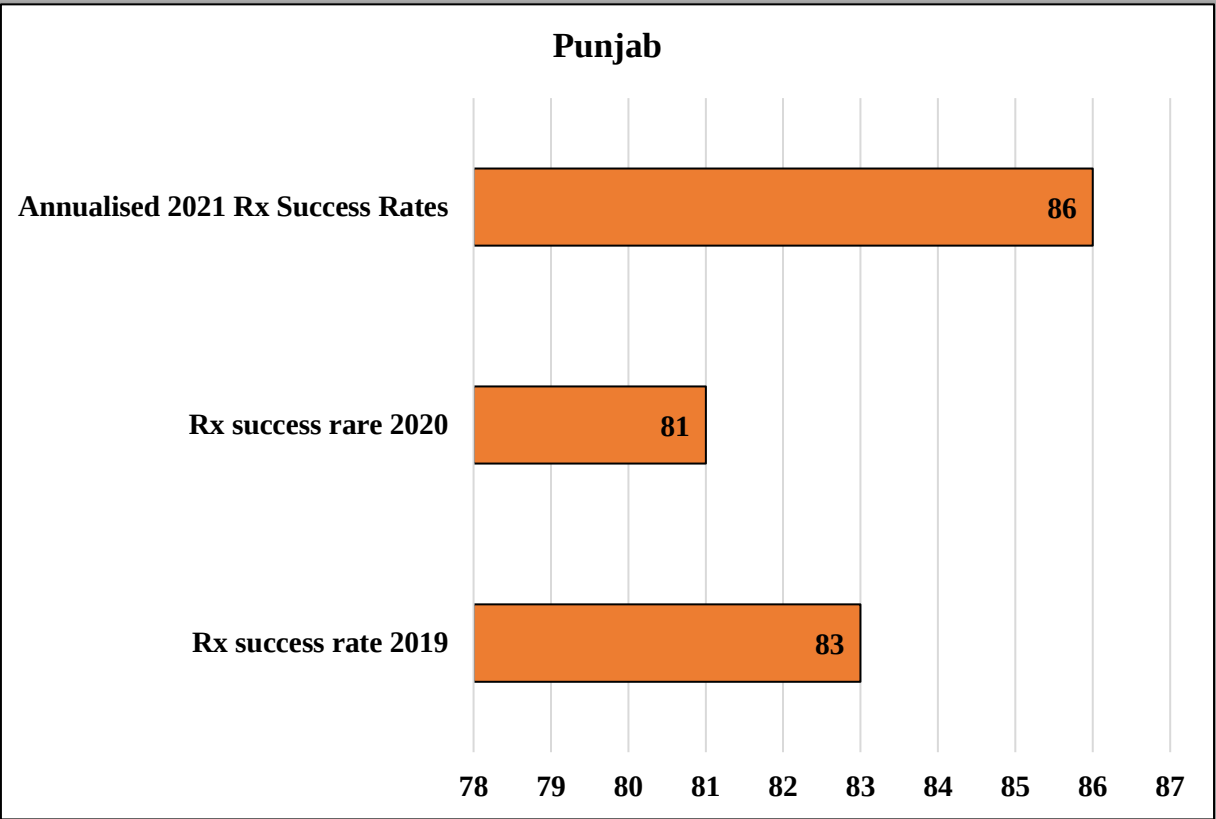


c) Treatment Success Rate:

The indicator measures the percentage of drug sensitive TB patients that are successfully cured with a negative follow up report at the end of the treatment or follow up report is not available, but it has been established that the patient has taken the due course of treatment and the required number of drug dosages.

It is calculated as

= (Number of drug sensitive registered TB patients who have been completed treatment and cured)/ Number of drug sensitive registered TB patient over a specific time period * 100.

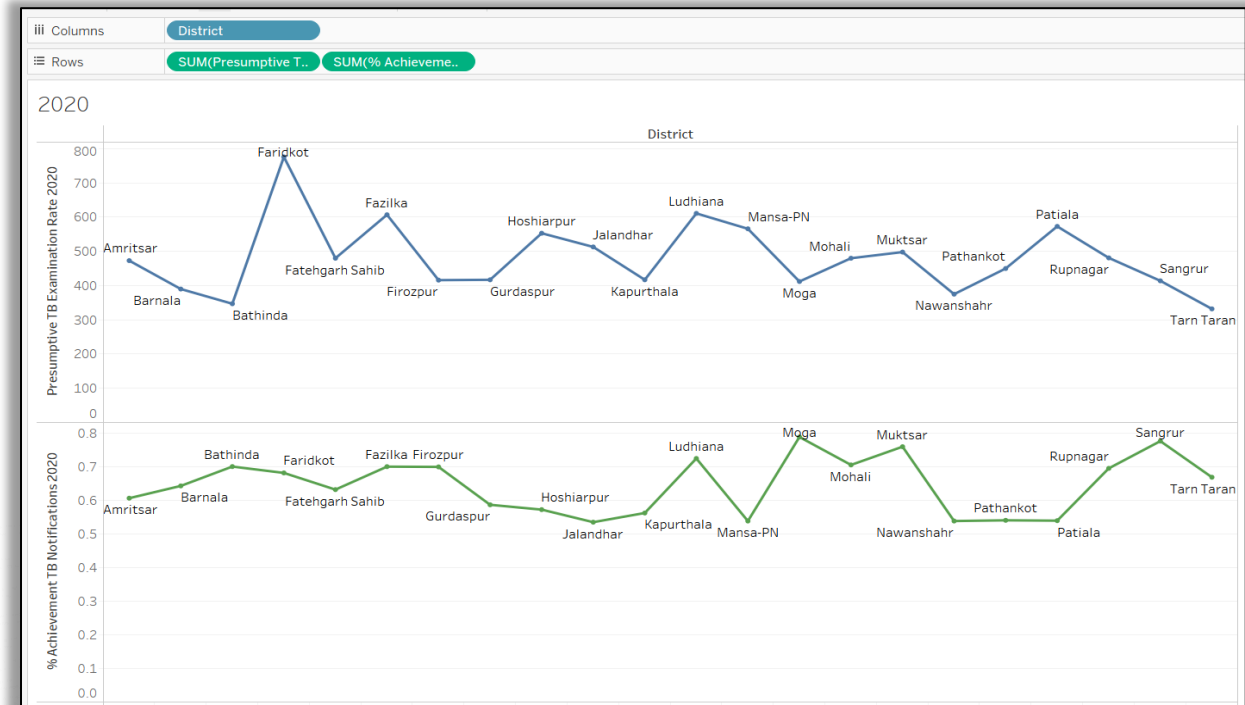
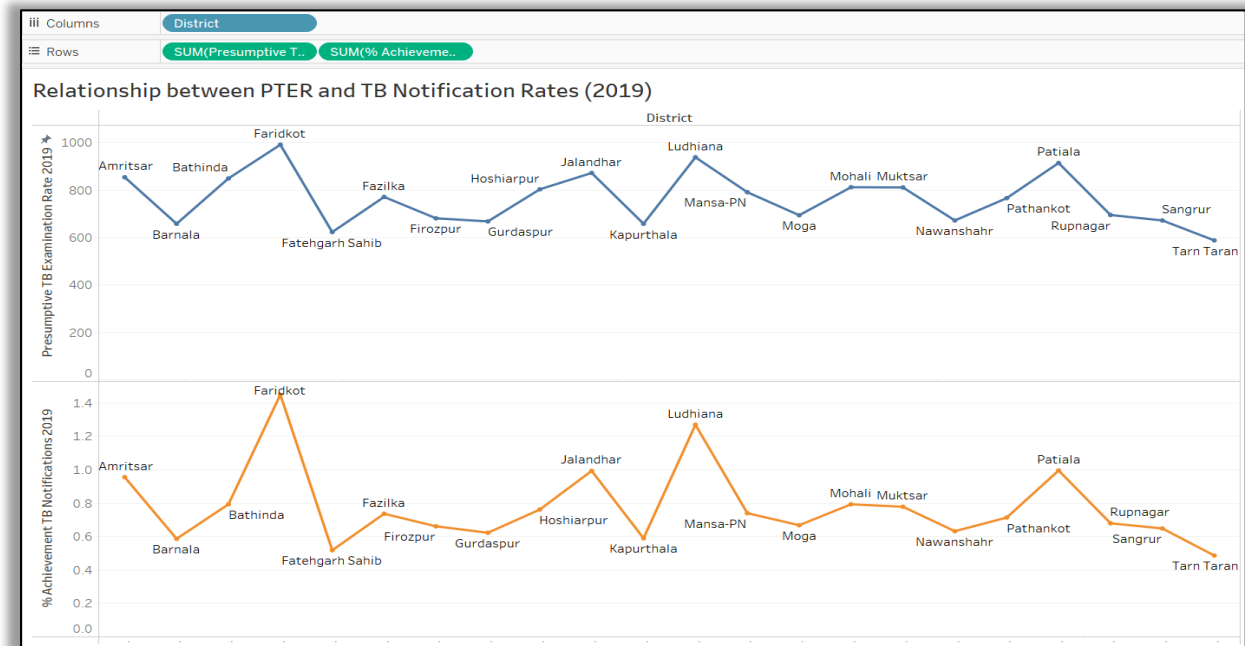


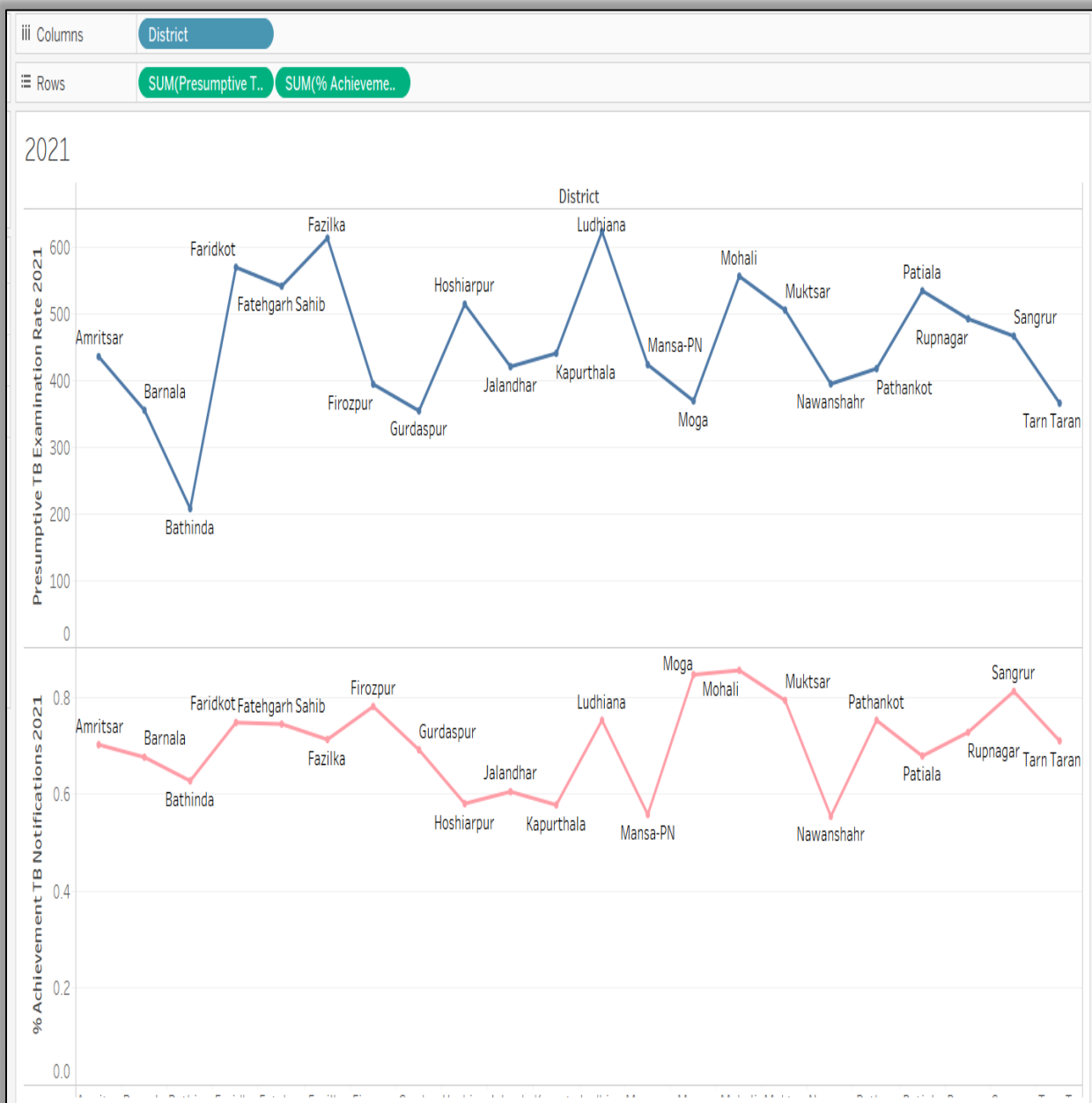
CONCLUSION

- During the course of this study, the indicators under consideration showcase the impact of covid-19 on TB Notifications in the said time period.
- PTER and TB notifications have followed a trend of proportionality in 2019 but it changed in the years 2020 and 2021 when the pandemic hit the state.

Why?

- Decreased general OPD patients leading to decreased diagnosis of Tuberculosis.
- Selective referral of presumptive TB patients by medical officers leading to decreased testing and increased positivity.
- The human resources available at healthcare facilities were directed towards the management of the pandemic, hence NTEP faced a severe shortage when the covid-19 pandemic was continuing to rise.

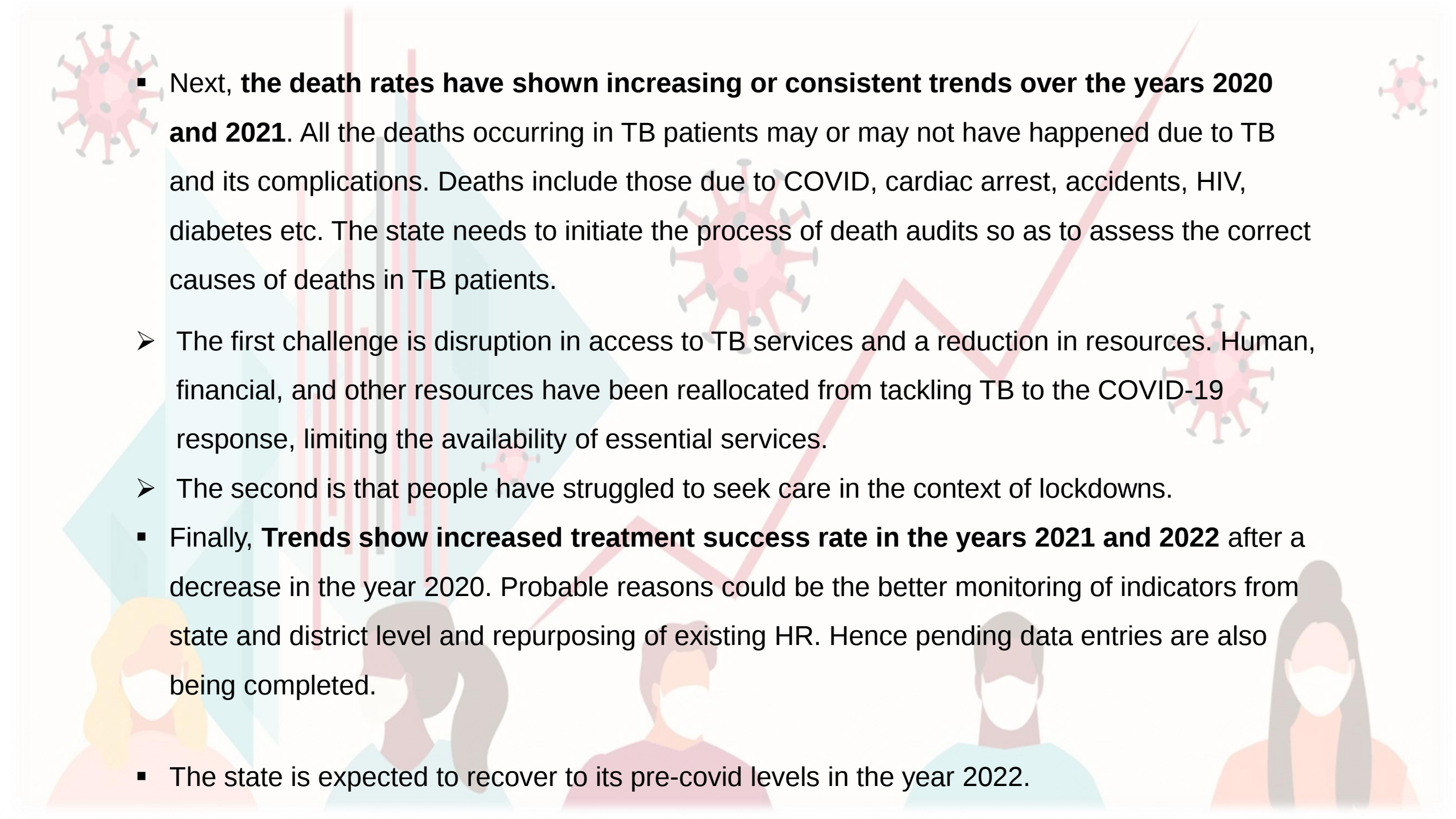




In 2021 and 2022, however, the previous relationship of direct proportionality is recovered to a certain extent when it was the time of a deadlier second wave of covid.

How?

- Improvement in machinery and infrastructure
- ACF rounds were conducted
- Private sector showed a major extent of recovery in 2021-2022.
- In 2021, there were no COVID waves from the months from January – March and July-December, and during this period, hospitals were fully opened and working at comparatively better capacities, functional OPDs and better private sector engagement.

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- Next, **the death rates have shown increasing or consistent trends over the years 2020 and 2021.** All the deaths occurring in TB patients may or may not have happened due to TB and its complications. Deaths include those due to COVID, cardiac arrest, accidents, HIV, diabetes etc. The state needs to initiate the process of death audits so as to assess the correct causes of deaths in TB patients.
 - The first challenge is disruption in access to TB services and a reduction in resources. Human, financial, and other resources have been reallocated from tackling TB to the COVID-19 response, limiting the availability of essential services.
 - The second is that people have struggled to seek care in the context of lockdowns.
 - Finally, **Trends show increased treatment success rate in the years 2021 and 2022** after a decrease in the year 2020. Probable reasons could be the better monitoring of indicators from state and district level and repurposing of existing HR. Hence pending data entries are also being completed.
 - The state is expected to recover to its pre-covid levels in the year 2022.

RECOMMENDATIONS:

Punjab faces the following main challenges in the program implementation:

- Lack of Human Resources at required locations.
- Lack of data entries.
- Lack of adequate funds and
- Lack of adequate consumables and efficiently functioning lab equipment.

Based on the challenges, the recommendations are:

- Recruitment of Human Resources at priority.
- Gap analysis of the workload to be done for all the posts.
- Rationalisation of manpower may be needed to be done.
- Release of adequate funding from Central TB Division (CTD)
- Arranging the adequate consumables from the state PHSC.

Further, Death audits must be necessary and should be regularly monitored by the highest authorities.

The process has already begun in the state.





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COVID-19 Crisis
PUNJAB

THANK YOU!

Presented By:
- Dr Aastha Maingi