Comparative Analysis of State Government Applications

INTRODUCTION

Over the last three months there has been a considerable amount of focus on Aarogya Setu, the Indian Government's Covid-19 contact tracing app. This app uses location data and Bluetooth technology to try to determine if the user has been in close proximity with a COVID-19 infected person. The efficacy, usage, mandate, and privacy policies of this app have been discussed at length. The app has received much criticism for not possessing adequate safeguards to protect the privacy of the users, and for failing to meet the necessity and proportionality principle. Further, there is no underlying legislation which forms the basis of the app. The app is currently voluntary, however, there has been a strong push by the Government to make the use of the app mandatory to access essential services. For example, as per the standard operating procedure published by the Airport Authority of India, it is mandatory for passengers above the age of 14 to register on the app prior to boarding any domestic flight. In addition to Aarogya Setu, several state governments have also launched mobile apps to monitor Covid 19 cases in their respective states. Given the focus on Arogya Setu, these apps have largely escaped attention and public scrutiny. The objective of these apps vary, from monitoring the movement of quarantine patients (Karnataka, Tamil Nadu, and Uttarakhand) to providing information and updates about the number of patients in the state. Some of these apps have now also introduced contact tracing, and identification of hotspots (Punjab, Haryana and Odisha). These state government apps have already been downloaded by lakhs of citizens in different states. COVA Punjab app, for instance, has been downloaded by over ten lakh citizens in the state.1

It is concerning that some of these apps either do not even have a privacy policy (Corona Mukt Himachal Pradesh, Covid-19 West Bengal). In some instances, where a dedicated privacy policy for the app is missing, the citizen is directed to the general privacy policy of the developer (Test Yourself Goa, Test Yourself Puducherry) or to the state government's website (Odisha, Maharashtra). Even in cases where a specific privacy policy has been published, the policies are often vague, and fail to specify important details such as the time period for which the data shall be retained and specific use cases for the data. Lack of clarity, transparency, and privacy on numerous levels across the COVID-19 apps launched by state governments indicates that the practices governing the apps in response to COVID-19 in Indian are far from ideal and require significant improvement.

This survey presents structured observations of the prevalent issues in these apps, providing findings that can be utilised to make comprehensive improvements to technology and app-based responses to COVID-19.

METHODOLOGY

This is empirical research based on publicly available data on the apps including the information available about the apps on their Google Play Store pages. Subsequent to the collection of the information, the data has been analysed against key internationally recognised privacy principles which are represented in most data protection frameworks in the world, including the Indian Personal Data Protection Bill, 2019. For the purposes of this analysis, we have only looked at apps deployed by State Governments and not apps developed by private entities. Further, we have also not analysed the apps deployed by the district administrations authorities in certain states such as the apps developed by the Faridabad Administration2, the Greater Chennai Corporation,3 Surat Municipal Corporation4 or apps developed for departmental use (Corona Contact Survey- Karnataka Government).5 This output is based on data collected as on May 26, 2020, with updates on numbers of users as on July 3, 2020.

Observations

No specific privacy policy
Ten apps do not have a specific privacy policy; they either direct the user to the privacy policy of the developer of the app or to the website of the concerned state government.

Absence of any privacy policy
Three apps do not have any privacy policy.

Excessive collection of data
All apps provide for permissions to access data which go beyond the scope of the intended purpose of the app. In cases where apps are intended to monitor the movement of quarantined patients, the app has access to the storage, IMEI number, web browser, IP address and media files of the user.

No sunset clause in any app
No app provides any information on how long the app will be in force and whether it will cease to be effective after the pandemic is over.

No app provides any details on when and how the data will be deleted
Will the data continue to vest with the authorities upon the expiry of the pandemic?

Information on Security measures deployed lacking
Only one app makes any specific reference to the security measures employed to keep the data secure.

Anonymisation of data unclear
Only one app makes any specific reference to the security measures employed to keep the data secure.
## Comparative Analysis of State Government Applications

<table>
<thead>
<tr>
<th>Application</th>
<th>KARNATAKA</th>
<th>GOA</th>
<th>PUDDUCHERRY</th>
<th>TAMIL NADU</th>
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<th>CHATTISGARH</th>
<th>UTTAR PRADESH</th>
<th>WEST BENGAL</th>
<th>HIMACHAL PRADESH</th>
<th>MAHARASHTRA</th>
</tr>
</thead>
</table>

- ✔: Yes
- ✗: No
- 📃: Redirected to another policy
- ?: No information available
- 📠: Incomplete information available
- 🌐: Accessible by limited persons

### Applications
<table>
<thead>
<tr>
<th>Application</th>
<th>Status</th>
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<tbody>
<tr>
<td>MP Covid Response App</td>
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<tr>
<td>MADHYA PRADESH</td>
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<td>Haryana Sahayak HARYANA</td>
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<td>COVID CARE Arunachal Pradesh</td>
<td></td>
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<tr>
<td>GoK Direct Kerala</td>
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</tr>
</tbody>
</table>
Data Protection

ANONYMISATION
No information available

PURPOSE LIMITATION
Access to the app is restricted to quarantined users, and so it is not possible to ascertain whether the data is being used for any other purpose.

DATA MINIMISATION
Personal data such as name, mobile number, GPS location and address may be collected. The data is not limited to the personal data collected at the time of registering on the app.

DATA SHARING
Data may be shared with third party service providers.

DATA DELETION/RETENTION
No information on how long the data would be stored, and if it would be deleted upon the expiry of the quarantine period has been provided.

Privacy Policy

The app has no dedicated privacy policy. The user is redirected to the privacy policy of the Revenue Department of Karnataka, which is available at https://www.landrecords.karnataka.gov.in/privacypolicy/

Security

No information has been provided about the specific security measures deployed in the app.

Grievance Redressal

The app has no specific grievance redressal mechanism. Only a general email address, for sending queries and suggestions to, is provided on Google Play, and in the privacy policy.
Maps the location of infected persons, and their movements in the last 14 days


1,000,000+ installations

Application developed by Karnataka Geographic Information System

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Data Protection

ANONYMISATION
Log data will be anonymised in this app. No information has been provided on whether other personal data will also be anonymised.

PURPOSE LIMITATION
No information available

DATA MINIMISATION
The app collects the name, address, gender, mobile number, log data, and session data of the person. It also has access to the location, phone, and photos/media/files. Considering that the purpose of the app is to track the movement of infected patients, the objective of collecting information regarding the log data and sessions data is beyond the stated objective of the app.

DATA SHARING
Data may be shared with third party service providers.

DATA DELETION/RETENTION
No information has been provided on how long the data would be stored, and if it would be deleted upon the expiry of the pandemic.

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Privacy Policy

The app has no specific privacy policy. The link on Google Play directs the user to the general privacy policy of the Karnataka Geographic Information System, which is available at http://kgis.ksrsac.in/privacystatement/.

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Security

No information provided.

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Grievance Redressal

There is no specific grievance redressal mechanism. A general email address has been provided on Google Play and on the privacy policy to respond to queries and suggestions.
Enables users to self assess their risk of contracting COVID-19

Data Protection

ANONYMISATION
No information available.

PURPOSE LIMITATION
Clear and specific purpose for collecting the information and as per available information, the personal data will not be used for any other purpose.

DATA MINIMISATION
To register on the app and to complete the survey, the information collected is limited to (i) name; (ii) mobile number; (iii) home address; (iv) age; (v) occupation; (vi) purpose of taking the survey. However, the privacy policy of Innovaccer Inc states that it automatically collects information about the device, including the Internet Protocol address, web browser address and system and software used to access the app.

DATA SHARING
Data may be shared with other entities.

DATA DELETION/RETENTION
No information on how long the data would be stored, and if it would be deleted upon the expiry of the pandemic.

Privacy Policy

The app has no specific privacy policy. The link on Google Play directs the user to the privacy policy of Innovaccer Inc, which is available at https://innovaccer.com/privacy/.

Security

The privacy policy only refers to the general security measures that have been deployed by Innovaccer. Inc. There is no separate or specific measure provided for ensuring the safety of the data collected through this app.

Grievance Redressal

There is no information available about a grievance redressal mechanism.
Enables users to self assess their risk of contracting COVID-19

Data Protection

ANONYMISATION
No information available.

PURPOSE LIMITATION
Clear and specific purpose for collecting the information and as per available information, the personal data will not be used for any other purpose.

DATA MINIMISATION
To register on the app and to complete the survey, the information collected is limited to (i) name; (ii) mobile number; (iii) pincode; and (iv) Goan or non-Goan. However, the privacy policy of Innovaccer Inc states that it automatically collects information about the device, including the Internet Protocol address, web browser address and system and software used to access the app.

DATA SHARING
Data may be shared with other entities.

DATA DELETION/RETENTION
No information on how long the data would be stored, and if it would be deleted upon the expiry of the pandemic.

Privacy Policy

The app has no specific privacy policy. The link on Google Play directs the user to the privacy policy of Innovaccer Inc, which is available at https://innovaccer.com/privacy/.

Security

The privacy policy only refers to the general security measures that have been deployed by Innovaccer. Inc. There is no separate or specific measure provided for ensuring the safety of the data collected through this app.

Grievance Redressal

There is no information available about a grievance redressal mechanism.
Data Protection

ANONYMISATION
No information available.

PURPOSE LIMITATION
As per the privacy policy of e-Sevai portal of the Government of Tamil Nadu, if any personal information is sought, then the Department of Electronics and Information Technology is required to inform the users about the purpose for which the information has been sought. However, the privacy policy does not specifically refer to this surveillance app, therefore, it is unclear whether this provision of the policy would be applicable to the data collected through this specific app.

DATA MINIMISATION
As per the privacy policy of ‘e-Sevai’, the app does not automatically collect any personal information from the user. However, as the privacy policy does not specifically refer to this app, there is a lack of clarity on the applicability of this provision to the data collected through this app.

DATA SHARING
The e-Sevai privacy policy states that the data is not shared with any other entity whether public or private.

DATA DELETION/RETENTION
No information on how long the data would be stored, and if it would be deleted upon the expiry of the pandemic.

Privacy Policy

The app has no specific privacy policy. The link to the privacy policy available on Google Play directs the user to the ‘e-Sevai’ portal of the Tamil Nadu Government, which is available at https://www.tnesevai.tn.gov.in/terms.html.

Security

No information available.

Grievance Redressal

There is no information available about a grievance redressal mechanism.
Data Protection

ANONYMISATION
Information is held in an encrypted form.

PURPOSE LIMITATION
As per the privacy policy, the data is to be collected only for user categorisation and analytics.

DATA MINIMISATION
The following information is collected from the user:
(i) IP address; (ii) domain name; (iii) browser type; (iv) operating system; (v) pages visited; (vi) IMEI; (vii) device id; (viii) language setting; (ix) handset make and model. It also requires permission to access the photos/media/files. Considering that the objective of the app is to provide access to preventive health care, it is unclear as to why the app requires access to photos/media and files of the user.

DATA SHARING
Personal data may be shared with law enforcement agencies and or other government departments.

DATA DELETION/RETENTION
There is no information on whether the data will be retained or deleted after the pandemic is over. Upon deleting the app, the user shall continue to receive information/notifications that she has opted for, unless she specifically opts out from receiving such communication.

Privacy Policy

The app has a specific privacy policy, which is available at https://msewa.punjab.gov.in/m-sewa/privacyPolicy.html.

Security

Communication channel for accessing the data is encrypted and multi-factor authentication has been deployed to ensure the authenticity of the user.

Grievance Redressal

There is no information available about a grievance redressal mechanism.
CG Covid-19 ePass CHHATTISGARH

Assists in issuing an e-pass for movement of essential services during the lockdown

Data Protection

ANONYMISATION
No information available.

PURPOSE LIMITATION
The purpose of collecting the personal data is limited to granting an e-pass for vehicular traffic.

DATA MINIMISATION
The following information is sought from the user (i) name; (ii) travel plans; (iii) mobile number; (iv) address; (v) Aadhar; and (vi) photo. It is mandatory to provide the Aadhar number. Considering that the objective of the app is to provide an e-movement pass, it is concerning that the submission of the Aadhar number has been made mandatory.

DATA SHARING
No information available.

DATA DELETION/RETENTION
No information on how the data will be retained and whether it will be erased upon expiry of the lockdown has been provided.

Privacy Policy

The Privacy Policy developed by ASC, it is a brief policy specific to the app, which is available at https://allsoft.co/privacy_policy_cg_covid_19_epass_app.html.

Security

No specific information. The privacy policy merely makes a general reference to state that “they are striving to use commercially acceptable means of protecting it.”

Grievance Redressal

There is no information available about a grievance redressal mechanism.
UP Government Self Quarantine App  UTTAR PRADESH

Assists users in assessing their symptoms, and in undergoing self quarantine, if necessary

Data Protection

ANONYMISATION
- No information available.

PURPOSE LIMITATION
- No information available.

DATA MINIMISATION
- The following information is collected: (i) Name; (ii) Address (Does not have to be specific to UP) (iii) mobile number; (iv) Gender. It also has access to the location and the full network. Considering that the purpose of the app is to assist the users to start the process of self quarantine, the rationale for the app to have access to the full network is unclear.

DATA SHARING
- No information available.

DATA DELETION/RETENTION
- No information on how the data will be retained and whether it will be erased upon expiry of the lockdown.

Privacy Policy

The app has no dedicated privacy policy. The link on Google Play directs the user to the Uttar Pradesh Government’s Covid-19 portal, which is available at https://dgmhup-covid19.in/

Security

No specific information. The privacy policy merely makes a general reference to state that “they are striving to use commercially acceptable means of protecting it.”

Grievance Redressal

There is no information available about a grievance redressal mechanism.
Monitor people who are under home quarantine in West Bengal

Data Protection

ANONYMISATION
No information available.

PURPOSE LIMITATION
The personal data is collected for the stated objective of monitoring the movement of quarantined people in West Bengal.

DATA MINIMISATION
The following information is collected: (i) Name; (ii) Age; (iii) Gender; (iv) Address; (v) next of kin; (vi) symptoms (if they are persistent). The app also has access to: (i) Location; (ii) phone; and (iii) Others.

DATA SHARING
No information available.

DATA DELETION/RETENTION
No information available.

Privacy Policy

The app has no specific privacy policy. The link on Google Play directs the user to the website of the Government of West Bengal, which is available at https://wb.gov.in/

Security

No information available.

Grievance Redressal

There is no information available about a grievance redressal mechanism.
Corona Mukt Himachal HIMACHAL PRADESH

Monitors the movement of the people who are under home quarantine in Himachal Pradesh


50,000+ installations

Application developed by Department of Information Technology, Himachal Pradesh

Data Protection

ANONYMISATION
No information available.

PURPOSE LIMITATION
As the login is limited to quarantined individuals, it is difficult to ascertain whether the data is being used for any other purpose other than the intended use.

DATA MINIMISATION
The app has access to: (i) location; (ii) Wi-fi connection information; and (iii) Other. As the login is limited to quarantined individuals, it is not possible to ascertain whether any other additional information is collected.

DATA SHARING
No information available.

DATA DELETION/RETENTION
No information available.

Privacy Policy

The app has no privacy policy.

Security

No information available.

Grievance Redressal

There is no information available about a grievance redressal mechanism.
Provides access to preventive health care advisories for users to undertake a self-screening of their symptoms.

Kavach App CHHATTISGARH

Data Protection

ANONYMISATION
No information available.

PURPOSE LIMITATION
No information available.

DATA MINIMISATION
Upon installing the app, the name and phone number of the user is collected. The app also has access to the location and the media files on the phone of the user. Considering the objective of the app the rationale for seeking access to media files is not clear. It is not necessary for the stated purpose/objective of the app.

DATA SHARING
No information available.

DATA DELETION/RETENTION
No information available.

Privacy Policy

There is no privacy policy available either on Google Play or within the app.

Security

No information available.

Grievance Redressal

There is no information available about a grievance redressal mechanism.


1,000,000+ installations

Application developed by Chhattisgarh Infotech Promotion Society
Digital contact tracing app

10,000+ installations
Application developed by Maharashtra State Innovation Society

Data Protection

ANONYMISATION
No information available.

PURPOSE LIMITATION
Difficult to ascertain as the access to the app is restricted.

DATA MINIMISATION
It collects the following information: (i) name; (ii) age; (iii) gender; and (iv) address. It also has access to the accounts and the contacts of the registered user.

DATA SHARING
As per the privacy policy, data may be shared with other entities.

DATA DELETION/RETENTION
No information on whether the data will be deleted upon expiry of the pandemic.

Privacy Policy

The app has no dedicated privacy policy. The link on Google Play directs the user to the general privacy policy of the Maharashtra State Innovation Society, which is available at https://mahakavach.flycricket.io/privacy.html

Security

No information available.

Grievance Redressal

There is no information available about a grievance redressal mechanism.
Data Protection

ANONYMISATION
No information available.

PURPOSE LIMITATION
No information available.

DATA MINIMISATION
The following information is collected: (i) name; (ii) phone number; (iii) IMEI; (iv) current location. Not mandatory to provide the name, however, it is mandatory to provide the IMEI number and the current location.

DATA SHARING
The privacy policy stipulates that no personal data of a suspected patient will be shared with other users. However, it does not specify whether the data will be shared with other government authorities/agencies.

DATA DELETION/RETENTION
No information on whether the data will be deleted upon expiry of the pandemic has been provided.

Privacy Policy

The app has a dedicated privacy policy which is available at http://mrcp.nhmmp.gov.in/corona.html

Security

No information provided.

Grievance Redressal

There is no information available about a grievance redressal mechanism, only a general email address, for sending queries and suggestions to, is provided on Google Play.

MP Covid Response App MADHYA PRADESH

Identifies citizens suffering from or susceptible to contracting COVID-19


50,000+ installations

Application developed by National Health Mission - Madhya Pradesh Government
Generates heat maps and undertakes contact tracing. Provides information regarding the confirmed cases and the available essential services in the proximity range of the user.

**Data Protection**

**ANONYMISATION**

Personal data will be stored in anonymised aggregated datasets.

**PURPOSE LIMITATION**

The privacy policy states that the personal information will not be used for any other purpose other than those mentioned in the policy.

**DATA MINIMISATION**

The policy states that the following information will be collected, namely (i) name; (ii) phone number; and (iii) location. The app also has access to the media/photo files of the user and it can modify, read and/or delete the contents on the USB storage.

**DATA SHARING**

The personal data may be shared with necessary and relevant persons as may be required to carry out necessary medical and administrative interventions.

**DATA DELETION/RETENTION**

Data will be retained as long as the account is in existence and for such period thereafter as required.

**Privacy Policy**

The app has a specific privacy policy which is available at [https://sahayak.haryana.gov.in/privacy-policy.html](https://sahayak.haryana.gov.in/privacy-policy.html).

**Security**

As per the privacy policy, the app is protected with standard security features. However, it does not specify the features.

**Grievance Redressal**

The name and address of the Grievance Redressal Officer has been provided.
Data Protection

ANONYMISATION
No information available.

PURPOSE LIMITATION
As the login is limited to quarantined individuals, it is difficult to ascertain whether the data is being used for any other purpose other than the intended use.

DATA MINIMISATION
Difficult to ascertain as the login is limited to quarantined individuals.

DATA SHARING
As per the general privacy policy, the data is not shared with any other entity (public or private).

DATA DELETION/RETENTION
No information on whether the data will be deleted upon expiry of the pandemic.

Privacy Policy

The app has no specific privacy policy. The link on Google Play directs the user to the privacy policy of the Odisha Government, which is available at https://esamiksha.gov.in/Odisha/PrivacyPolicy.aspx

Security

No information available.

Grievance Redressal

There is no information available about a grievance redressal mechanism.
# Data Protection

**ANONYMISATION**  
No information available.

**PURPOSE LIMITATION**  
No information available.

**DATA MINIMISATION**  
No personal information required to access the app.

**DATA SHARING**  
No information available.

**DATA DELETION/RETENTION**  
No information available.

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# Privacy Policy

The app has no specific privacy policy. The link redirects the user to the general privacy policy of Qkopy X, which is available at https://qkopy.com/x/privacy-policy.html.

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# Security

No information available.

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# Grievance Redressal

The privacy policy of the app, establishes a grievance redressal mechanism. However, the mechanism is not specific for the purpose of this app.

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1,000,000+ installations  

Application developed by Information and Public Relations Department, Government of Kerala in collaboration with QkopyX
Quarantine and contact tracing app for Covid 19 suspect patients. Only patients on the quarantine list can access the app.

<table>
<thead>
<tr>
<th>Data Protection</th>
<th>Privacy Policy</th>
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</thead>
<tbody>
<tr>
<td>ANONYMISATION</td>
<td>The app has no privacy policy.</td>
</tr>
<tr>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>PURPOSE LIMITATION</td>
<td></td>
</tr>
</tbody>
</table>
As the app can only be accessed by quarantined patients, it is not possible to ascertain whether the personal data was used for another purpose. |

| DATA MINIMISATION | Security |
As the app can only be accessed by quarantined patients, it is difficult to ascertain whether only necessary information is collected purpose. |

| DATA SHARING | Grievance Redressal |
No information available. |

| DATA DELETION/RETENTION | There is no information available about a grievance redressal mechanism. |
No information available. |


5,000+ installations

Application developed by Atsuya Technologies Private Limited in collaboration with the Government of Arunachal Pradesh