

Press Release by the Indian Scientists' Response to CoViD-19 (ISRC) Group

20 April, 2020

State-level epidemiological modelling and resources for becoming Covid-wise

Modelling: Governments and policy-makers everywhere are confronting major strategic challenges to their public health infrastructure. Mathematical models provide a crucial tool in comparing the relative effectiveness of different policy interventions. The ISRC Modelling team has developed INDSCI-SIM, an India-specific epidemiological model that provides the most detailed approach to date of any model for COVID-19 spread in India. It can be used for planning for resources at the city, district or state-level. Using this model, it is possible to compare the effects of multiple non-pharmaceutical interventions – including different types of lock-downs, quarantines and expanded testing – in altering the trajectory of the pandemic. Finally, the model can be used to forecast the requirements that will be placed on the health care system, including requirements for hospital beds and for critical care. The study demonstrates that strategies that involve large-scale testing and quarantining of both symptomatic and asymptomatic patients are the only truly effective ones in helping to slow and then stop the spread of the epidemic.

Bhalchandra Pujari of Centre for Modeling and Simulation, Savitribai Phule Pune University, a member of the group, said, "In a unique online effort across multiple cities, we collaborated to develop a rigorous India-specific model. It is not only pertinent for the ongoing pandemic but will also be an important tool for policy makers preparing for future epidemics."

Separating fact from fiction: The Hoaxbusters team of ISRC presents a new series – “**Be COVID wise**” that seeks to provide answers to questions that overwhelm and confuse everyone. Do children and young adults get infected with coronavirus, why isn't a vaccine available yet, would the warm Indian summer reduce the pandemic? On such questions our own understanding changes as new evidence becomes available. Highlighting this, team member Deepa Agashe of the National Centre for Biological Sciences in Bangalore said, “The information on COVID keeps evolving and it is hard for the public to keep up with the scientific literature. We are using our training and resources to constantly keep up with the evolving knowledge on this pandemic. Our website provides additional scientific details and technical links for those who want to follow up on our brief social media infographics.”

Guidelines for essential service providers: The ISRC science communication team offers a set of resources for essential service providers, like shopkeepers and those delivering goods to commercial establishments and homes. “For such people, daily activities like stocking the shop or collecting payments can seem daunting. Our attempt here is not only to contextualize these directives to Indian realities but also to communicate the science behind these instructions,” said Varuni P, outreach associate at the Institute of Mathematical Sciences, Chennai. The highlight is a Bengali audio play

named 'Corona Kumir o Haridpada' (Crocodile Corona and Haripada), which focuses on a lower-middle-class family in Bengal, written and enacted by Ayan Banerjee and Anindita Bhadra, both faculty at IISER Kolkata, and co-founders of the theatre group (*Kalyani Mukhosh*).

IT systems: The ISRC Mobile Applications team has operationalized SMALL-BAG (<https://bit.ly/smallbagpres>), an E-Token system for shopping by local buyers and grocers. IIT-Bombay and KEM Hospital have collaborated to deploy WWH (<https://bit.ly/kem-iitb-hindi>), a helpline for non-covid patients. ISRC can help replicate these systems where there is a need. The Gram Vaani team has set up IVR (Interactive Voice Response) systems for rural and low-income communities, through which they can access accurate information and seek help.

The Be COVID-wise series of infographics, the resources for service providers and Gram Vaani, are available in multiple Indian languages as well as English and Portuguese.

General ISRC Resources for the Media and Public

Indian Scientists' Response to CoViD-19 Website

<https://indscicov.in/>

Hoax Busters QnA Website for Covid-wise

<https://indscicov.in/QnAcovid/>

Download link for all images on Covid-wise: <http://tiny.cc/Be-COVID-Wise>

Daily Life and COVID - 19

<https://indscicov.in/popularization-resources/>

INDSCI-SIM, an India-specific epidemiological model

<https://indscicov.in/indscisim/>