Press Release by the Indian Scientists' Response to CoViD-19 (ISRC) Group
27 April, 2020

Fine-tuned models and fine-tuned information

Modelling: As we approach the end of national lockdown, it is important to fine-tune our understanding of the virus spread in India. Using publicly available data, the growth in the number of confirmed cases is being analysed by ISRC's data analysis team. It is observed that after the imposition of the nation-wide lockdown on March 25, the national growth rate has been decreasing after April 2, and thus the doubling time has also increased, to around 10 days now. However, we find a big variation in doubling time across the states, ranging from around 6.5 days for Maharashtra to around 22 days for Karnataka. Gujarat, Maharashtra, Uttar Pradesh and West Bengal have growth rates larger than the national scale, whereas Delhi, Jammu and Kashmir, Karnataka, Tamil Nadu, Telangana have smaller growth rates. Finally, we caution against any extrapolation based on current data, since fresh outbreaks can alter the scenario significantly.

In parallel work, Sourendu Gupta (TIFR, Mumbai) and R Shankar (IMSc, Chennai) estimate the likely range of actual infections in several epidemic hotspots (https://arxiv.org/pdf/2004.04025). An analysis by Sourendu Gupta makes specific conditional predictions for Mumbai (https://arxiv.org/pdf/2004.11677). Vishwesha Guttal (IISc, Bengaluru), Sandeep Krishna (NCBS, Bengaluru) and Rahul Siddharthan (IMSc, Chennai) present an algorithm for improved contact-tracing via mobile phones. Rather than consider only contacts with known infected people, the algorithm maintains a risk factor for each individual which is updated on encountering risky individuals. It stores most data locally on the phone and requires minimal use of a central server, mitigating privacy concerns.

Fine-tuned information: The Hoaxbusters team of ISRC address issues that are of immediate relevance to the public. The "**Hoaxbusting**" series dispels the myth that Indian bats could spread CoViD19. Protecting the habitat for bats is important for our ecosystem and agriculture. Information in "**Be Covid wise**" series addresses questions such as: can you boost the immune system, what is plasma therapy, and whether the BCG vaccine may help with CoViD19. Subhojit Sen, biologist at the UM-DAE Center for Excellence in Basic Sciences said, the team "cast a large net" to collect evidence from multiple scientific platforms and publications, and provide only important information to the public. The "**Daily life and Covid-19**" series provides fine-grained information. For instance, while *hand-washing* is fundamental and essential, a number of questions arise related to soaps and sanitisers and low-resource environments with poor access to water. The resources are made available in multiple Indian languages as well as English and Portugese.

IT systems: The SMALL-BAG (https://bit.ly/smallbagpres), an E-Token system developed by IIT-Bombay team for shopping by local buyers and grocers, goes SMS-based, thus reducing waiting times while ensuring physical distancing.

General ISRC Resources for the Media and Public

Indian Scientists' Response to CoViD-19 Website
https://indscicov.in/

Hoax Busters & Be Covid wise Website
https://indscicov.in/busting-hoaxes/
https://indscicov.in/qnacovid/

Daily Life and COVID - 19
https://indscicov.in/popularization-resources/

INDSCI-SIM, an India-specific epidemiological model
https://indscicov.in/indscisim/

Analysing Covid19 India data
https://indscicov.in/covid19-india-data-analysis/

ISRC YouTube Channel
https://www.youtube.com/channel/UCiBKoITAvx1_aZq1oeGcZhw