



## CORONA RESEARCH SNAPSHOT

### ➡➡ Data shows similar COVID-19 spread pattern around the globe in initial phases

The emergence of SARS-CoV-2 has given rise to an unprecedented effort by the world scientific community to understand the various aspects of the epidemic. Most of the spread data studies either provide only local estimates, or are focused on clinical studies or are primarily concerned with presentation of primary data. A comprehensive multi-scale study of the spread and growth of the epidemic was lacking. The researchers of CSIR-National Institute of Science, Technology and Development Studies (NISTADS) and Institute of Frontier Science and Applications, Bengaluru examined if there exists some intrinsic dynamics in the epidemiology of COVID-19 which results in high spatial and temporal coherence in the spread and growth of the disease across the world.

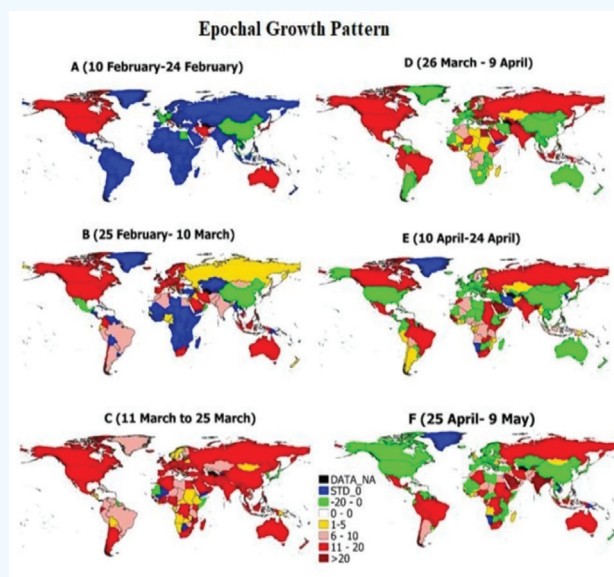
Based on the results, it was concluded that COVID-19 has a strong intrinsic dynamic of time scale of about 40 days, which makes the epidemiology very similar across the world in spite of the regional variations in immunity, lifestyle and healthcare practices. The results provide further insight into the spatio-temporal coherence in the global structure of SARS-CoV-2 transmission and spread, and certain measure of relative roles of global vs. local transmission in its severity, and how effective control measures can be in specific contexts.

The results also provide an important evidence supporting effectiveness of social

distancing and lockdown. An interesting and important feature of the spread of the disease is its spread like a global front of nearly uniform intensity or severity across the globe, especially in the early phases. This study is being considered as the first estimate of intrinsic dynamics of SARS-CoV-2 transmission and COVID-19 natural history based on a well-documented public domain global dataset on the epidemiology at both global and regional levels.

The resulting estimates provide important inputs for interpreting surveillance data, evaluating interventions, and setting public health policy. The study is published as a preprint in *The Lancet Infectious Diseases*.

Source: Preprint at *The Lancet Infectious Diseases*; DOI: 10.2139/ssrn.3618307; 2020



Normalized epochal (%) linear trends in daily new cases of COVID-19

Courtesy: Nishad et al. Preprint at *The Lancet Infectious Diseases*