The Informatics of COVID-19: A New York Perspective

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Abstract: Since March 2020, more than 100,000 publications on the topic of [COVID-19]/[SARS-CoV-2] are listed in PubMed; new publications are coming out at approximately 3,000 per week. By comparison, with a 38-year head-start, [Human Immunodeficiency Virus]/[HIV] has not yet reached 400,000 publications. The question at hand is: what information is required to understand the contagion that is SARS-CoV-2? The domains include Investigational Science into viral biology and the host response; Medical Science regarding COVID-19 disease and treatment; and information for Public Health and our Society. Recognizing that no one individual can adequately represent the information now available regarding COVID-19 and the virus that is SARS-CoV-2, a regional perspective will be given for the Informatics journey we have traveled. Immediate conclusions include: (1) the Informatics of Epidemiology must be activated immediately upon entry of a new pathogen into a region, with as much granularity as possible to inform the Public Health response; (2) the medical community must activate immediately to assimilate and disseminate information about the pathogen’s impact on the human condition; and (3) worldwide communities of investigational science must activate immediately, both in pursuit of therapeutics based on scientific knowledge of the pathogen and host, and in support of mitigation of the pandemic. While these conclusions may seem self-evident, the natural experiment that is COVID-19, and the information obtained over the course of this pandemic, provide insights into both our strengths and weaknesses as an information-based society.

Educational Objects: Upon completion, participants should be able to:
- To understand the contribution that the New York regional community made to world knowledge about COVID-19.
- To examine the Informatics required to achieve new knowledge about COVID-19.
- To consider our societal needs for acquiring and managing pandemic information moving forward.

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