

The 3P Framework – A Comprehensive Approach to Coping with the Emerging Infectious Disease Crisis

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Abstract

The COVID19 pandemic is the latest example of the profound socio-economic impact of the Emerging Infectious Disease (EID) crisis. Current health security measures are based in a failed evolutionary paradigm that presumes EID is rare and cannot be predicted because emergence requires the prior evolution of novel genetic capacities for colonizing a new host. Consequently, crisis response through Preparation for previously-emerged diseases and Palliation following outbreaks have been the only health security options, which have become unsustainably expensive and unsuccessful. The Stockholm Paradigm is an alternative evolutionary framework suggesting host changes are the result of changing conditions that bring pathogens into contact with susceptible hosts, with novel genetic variants arising in the new host after infection. Host changes leading to EID can be predicted because pre-existing capacities for colonizing new hosts are highly specific and phylogenetically conservative. This makes EID Prevention through limiting exposure to susceptible hosts possible. The DAMA (Document, Assess, Monitor, Act) protocol is a policy extension of the SP that can both prevent and mitigate EID by enhancing traditional efforts through adding early warning signs and predicting transmission dynamics. Prevention, Preparation and Palliation comprise the 3P framework, a comprehensive plan for reducing the socio-economic impact of EID.

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