

# Human Behavior and Viral Evolution of Emerging Infections

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We aim to understand how the emerging infection virus evolves and how we can optimize human behavior to bring this evolution under control. To achieve such goals, we created and analyzed mathematical models that can predict the spread of infection and help guide public health workers in improving the effectiveness of different human behaviors on the competition between virus variants. Our preliminary result shows the non-monotonic behavior for the share of variants as control strategies increase. Increasing the control level does not necessarily reduce the spread of variants, but a more engineered control strategy is needed.