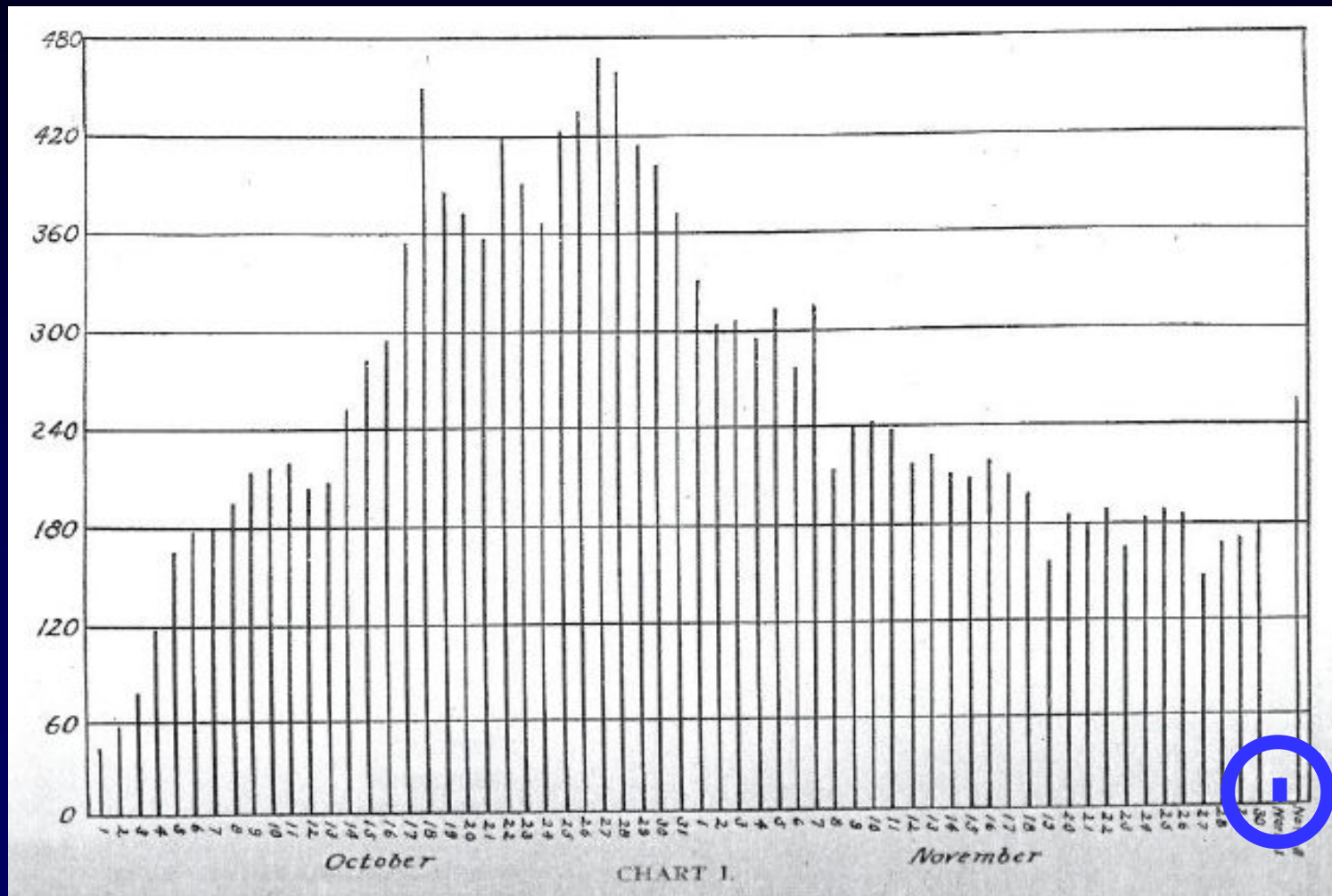


Community Mitigation Strategies: Policy Considerations

Institute of Medicine
26 October 2006

Rajeev Venkayya, MD
White House Homeland Security Council

Daily Deaths in Ohio - 1918



Brodrick OL. Influenza and pneumonia deaths in Ohio in October and November, 1918. *The Ohio Public Health Journal* 1919;10:70-72.

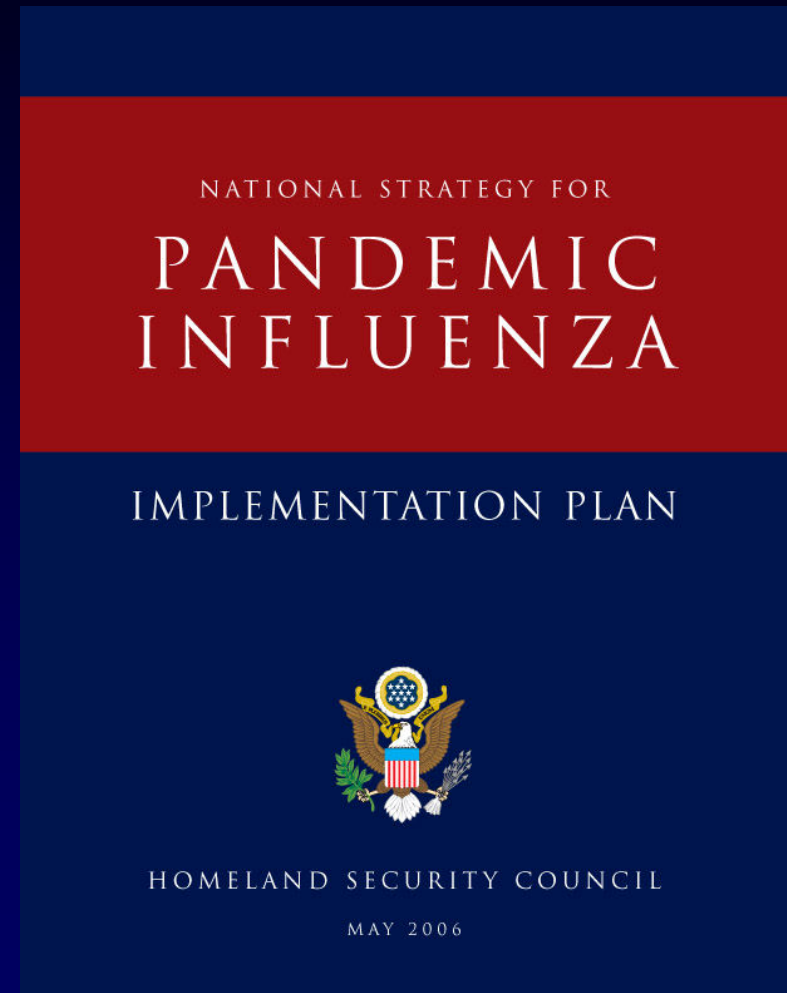
A 1918-Like Pandemic Would Take a Significant Toll Today

Severe Pandemic (1918-like) in the U.S.	
Illness	90 million (30%)
Outpatient medical care	45 million (50%)
Hospitalization	9,900,000
ICU care	1,485,000
Mechanical ventilation	745,500
Deaths	1,903,000

- Congressional Budget Office estimates 4.25% reduction in U.S. GDP, not including years of productivity lost

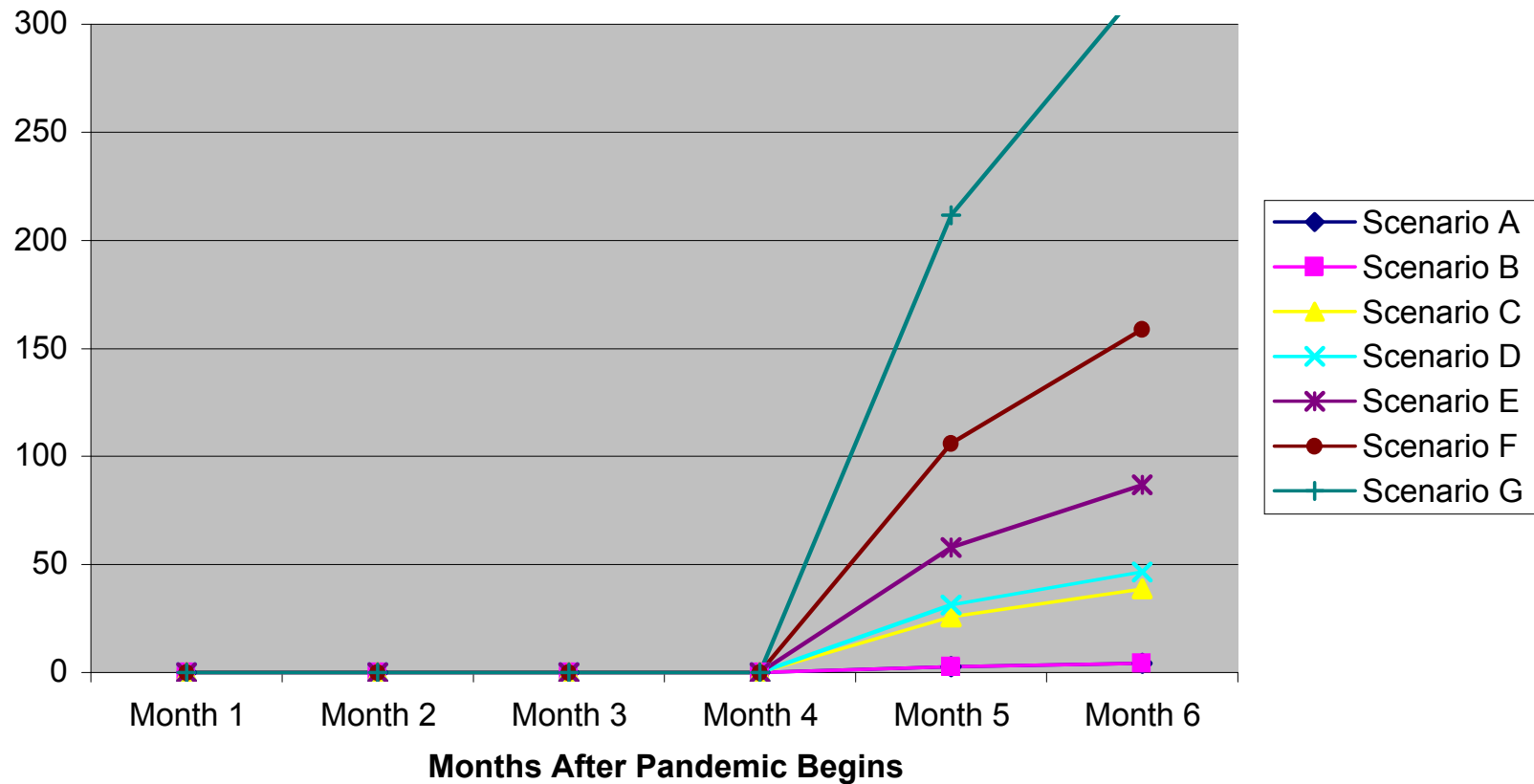
Implementation Plan for the National Strategy

- Strategy released on Nov 1, 2005
- Plan released on May 3, 2006
- Contains over 300 actions for Federal Departments and Agencies
- Provides guidance on implementation of the *Strategy*, the development of Department plans, and outlines specific roles and responsibilities of Departments and Agencies in pandemic preparedness and response
- Communicates expectations of non-Federal entities (State and local governments, private sector, critical infrastructure entities, individuals)



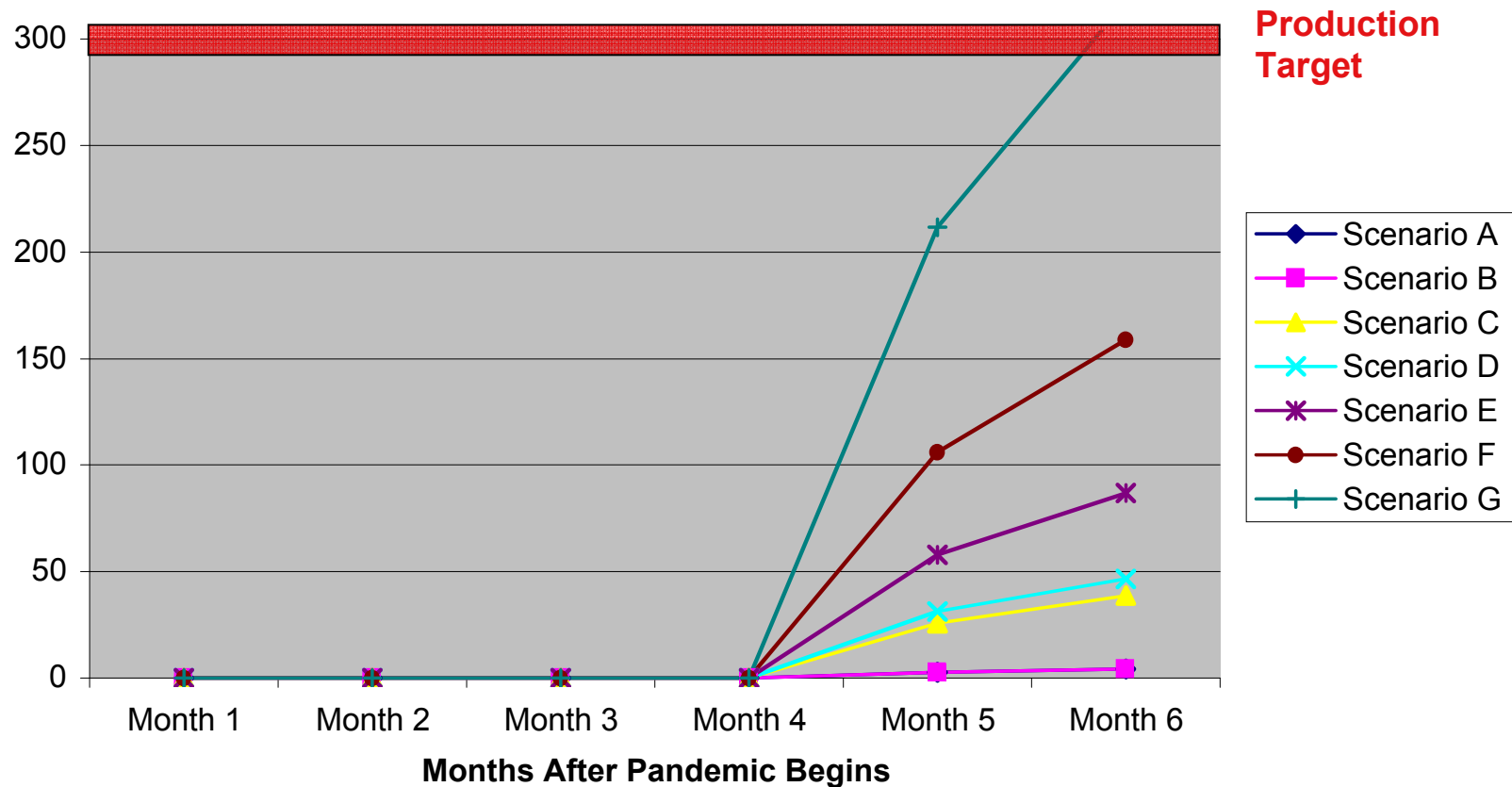
Vaccine Availability After A Pandemic Begins

Vaccine Production After Pandemic Virus Emerges



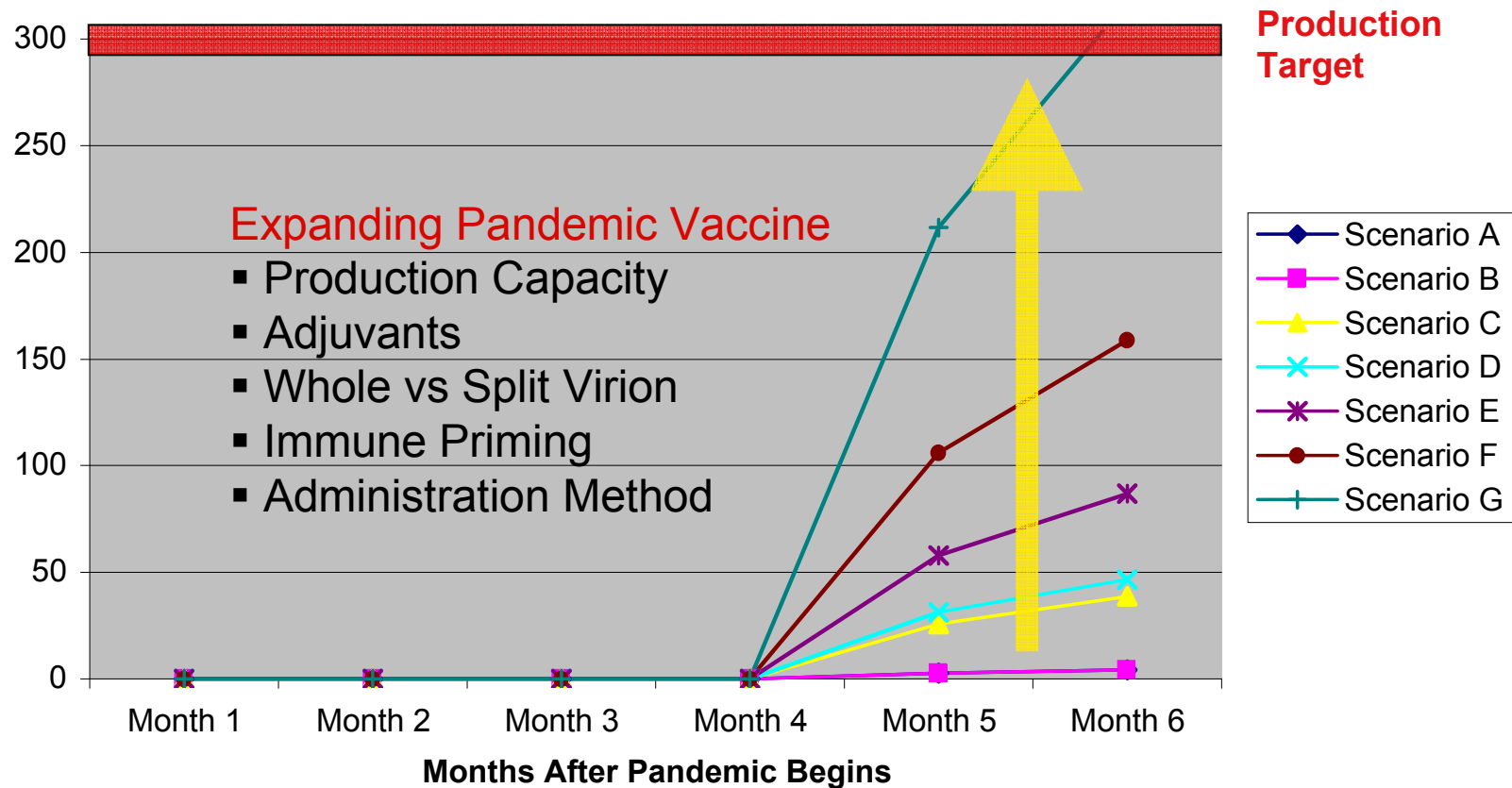
Vaccine Availability After A Pandemic Begins

Vaccine Production After Pandemic Virus Emerges



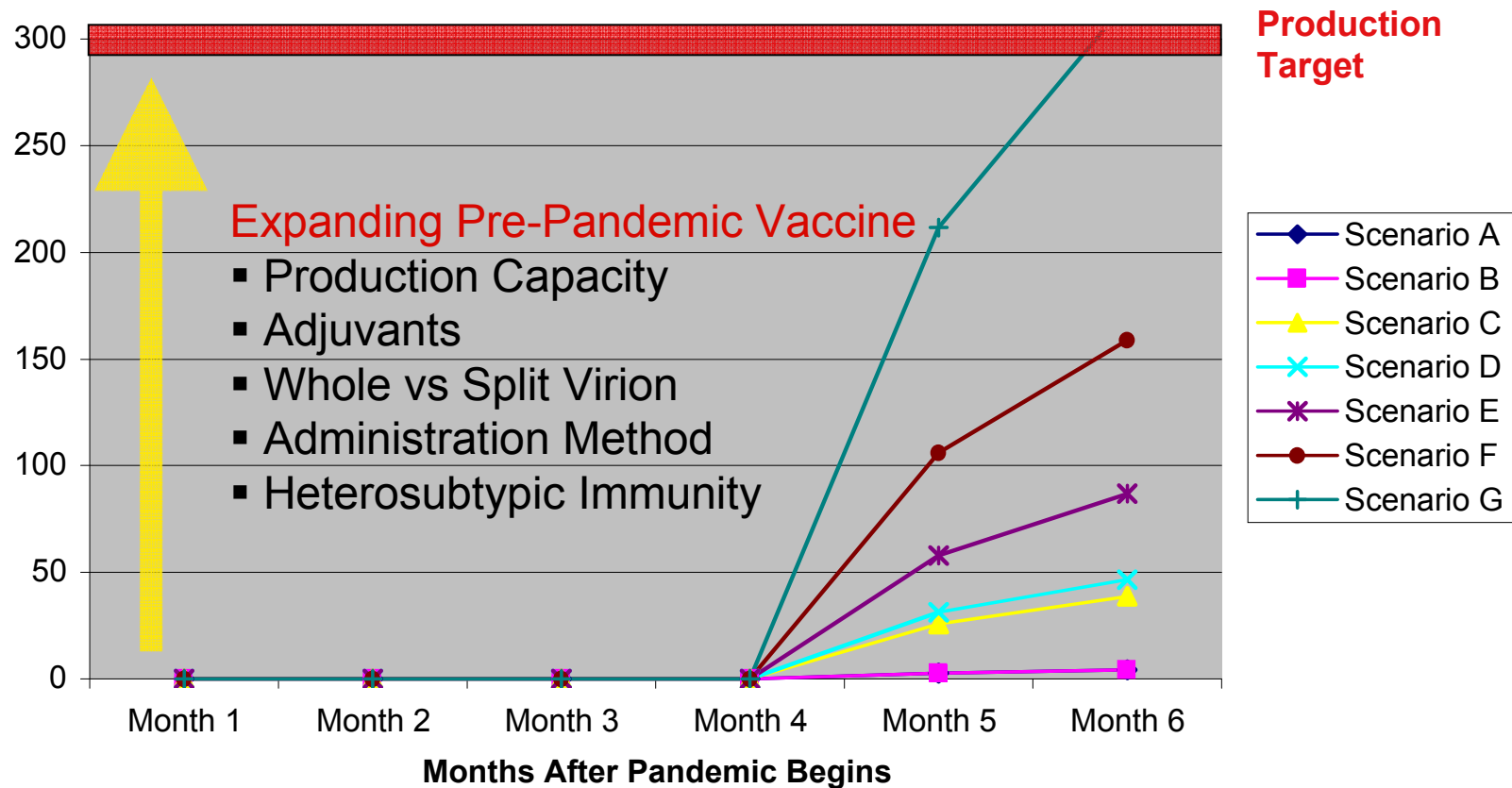
Vaccine Availability After A Pandemic Begins

Vaccine Production After Pandemic Virus Emerges



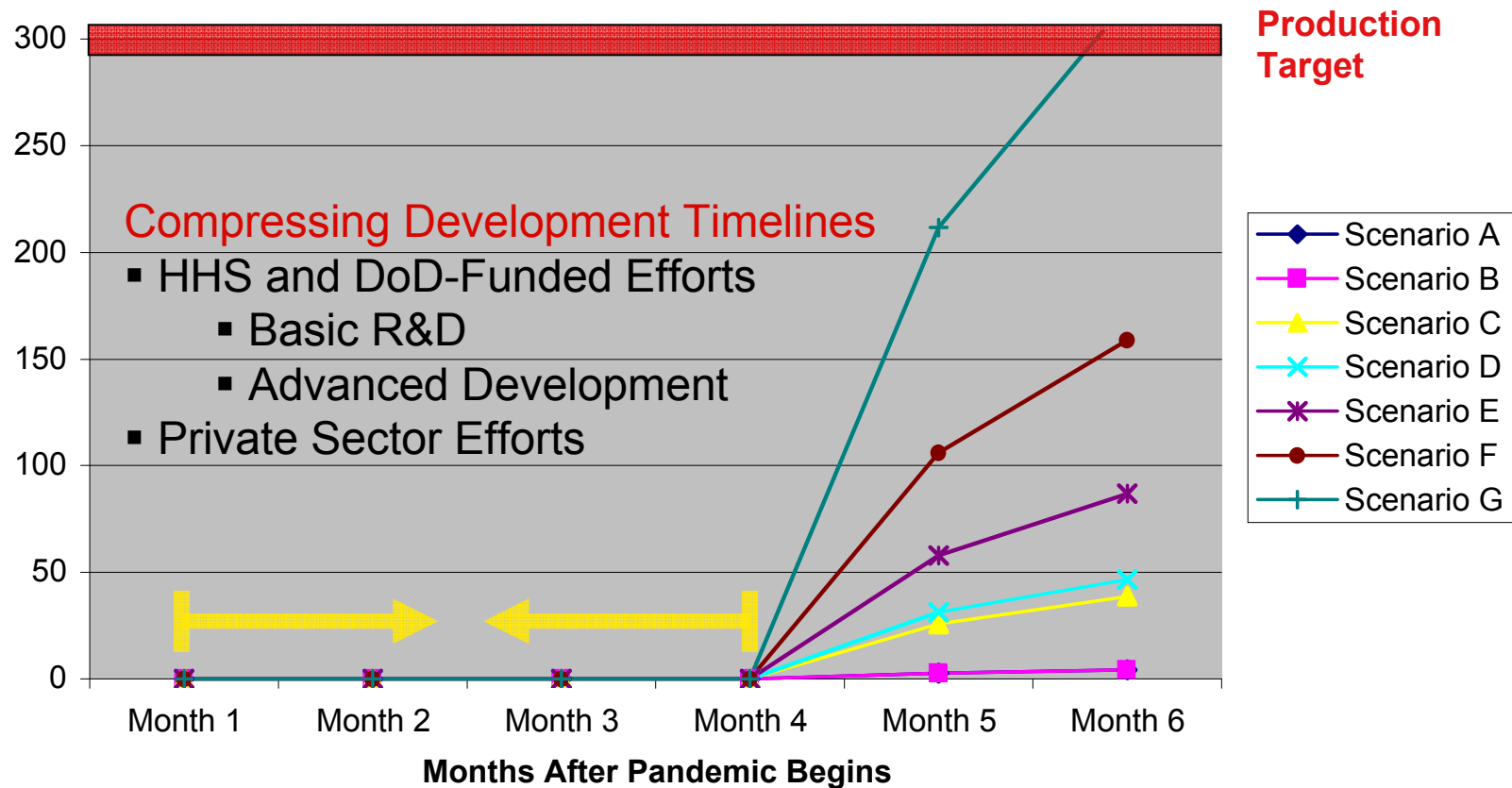
Vaccine Availability After A Pandemic Begins

Vaccine Production After Pandemic Virus Emerges



Vaccine Availability After A Pandemic Begins

Vaccine Production After Pandemic Virus Emerges

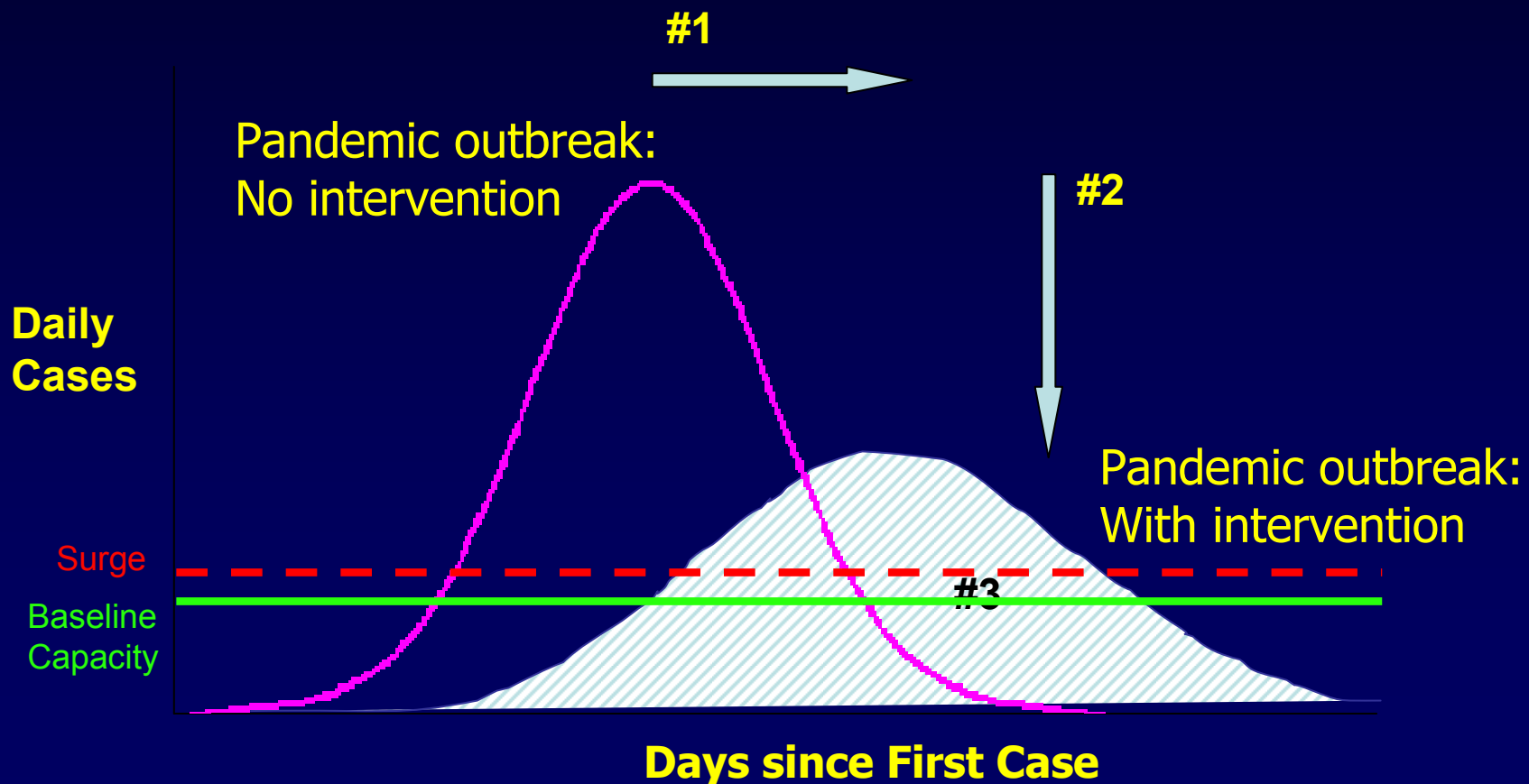


The Situation Today

- Our best countermeasure – vaccine – will probably be unavailable during the first wave of a pandemic
- Antiviral treatment may improve outcomes but will have only modest effects on transmission
- Antiviral prophylaxis will have more substantial effects on reducing transmission
- Infection control and social distancing should reduce transmission, but strategy requires clarification

Reducing the Burden on Communities

1. Delay outbreak peak
2. Decompress peak burden on hospitals / infrastructure
3. Diminish overall cases and health impacts



Concept

Combinations of partially-effective infection control measures, when implemented early and uniformly across a community, may be highly effective in controlling the spread of a pandemic influenza virus.

Policy Considerations

- We are unlikely to know whether community mitigation strategies are effective until the next pandemic or widespread outbreak of a communicable disease occurs.
- During a pandemic, public health recommendations will be tailored to the characteristics of the pandemic virus, and revised as “real-time” assessments of the efficacy of interventions become available.

Policy Questions

- During a severe pandemic, how could communities use the resources at their disposal to limit illness, hospitalization and death?
- Based upon the available evidence, what planning should be done now?

Benefits of this Analysis

- Extends the dialogue beyond the public health and medical communities
- Focuses attention on community resilience
- Relevant to all-hazards preparedness efforts
- Relevant to international preparedness efforts

