Comparative Analysis: Summary and Conclusions

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Objectives for comparative analysis

- Provide perspective on numbers needed to be vaccinated and cost per case averted

- Compare relative costs of vaccination for travelers with different itineraries and disease risk

- Understand the cost implications of expanding the current JE vaccination recommendations to a broader group of travelers

Numbers need to vaccinate to prevent a case

- Risk group I: 0.7 million

- Risk group II: 1.6 million

- Risk group III: 9.8 million

Cost per case averted

- Base case
  - Risk group I: $0.6 billion
  - Risk group II: $1.3 billion
  - Risk group III: $7.9 billion

- Sensitivity analysis, incidence increased 100x
  - Risk group I: $5 million
  - Risk group II: $12 million
  - Risk group III: $78 million

Additional cost to prevent additional JE case by expanding vaccination program

- Risk group I → risk group I+II: $1.6 billion

- Risk group I+II → risk group I+II+III: $14.6 billion

Conclusions

- Number needed to vaccinate and cost per case averted varied greatly related to disease risk group

- Cost per case averted was at least $2 million even when extensive sensitivity analyses conducted including increasing incidence and medical costs and decreasing vaccine cost
    - Substantially higher in lower incidence groups

Use of comparative analysis results

- Assist with work group considerations as part of Evidence to Recommendations assessment

- Consider comprehensively with other disease and vaccine data
  - High morbidity and mortality when JE occurs
  - Availability of safe and effective vaccine

Remaining work group objectives to be addressed at upcoming ACIP meetings

- Present Evidence to Recommendations framework

- Present proposed recommendations for use of JE vaccine in consideration of updated safety, immunogenicity, and traveler risk data

- Provide draft of updated MMWR Recommendations & Reports

Thank you