The Economic Impact of Pandemic Influenza in the United States: Priorities for Intervention

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Appendix I

For the equation in the main text defining net returns due to vaccinations, savings from outcomes averted and the costs of vaccination are calculated as follows:

Savings from outcomes averted = \sum (Number with outcome before intervention) 

- age, risk group
- Outcomes death, hospitalization, outpatient, ill, no medical care

= x vaccine effectiveness x $value of outcome prevented

- age, risk
- Outcomes death,
and;

Cost of vaccination = \$\text{cost/vaccinee} \times \frac{\text{population}}{\text{compliance}} \times \text{age, risk group} \times \text{age, risk group} \times \text{age, risk group}

Table. High and low levels of assumed vaccine effectiveness

<table>
<thead>
<tr>
<th>Disease outcomes</th>
<th>Vaccine effectiveness in preventing disease outcomes$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High$^b$</td>
</tr>
<tr>
<td>Death</td>
<td>0.70</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>0.55</td>
</tr>
<tr>
<td>Outpatient visits</td>
<td>0.40</td>
</tr>
<tr>
<td>Ill, no medical care sought</td>
<td>0.40</td>
</tr>
</tbody>
</table>

$^a$Vaccine effectiveness is defined as the reduction in the number of cases in each of the age and disease categories.

$^b$Within a defined age group, it was assumed that there was no difference in vaccine effectiveness between subgroups at high risk and not at high risk.

$^c$The terms high and low level of effectiveness are subjective and reflect only a judgment of the levels of effectiveness in the two scenarios relative to each other.

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