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:

\[
\text{Savings from outcomes averted} = \sum (\text{Number with outcome before intervention}) \times \text{compliance} \times \text{vaccine effectiveness} \times \text{$value of outcome prevented$)
\]

Outcomes death, hospitalization, outpatient, ill, no medical care
group

hospitalization,

outpatient, ill, no
medical care

and;

Cost of vaccination = \$\text{cost/vaccinee} \times \text{population} \times \text{compliance}

<table>
<thead>
<tr>
<th>Disease outcomes</th>
<th>0-19 yrs</th>
<th>20-64 yrs</th>
<th>65 + yrs</th>
<th>0-19 yrs</th>
<th>20-64 yrs</th>
<th>65 + yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death</td>
<td>0.70</td>
<td>0.70</td>
<td>0.60</td>
<td>0.40</td>
<td>0.40</td>
<td>0.30</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>0.55</td>
<td>0.55</td>
<td>0.50</td>
<td>0.55</td>
<td>0.55</td>
<td>0.50</td>
</tr>
<tr>
<td>Outpatient visits</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
</tr>
<tr>
<td>Ill, no medical care sought</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
</tr>
</tbody>
</table>

\*Vaccine effectiveness is defined as the reduction in the number of cases in each of the age and disease categories.
\*\*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.
\*\*\*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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