The introduction and widespread use of vaccines has resulted in a dramatic reduction in morbidity, mortality, and economic burden. This review focused on studies examining vaccine administration costs in low and middle-income countries, as well as in high-income settings. The results highlight the importance of considering local and regional contexts when planning vaccination programs.

**Table 1. Study Characteristics, Design, Cost and Cost Analysis Methodologies**

<table>
<thead>
<tr>
<th>Study Title</th>
<th>Country Setting</th>
<th>Type of Study</th>
<th>Cost Calculation Methodology</th>
<th>Results Presentation in Model?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public/private mixed</td>
<td>Secondary data (based on data provided by the provider)</td>
<td>Cost-effectiveness model</td>
<td>Secondary</td>
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</tbody>
</table>

**RESULTS**

- **Administration Costs**:
  - Overall, vaccine administration costs were lower in low/middle-income countries ($0.4–$4.5 per dose) compared to high-income countries ($5.2–$61 per dose).
  - Costs varied by vaccine, with estimates ranging from $2.00 for Hepatitis B to $5.20 for Hepatitis A.

- **Vaccine Administration Costs**: The total cost of vaccine administration was $1.67 per dose in Iraq, ranging from $2.00 for Hepatitis B to $5.20 for Hepatitis A.

- **Economic Evaluation**: The economic evaluation included costs and benefits of vaccine administration, assessing the impact on public health and the economy.

**CONCLUSIONS**

- **Timing and roll-out**: The roll-out of vaccines is crucial for achieving effective vaccination programs. Timely roll-out, combined with effective monitoring and evaluation, is essential for ensuring vaccination coverage.

- **Economic Impact**: The economic impact of vaccination programs is significant, as evidenced by the reduction in healthcare costs and improved public health outcomes.

**REFERENCES**

1. Zhou et al., 2005
5. Al-lela OQ, et al. Estimation of immunization providers’ activities cost, medication cost, and vaccine administration cost. (For adults and children)
6. Zhou et al., 2005
8. Zayed et al., 2005
10. Stengle et al., 2015;159(12):1136–1144.
11. Zhou et al., 2005
12. Al-lela OQ, et al. Estimation of immunization providers’ activities cost, medication cost, and vaccine administration cost. (For adults and children)
13. Zayed et al., 2005
15. Zayed et al., 2005
16. Zhou et al., 2005
18. Zayed et al., 2005
20. Zayed et al., 2005