Differences in Sources of Immunization Information Among Parents of Children Up-to-Date and Parents of Children Not Up-to-Date on Two or More Vaccines

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Most parents report that they depend primarily on their child’s health care provider for immunization information. However, parents also depend upon other sources of information, ranging from the internet to newspapers or magazines to friends or family members.
Objectives

The objectives of the study were to determine:

1. if parents of children who are not up-to-date on two or more “high profile” vaccines -- DTaP/DTP, hepatitis B, and measles-containing (MCV) -- used non-provider sources of immunization information more than parents of children who are up-to-date

2. if there were differences in the non-provider sources of immunization information used by parents of children who are not up-to-date and parents of children who are up-to-date

3. whether these sources made parents more or less concerned about immunizations
Methods

- Survey Instrument
  - National Immunization Survey Knowledge, Attitudes and Practices (NIS-KAP) module
Target Population

• Parents who used sources of immunization information other than their child’s doctor or nurse when their child was getting early immunizations
Target Population (cont.)

- Up-to-date, UTD (parents of children up to date for all recommended vaccines)

- Parents of children not up-to-date, NUTD (for two or more of DTaP/DTP, hepatitis B, or MCV)
  - “NUTD/decline vaccine” - those who asked the doctor/nurse not to give their child an immunization for reasons other than illness
  - “NUTD/other reason” - all other NUTD parents who did not ask the doctor not to give their child an immunization for reason other than illness
Analyses

- Chi Squared tests
- Z-score tests of proportions
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2. if there were differences in the non-provider sources of immunization information used by parents of children who are not up-to-date and parents of children who are up-to-date

3. whether these sources made parents more or less concerned about immunizations
## Non-Provider Sources of Information

<table>
<thead>
<tr>
<th>Immunization information from someone other than their HC provider</th>
<th>NUTD/Decline vaccine</th>
<th>UTD</th>
<th>P value</th>
<th>NUTD/other reason</th>
<th>UTD</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>33 (63.8)</td>
<td>327 (29.0)</td>
<td>0.01*</td>
<td>128 (29.8)</td>
<td>327 (29.0)</td>
<td>0.85</td>
</tr>
<tr>
<td>No</td>
<td>22 (36.2)</td>
<td>682 (71.0)</td>
<td></td>
<td>273 (70.2)</td>
<td>682 (71.0)</td>
<td></td>
</tr>
</tbody>
</table>
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## Information Source Used

<table>
<thead>
<tr>
<th>Sources</th>
<th>NUTD/decline %</th>
<th>NUTD/other %</th>
<th>UTD %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>47.3</td>
<td>14.4</td>
<td>16.6</td>
</tr>
<tr>
<td>Newspapers/Magazines</td>
<td>21.1</td>
<td>42.2</td>
<td>37.8</td>
</tr>
<tr>
<td>TV/radio</td>
<td>2.4</td>
<td>8.9</td>
<td>4.3</td>
</tr>
<tr>
<td>Family/Friends</td>
<td>22.8</td>
<td>12.2</td>
<td>22.8</td>
</tr>
<tr>
<td>Internet</td>
<td>20.9</td>
<td>8.4</td>
<td>16.9</td>
</tr>
<tr>
<td>Phone/hotline</td>
<td>2.4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>40.2</td>
<td>48.2*</td>
<td>30.6</td>
</tr>
</tbody>
</table>
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3. whether these sources made parents more or less concerned about immunizations
## Parents Made More Concerned

<table>
<thead>
<tr>
<th>Sources</th>
<th>NUTD/decline %</th>
<th>NUTD/other %</th>
<th>UTD %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>80.6*</td>
<td>36.2</td>
<td>16.0</td>
</tr>
<tr>
<td>Newspapers/Magazines</td>
<td>82.8*</td>
<td>20.9</td>
<td>33.9</td>
</tr>
<tr>
<td>TV/radio</td>
<td>100</td>
<td>57.8</td>
<td>85.4</td>
</tr>
<tr>
<td>Family/Friends</td>
<td>28.9</td>
<td>19.3</td>
<td>39.9</td>
</tr>
<tr>
<td>Internet</td>
<td>79.7*</td>
<td>12.4</td>
<td>16.6</td>
</tr>
<tr>
<td>Phone/hotline</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>61.3*</td>
<td>21.8</td>
<td>23.6</td>
</tr>
</tbody>
</table>
Demographic Differences Between Groups

- Both NUTD/decline vaccine and NUTD/other reason parents differed demographically from UTD parents
  - A greater proportion of NUTD/decline vaccine parents than UTD parents were:
    - 30+ years (88.9% versus 52.6%)
    - college graduates (73.5% versus 38.3%)
    - white (95.7% versus 65.9%)
Demographic Differences Between Groups (cont.)

- Compared to UTD parents, a greater proportion of NUTD/other reason parents
  - lived in households earning $0-30,000 (53.3% versus 28.2%) and
  - had less than 12 years of school (21.9% versus 4.2%)
Conclusions

• Parents of children missing two or more vaccines can be segmented as those who request that their child not be vaccinated and others

• These NUTD/decline vaccine parents obtain immunization information from non-provider sources more than UTD parents, and are made more concerned by this information
Conclusions (cont.)

- Compared to UTD parents, NUTD/decline vaccine parents tend to be older, white, and generally more educated, while NUTD/other reason parents tend to have less education and less income.

- The latter parents may be due to reasons related to, for instance, access to health care and ability to take time off work to take their child for immunizations. However, some may also be cases for reasons related to mistrust of medical professionals.
Conclusions (cont.)

• It is not the type of non-provider immunization information source per se that causes a concern (little to no difference in information sources used)

• Rather, it may the interpretation and/or response to the information in the non-provider source that distinguishes NUTD/decline vaccine parents and UTD parents.
Limitations/Strength

• Low response rate.

• Analysis groups comprised of demographically different people.

• Ability to assess the affect of sources of immunization information for different groups of parents.
Acknowledgements

• Abt Associates
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• P. Smith
• H. Yusuf
• B. Schwartz
Recommendations

• Use Vaccine Information Statements (VIS) as a tool for discussing risks of vaccines and risks of diseases (to the child, family, and community)
• Ask questions
  – Assess the parent’s reasons for wanting to delay or forgo vaccination in a non-confrontational manner
  – If parents have safety concerns, ask them to identify the source of the concerns
  – Listen carefully, paraphrase to the parent what you’ve heard, and ask them if you have correctly interpreted their concern
Recommendations (cont.)

- Provide factual information in understandable language that address the parent’s specific concerns
- Express your personal support for vaccinations and share your experiences with vaccine-preventable diseases
- Provide educational materials to be taken home and refer concerned parents to other credible sources
Recommendations (cont.)

• Inform parents who defer vaccination of their responsibilities to protect other family and community members
• Advise parents of state school or child-care entry laws
• Explore whether the parent is willing to allow the child to receive certain vaccines
• Periodically assess the parent’s willingness to vaccinate their child (e.g., at every well child visit)
• Document refusals to vaccinate in medical record