Increasing Measles Vaccination Rates in At-Risk Populations

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In 2019, there were 1276 measles cases reported in the US. Orange County, Florida, was ranked the 14th most-likely county in the country for an outbreak. A major factor is the decline in the herd immunity rate. In an effort to increase the herd vaccination rate, we implemented an intense outreach program.

**Impacts of Increasing Herd Vaccine Rate from 80% to 95%**

**Purpose**
- Herd vaccination rate
- Measles outbreak chance

** Benchmarks & Goals**
- Determine which outreach method is most effective, mail, phone, or patient portal
- Increase vaccination compliance rate for MMR, among children 3-18, by 2.5% within a two-month time frame

**Data Collection Plan**
- Eligible patient population assessed from FL Shots data combined with internal data to determine which patients were in need of immunizations.

**Evidence of Data Collection**
- Initial Patient Pool 54,183
- Patients over age 2 47,845
- Matches in FL Shots 39,095
- No MMR on file 1655
- Record of at least one vaccination 605
- Patients medically excluded 102
- Outreach Pool 503

**Data Analysis**

<table>
<thead>
<tr>
<th></th>
<th>1st Outreach</th>
<th>2nd Outreach</th>
<th>Total Failure Rate</th>
<th>Responses</th>
<th>Appointments</th>
<th>Vaccinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mail</td>
<td>113</td>
<td>141</td>
<td>25% Bad address</td>
<td>Six responses</td>
<td>Two appointments</td>
<td>Two vaccines</td>
</tr>
<tr>
<td>MyNemours</td>
<td>61</td>
<td>60</td>
<td>75% Unopened</td>
<td>Three responses</td>
<td>Zero appointments</td>
<td>Zero vaccines</td>
</tr>
<tr>
<td>Phone</td>
<td>91</td>
<td>139</td>
<td>Low</td>
<td>Twenty appointments</td>
<td>Sixteen vaccines</td>
<td></td>
</tr>
</tbody>
</table>

**Comparison of Current Performance to Performance Goal**
Initial two rounds resulted in 2.97% vaccination rate which exceeded the initial goal of 2.50%

**Corrective Action**
After the initial two rounds of contact, it became readily apparent phone outreach was the only effective means of communication. All subsequent contact was made by telephone. For the final round, our outreach consisted of 273 patients from rounds one and two who had been contacted via mail or MyNemours portal.

*Medically excluded children and those with no contact phone numbers reduced the pool from 375 to 273

**Re-Measurement**
Goal: 2.50% (7 vaccinations)
Actual: 6.59% (18 vaccinations)

**Bonus**: An additional 319 patients received their measles vaccine over the period of our outreach but could not be perfectly attributed to our outreach

**Reporting of Findings**
Findings were reported out to the Council of Managers and the PMSI board of directors. The communication occurred during the third quarter meetings for both groups.

**References**
4. https://fred.publichealth.pitt.edu/measles