Telephone survey samples of the general public often use combinations of three different sample frames to adequately represent households, including:
1. Random digit dialing (RDD) unlisted households
2. RDD listed households
3. Cell-phone only households

This paper examines the sample disposition results for several standard AAPOR categories, including:
(a) Non-working telephone numbers
(b) Non-contactable households
(c) Ineligible households
(d) Refusals
(e) Completed interviews

This information is useful for survey researchers who are planning telephone surveys that use these sample frames.

Having accurate estimates for sample disposition rates is necessary when planning and budgeting surveys.

Methodology
Eight separate telephone surveys of Washington State households conducted over a two year period between September 2007 and December 2009:
- RDD unlisted, RDD listed, cell-phone sample frames
- Total starting sample size of 7,200 for each survey
- About 500-600 completed interviews for each survey
- Approximately 10-12 minute telephone interview
- Surveys completed over one month period

Results for All Samples Combined by Survey

<table>
<thead>
<tr>
<th>Survey</th>
<th>Starting Sample</th>
<th>% Working</th>
<th>% Contactable</th>
<th>% Eligible</th>
<th>% Cooperating</th>
<th>Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>4000</td>
<td>73%</td>
<td>48%</td>
<td>90%</td>
<td>49%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>7200</td>
<td>41%</td>
<td>43%</td>
<td>83%</td>
<td>46%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>7200</td>
<td>41%</td>
<td>42%</td>
<td>88%</td>
<td>48%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>7200</td>
<td>39%</td>
<td>42%</td>
<td>87%</td>
<td>48%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>7200</td>
<td>38%</td>
<td>41%</td>
<td>87%</td>
<td>48%</td>
<td>7%</td>
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<tr>
<td></td>
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<td>38%</td>
<td>41%</td>
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<td>48%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>47200</td>
<td>43%</td>
<td>45%</td>
<td>87%</td>
<td>49%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Notes:
- All starting sample sizes for cell only = 800
- Starting sample sizes for RDD unlisted = 4,612 to 4,933 (except for survey #1 = 800)
- Starting sample sizes for listed = 1,467 to 1,788 (except for survey #1 = 2,400)
- % Cooperating includes partial completes
- Yield = Number of Interviews / Starting Sample

Sample disposition rates are quite consistent across all seven surveys.

However, the rate of working telephones varies considerably by sample frame, with the lowest for RDD Unlisted (18%), and the highest for Listed (93%).

Rates of contactability are lowest for RDD Unlisted (34%) and highest for Listed households (47%).

Similarly, rates of eligibility are lowest for RDD Unlisted (34%) and highest for Listed households (47%).

Cooperation rates are lowest for cell-phone only households (35%), and highest for RDD (52%), regardless of whether they are listed or unlisted.

The yield in number of completed interviews from starting samples that include RDD Unlisted, Listed, and Cell-phone households is very stable at around 7% to 8%.

What is the proper mix of these three sample frames that produces the best representation of the public?