Leveraging Strategies on Health Information Technology to Maximize Health Outcomes

Cost avoidance of converting from postal to electronic mail

Background

- This year marks the 21st century, where the health care industry is moving from physical to digital interactions. As costs and patient outcomes improve, a new approach to managing health care has been documented, yet little has been published about the cost savings associated with communicating electronically.
- Specifically, we created an economic model to project the potential cost avoidance of converting from postal to electronic mail.
- The cost of converting from postal to electronic mail included staff and resources that would be freed to pursue other initiatives, followed by reduced postage costs.
- As Medicare and population trends add pressure on health care organizations to improve cost efficiencies and effectiveness of communication that helps people manage their conditions, obtain preventive health screenings, and take advantage of resources, new approaches are needed.
- Providers serving this population are faced with unique challenges which may result in an increased adoption of information technology in their practices.

Objectives

- The overall purpose of this work was to project a broad perspective of the implications of a Medicare Advantage plan moving to email communication.
- Specifically, we created an economic model to project the potential cost avoidance of switching from mail to electronic messaging and reported the utilization of email to receive health information.

Methods

- In May 2013, Humana launched an organizational challenge to identify opportunities for performance improvement. Accordingly, a multidisciplinary team was formed to evaluate the feasibility of replacing current copying and mailing practices with secure email.
- A retrospective review of enrollment data was used to identify the current utilization of email to receive health information. Specifically, the percentage of people with an email address on file and the percentage of people who subscribe to receive health information via email were reported.
- An economic model was created to project the potential cost avoidance of eliminating postal mailings. A segment of Humana’s Medicare Advantage population was used as the base case population.
- In addition, 16.2% (60,014/369,841) of population subscribed and received health information via email.

Findings

- As of 2013, 32.4% of the population had an email on file. In addition, 16.2% (60,014/369,841) of population subscribed and received health information via email.

Figure 4. Projected Overall Cost Avoidance by Year

Table 1. Expected Population Growth & Email Uptake

<table>
<thead>
<tr>
<th>Year</th>
<th>Population growth</th>
<th>Email uptake</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>104%</td>
<td>10%</td>
</tr>
<tr>
<td>2014</td>
<td>27%</td>
<td>10%</td>
</tr>
<tr>
<td>2015</td>
<td>14%</td>
<td>10%</td>
</tr>
<tr>
<td>2016</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>2017</td>
<td>11%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Table 1. Expected Population Growth & Email Uptake

- The total cost avoidance over the 5-year period is estimated to be $765,173.

Figure 5. Components of Cost Avoidance (2013-2017)

Conclusions

- This economic model using retrospective financial data projected a $765,173 savings associated with converting 10% of the population from postal mail to electronic mail over a 5-year period.
- Avoided staffing costs was the largest component, as nursing and CHE staff time would be freed to pursue other initiatives, followed by reduced postage costs.
- Approximately 1/3 of the population assessed presently has an email on file with the health plan.
- Future research should evaluate the willingness of individuals enrolled in this plan to receive health information via email.

Limitations

- This study has several limitations. The base case population came from a single, private Medicare Advantage plan and does not necessarily reflect the population at large. The financial inputs of this model are based on actual health plan prices, but we did not account for inflation or population growth.

Implications for Policy, Delivery or Practice

- Fiscal responsibility is of prime importance and reducing cost is fiscally prudent and the minimum return per year for transitioning from a paper-based system to an electronic system is substantial. The benefits of secure e-mail with patients are well documented and for patients with chronic diseases.
- As health care legislation continues to put pressure on health care organizations to improve patient care and efficiencies, the move to electronic communications has a potential to improve efficiency of patient education among a population that is both increasing in need for support and increasing in magnitude. The benefit have a potential to positively impact care recipients, providers and payers.

Table 1. Expected Population Growth & Email Uptake

- The largest component of cost avoidance was staffing, followed by postage.

- The financial data were used to identify the largest component of cost avoidance was staffing, followed by postage.

- The largest component of cost avoidance was staffing, followed by postage.

- The largest component of cost avoidance was staffing, followed by postage.

- The largest component of cost avoidance was staffing, followed by postage.

- The largest component of cost avoidance was staffing, followed by postage.

- The largest component of cost avoidance was staffing, followed by postage.