

Comparisons of Electronic and Mail Survey Approaches

Two Studies

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Research Questions

- How do the response rates of web and mail surveys compare?
- How do the characteristics of respondents to web and mail surveys differ?

Methods

- Site
 - ▶ 3 primary care practices in Greater Boston
- Sample
 - ▶ Patients who had signed up for a portal and for whom there were email addresses
 - ▶ Patients who did not sign up for portal (with no email addresses)
- Design
 - ▶ Patients randomized to 4 survey protocols
 - ▶ CAHPS Clinician & Group Survey

Survey Protocols



- 1. Standard mail:** Mail questionnaire; mail reminder; second questionnaire (1176 respondents)
- 2. Mixed mode:** Postal advance letter; email letter with URL link to survey; email reminder; then postal mail questionnaire (782 respondents)
- 3. Web:** Email letter with URL link to survey; 2 email reminders to non-respondents (1186 respondents)
- 4. Web through portal:** Email notification to look for message in portal; letter in email with link to survey; everyone sent an email reminder (1192 respondents)

Protocol for Patients Without Email Addresses



- **Standard mail protocol:** Mail questionnaire; mail reminder; second questionnaire (769 respondents)

Compared

- ▶ Response rates
- ▶ Who responded
- ▶ Patient experience reports

Response Rates

Mail Only	Mixed Mode: Web & Mail	Web Only
43%	41%	20%

*"Web only" significantly lower than other two conditions $p < 0.001$

Respondents

- There were no differences in the age, education or race/ethnicity of those responding to the three protocols
- Females were slightly (NS) more likely to respond to the mixed protocol

Patient Experience Scores



- 4 CAHPS core composite measures: Access, Communication, Coordination, and Office Staff
- Overall rating of the provider
- Patient-Centered Medical Home (PCMH) supplemental items: 3 questions and a 2-item composite measure
- Additional items: 4 items about discussions with patients plus a 3-item Shared Decision Making composite measure

Differences in Experience Scores

- There were no significant differences in any of the 4 core composite measures, the provider rating, or the PCMH measures
- Of the 5 additional comparisons, there was one statistically significant difference
 - ▶ Those in the mixed-mode protocol were more likely to say they were asked about depression

Portal & Direct Email Link

- Response rates were similar (17% vs 20%; NS)
- Those over 65 were more likely to respond if they did not go through the portal ($p < .05$)
- No differences in the 4 core composite measures, the provider rating, or the PCMH measures
- Of the additional comparisons, only the Shared Decision Making composite measure was significantly different

Patients With and Without Email Addresses

- Response rates were higher for those with email (43% vs 37%, $p < .05$)
- Those with email were more likely to be under 65, more likely to be college grads, and more likely to be female
- On the 9 key measures, there was one statistically significant difference
- On the 5 supplemental measures, there were 3 statistically significant differences

Limits to Generalizability

- Over 70% were college grads
- Over 90% were non-Hispanic whites
- Over 80% had enrolled in the portal program, which means they used the Internet

Summary

If this survey had been done entirely on the Internet (so only those with known emails) and no mail alternative offered:

- ▶ The response rates would have been quite different (20% vs 40%)

BUT

- ▶ The characteristics of respondents would have been comparable
- ▶ The substantive results for all measures would have been comparable

Patients Without Emails

- Slightly less likely to respond
- Demographic characteristics different
- Responses to the 4 core composite measures, the provider rating, and the PCMH measures were very similar to those with email addresses
- Differences on the additional items suggest that they may have some different experiences

Conclusions

- Web vs. Mail Protocol
 - ▶ Response rates were very different
 - ▶ Survey results were very similar
- Responses from those without known email addresses were also similar, but with differences in reports about some experiences

Using the Internet to Collect CAHPS Data



To address:

- ▶ *Concerns about low response rates*
- ▶ *Possible different perceptions and experiences of those without email*

A web survey should be combined with an alternative mode (mail seems best at this time) to improve response rates and to include those who do not use email.

Surveying in Today's Environment

- Response rates to all types of surveys have been declining for many years
- Response rates are important, but representativeness is at least as important, and less often assessed
- Increasing numbers of people use electronic methods (e.g., email, patient portals, SMS) to communicate, but low response rates and poor representativeness are serious limitations for electronic surveys

Improving Response Rates

- High response rates are possible, even for hard-to-reach populations
- Some effective strategies (e.g., overnight delivery services, incentives) may not be feasible or cost-effective
- Mail surveys can yield high response rates, but many survey protocols are not optimal
- Different populations respond to different contact and survey modes, so mixed protocols often yield best response rates and representativeness

Electronic Contact Methods

- Using email or portals to contact patients typically yields low response rates
- Respondents to electronic contacts often differ from other respondents, so caution is required
- Using email, web, or SMS in combination with other strategies can achieve the response rates of traditional mixed methods and **may** reduce overall costs, but anticipated savings are not always realized (e.g., more follow-up may be required than in a mail survey)

Improving Mail Response Rates

- Factors in mail surveys to consider and evaluate
 - ▶ Sponsorship
 - ▶ Contact and survey material design
 - e.g., in older adults, a more attractive layout can increase mail response rates by 15-20%
 - ▶ Protocol timing and intensity
 - ▶ Using strategies (e.g., a well-known delivery service) that conveys urgency
- The best approach often differs by population, but several basic approaches would improve response rates in many applications more than shortening surveys

Conclusions

- Cost is important, but representativeness of data is the “sine qua non” of survey approaches
- Electronic methods, used alone, are not ready for “prime-time”
- Need for continued research on diverse contact and survey methods, including combinations