

Incentive and Mode Effects: Findings from the Kaiser Permanente CAHPS-HIT Demonstration Study

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Track: The Evolution of CAHPS Instruments
Session: The Development and Testing of the CAHPS HIT Item Set
Date & Time: April 20, 2010, 2:15 - 3:45 pm
Track: CAHPS T1-S3

Collaboration between Kaiser Permanente and RAND

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Outline

- **Study objectives**
- **Kaiser Permanente study site**
- **Study design**
- **Findings from the incentive experiment**
- **Web versus mail “mode” effects**
- **Should HIT be included as supplemental items or integrated into CAHPS core?**

Study Objectives

- Incentive experiment
- Mixed Mode– web and mail
- Psychometric analysis
- 4 point versus 6 point response scales
- Analysis of item wording
- Case-mix adjustment analysis
- Power to distinguish physician level differences

Study Conducted in Kaiser Permanente's Southern California Region

- **Total Southern California membership is over 3.2 million members**
- **13 Medical center areas**
- **Study done at two medical center areas**
 - **San Diego: the largest area with 490,000 members**
 - **Woodland Hills: 195,000 members**
 - **Both have a high percentage (~30%) of members using Kaiser Permanente's member website**

My Health Manager

- **Kaiser Permanente HealthConnect® is one of the most robust and sophisticated electronic health records anywhere**
 - Fully operational at all Kaiser facilities
- **My Health Manager is directly connected to Kaiser Permanente HealthConnect®**
 - Members can access their personal health records
- **My Health Manager is available free to all Kaiser Permanente members**

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My health manager

Access your health and health plan information in one safe, convenient place. Click to find out which features are available to you.



[My doctor](#)

E-mail your doctor, get information about our health practitioners, select your personal physician, and choose to act for a family member.



[My medical record](#)

See test results, immunizations, choose to act for a family member, and more.



[Pharmacy center](#)

Order prescription refills online or check the status of a prescription refill for yourself or another member. Review our formulary (list of covered drugs) too.



[Appointment center](#)

Schedule, cancel, or view upcoming appointments and past visit information.



[Manage my health plan](#)

Get information about your plan, download forms, and more.



[My message center](#)

- In Southern California 750,000 members are registered users of My Health Manager
- Across all Kaiser Permanente there are over 3 million users

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- ☐ [Act for a family member](#)
- ☐ [Appointment center](#)
- ☐ [Facility directory](#)
- ☐ [My medical record](#)
- ☐ [Physician home pages](#)
- ☐ [Health encyclopedia](#)

My doctor

[E-mail my doctor](#)

Send nonurgent health questions to your doctor's office.

[View messages](#)

See e-mail messages from your doctor's office.

[Medical staff directory](#)

Find personal physicians who are accepting new patients, and learn more about the background and qualifications of our health care practitioners.

[Selecting a physician](#)

Learn how to choose your personal physician.


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My medical record

[My test results](#)

View select test results, including the date the test was completed and information about the results.

[Act for a family member](#)

Access portions of your child's or family member's medical record and use other features on his or her behalf. (Age limits and access vary by state.)

[My allergies](#)

View a list of your allergies, including the name of the allergen, the reaction you've had, and the date the allergy was first noted in your medical record.

[My health care reminders](#)

Find out when you are due for recommended tests, immunizations, and other procedures.

[My health summary](#)

View a summary of your current health information.

[My immunizations](#)

View a list of your immunizations, including the name of the immunization and the date(s) it was administered.

[My ongoing health conditions](#)

See a list of your ongoing health conditions and learn more about them.

[Past visit information](#)

Review past visit information, including recommended follow-up steps.

Related links:

- ☐ [E-mail my doctor](#)
- ☐ [Appointment center](#)
- ☐ [Refill prescriptions](#)
- ☐ [Health encyclopedia](#)

Test results

Act for a family member

Allergies

Health care reminders

Health summary

Immunizations

Ongoing health conditions

Past Visit Information

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- ☐ [E-mail my doctor](#)
- ☐ [Facility directory](#)
- ☐ [Health encyclopedia](#)
- ☐ [My medical record](#)
- ☐ [Refill prescriptions](#)

Appointment center

Schedule appointment

Schedule nonurgent appointments with your primary care practitioner in **Family Medicine, Internal Medicine, or Pediatrics only**. (Please do **not** use it to schedule checkup/prevention exams, well-baby visits, Pap tests, or Ob/Gyn visits.)

Request appointments

Send a message requesting a **checkup/prevention exam, well-baby visit, Pap test, or Ob/Gyn visit, or to request cancellation of an Ob/Gyn visit**.

View/cancel appointment

See a list of your upcoming appointments. You can also cancel appointments in Family Medicine, Internal Medicine, or Pediatrics.

Past visit information

Review past visit information, including recommended follow-up steps.

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Pharmacy center

Refill prescriptions

Order prescription refills online or check the status of a prescription refill for yourself or another member.

Prescription refill e-mail reminder

Sign up to be reminded by e-mail when your prescriptions are due for a refill.

Contact a pharmacist

E-mail secure, nonurgent questions about prescription or nonprescription drugs or dietary supplements to a Kaiser Permanente pharmacist.

Formulary (covered drugs)

View a list of drugs that have been approved for our members.

Related links:

- ☐ [Drug encyclopedia](#)
- ☐ [My medical record](#)
- ☐ [Natural medicines database](#)
- ☐ [Facility directory](#)

**List of
patient's
current
prescriptions
not yet
available in
Southern
California**

Who We Surveyed

- **Surveyed 3600 adult members**
 - 1800 each from two medical centers
- **Sample represented 30 primary care physicians**
 - Selected physicians with the largest number of patients who had sent them an email
 - Sampled 120 patients per physician
- **Patients were all users of My Health Manager**
 - Patients had at least one office visit with their personal doctor in the prior 6 months
 - For each doctor, randomly selected among patients who had sent the doctor an email in the prior 6 months
 - If a doctor did not have 120 patients who had emailed
 - we selected all patients who had emailed
 - then sampled from patients who did not email

How We Surveyed

- **Mixed Mode**
 - Internet survey– primary mode
 - Mail survey– secondary mode
 - English only

Survey Events	Date	Days After Start of Fieldwork
Initial email	11/19/09	
Reminder email #1	12/01/09	12 days
Reminder email #2	12/07/09	18 days
Mail packet	12/16/09	27 days
End fieldwork	1/15/10	57 days

Incentive Experiment

- **The effect on response rates of a nominal incentive paid for completion of the survey**
 - **\$5 e-certificate or \$5 bill**
 - **Incentive paid after receipt of “completed” survey**
- **Half the sample randomly selected were offered the incentive**

The Incentive Boosted Response Rates

	Incentive	No Incentive
Overall Response Rate	57%	49%
Percent of Total Completes		
Web Survey	73%	72%
Mail Survey	27%	28%

- **Response rate 8 percentage points higher**
 - Total response rate: 53%
- **Mix of web and mail completes is identical**
- **Incentives did not affect how long it took before surveys were completed.**

Are There Differences Between the Incentive and No Incentive Respondents?

- **There are no significant differences in the following demographic characteristics**
 - **Age, gender, education, and got help completing the survey**
 - **Self-reported health status and chronic conditions**
- **Incentive group has a somewhat higher percentage of Asian respondents: 8% versus 4%**

Are There Differences Between the Incentive and No Incentive Respondents?

- **There are no differences in**
 - **Number of email messages with their doctor**
 - **Number of doctor office visits (both administrative data and self-reported)**
 - **Percent reporting visits for care needed right away, and for routine care**
 - **Length of Kaiser Permanente membership**

Did the Incentive Group Report Different Levels of Service than the No Incentive Group?

- **There are no statistically significant differences in either the Core CAHPS or the CAHPS HIT items**

Is It Worthwhile to Pay an Incentive?

- **Sizable increase in response rate**
 - Response rate 16% higher
- **However, there are essentially no differences in respondent characteristics or in survey responses**
- **This demonstration project had a very selective sample**
 - All had at least one encounter with their doctor
- **Impact of incentive may be different for a representative sample of all members**
 - Worth further testing

Are There Mode Effects Between Web and Mail Surveys for the CAHPS HIT?

- **Not a “true” test of whether mode affects how individuals respond to the CAHPS HIT questions**
 - Not randomized
 - Can’t completely separate out the effects of early versus late responders
- **Are there differences between respondents who used the web vs. mail?**
- **Are there differences in the responses?**
 - Case-mix adjustments

Are There Differences Between Respondents Who Used the Web vs. Mail? **Demographics**

- No differences in age, gender or education

Respondent	Mode	
	Web	Mail
Age		
18-34	6%	9%
35-44	9%	10%
45-54	19%	16%
55-64	29%	28%
65 plus	37%	38%

	Mode	
	Web	Mail
Female	57%	59%
College Grad	52%	51%

Are There Differences Between Respondents Who Used the Web vs. Mail? **Demographics**

- Small but statistically significant race/ethnicity differences

	Mode	
	Web	Mail
Hispanic	8%	8%
Asian	5%	9%
White	92%	87%
African Amer.	3%	3%
Other	2%	2%

- Mail respondents report somewhat poorer health status

	Mode	
	Web	Mail
Excellent - Good	86%	82%
Fair - Poor	14%	18%

Are There Differences Between Respondents Who Used the Web vs. Mail? **Utilization**

- **Web respondents sent a significantly higher average number of email messages to their doctor**
 - 4.6 versus 3.6 messages in prior 6 months
- **Medical records indicate there are no differences in the number of doctor visits**
 - 1.6 versus 1.7 visits in prior 6 months
 - However, a higher percentage of mail respondents reported 5 or more visits (15% versus 10%)

Are There Differences in Responses Between Those who Used the Web vs. Mail?

- Not surprising, web respondents are much more likely to be aware of and use online features
- Mail respondents are more likely to phone their doctor
- All these differences persist after case-mix adjusting for age, education and health status
- Nearly identical experiences with doctors using computers in the exam room

Web Respondents Are Much More Likely to Be Aware of and Use Online Features

Knowledge and Use of Online Features	Web	Mail
Can you make appointment by email or website? (% Yes)	93%	84%
Made an appointment by email or website	49%	38%
Emailed MD with medical question	69%	53%
Received email reminder about needed tests or treatments	44%	35%
Made appointment for tests or treatment mentioned in email	82%	72%
Used Email or Website to Refill RX	46%	39%
Used Email or Website to Request New RX	18%	13%

- All differences statistically significant, $p < .05$

Web Respondents Are Much More Likely to Be Aware of and Use Online Features

- Online lab and test results are the exception
- Nearly universal use, and high ratings

Lab and Test Results Online	Web	Mail
Does MD's office put your lab or test results on a website? (% Yes)	99%	96%
Did you look for your lab or test results on the website (% Yes)	99%	96%
Easy to find lab or test results on the website (% Usually-Always)	98%	96%
Lab or test results posted on the website as soon as needed (% Usually-Always)	98%	96%
Lab or test results on the website were easy to understand (% Usually-Always)	92%	89%

Mail Respondents are More Likely to Phone their Doctor

Phone Calls to MD	Web	Mail
Phoned to make an urgent care appointment*	55%	62%
Phoned MD about medical question during office hours	44%	48%
Phoned MD about medical question after hours*	7%	9%

*Differences are statistically significant, $p < .05$

Nearly Identical Experiences with the Doctors Using Computers in the Exam Room

Use of Computers in the Exam Room	Web	Mail
MD used computer or PDA during office visit	95%	95%
During your visits MD used computer or PDA to:		
Look up results or information	99%	99%
Show results or information*	57%	63%
Order prescription	88%	87%
Computer or PDA was helpful		
Yes, Definitely	76%	74%
Yes, Somewhat	19%	22%
No	5%	4%
Computer or PDA: Ease of Talking to MD		
Harder	3%	3%
Not harder or easier	48%	50%
Easier	49%	47%

*Differences are statistically significant, $p < .05$

Mixed Mode Results More Representative

- **Mixed mode of web and mail resulted in a more representative reporting of HIT use rates**
- **But there is no difference in HIT experiences among those using HIT**
- **There are also no significant differences on MD Communication items or Overall Doctor Rating**

Should HIT be Included as Supplemental Items or Integrated into CAHPS Core?

- **CAHPS core questions are primarily questions about care in the doctor's office**
- **HIT questions include, but go beyond care in the doctor's office**
- **Several topics covered in the CAHPS core are also covered in the HIT supplemental questions**
 - **Lab and test results**
 - **Seeking appointments and seeking advice**
 - **Use of computers in the exam room and MD communication**
- **Does this division of care between the core and HIT questions accurately capture how patients think about their care?**

There are Potential Problems When Similar Core and HIT Questions are Asked Separately

Lab and Test Results: Core vs. HIT

Core

In last 12 months did MD order test or x-ray for you? (% Yes)	95%
In last 12 months, how often did someone from MD's office follow up to give you those results? (% Usually-Always)	68%

HIT

In the last 12 months, did you look for your lab or test results on the website (% Yes)	98%
In the last 12 months, how often was it easy to find lab or test results on the website (% Usually-Always)	98%
In the last 12 months, how often were these lab or test results posted on the website as soon as needed (% Usually-Always)	92%

Conclusions

- **Future incentive experiments worthwhile**
 - With representative samples of all patients, not just those who have had a recent encounter
- **Mixed mode (web and mail) will result in a more representative reporting of HIT use**
 - But not of experiences among HIT users
- **Need to consider whether HIT questions should be supplemental items or integrated into CAHPS core**