

# 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**



## 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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## 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.

[▲ Back to top](#)



#### Related links:

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



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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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## 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.

#### Related links:

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

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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

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

# 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
<b>Overall Response Rate</b>	<b>57%</b>	<b>49%</b>
<b>Percent of Total Completes</b>		
<b>Web Survey</b>	<b>73%</b>	<b>72%</b>
<b>Mail Survey</b>	<b>27%</b>	<b>28%</b>

- **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
<b>Hispanic</b>	<b>8%</b>	<b>8%</b>
<b>Asian</b>	<b>5%</b>	<b>9%</b>
<b>White</b>	<b>92%</b>	<b>87%</b>
<b>African Amer.</b>	<b>3%</b>	<b>3%</b>
<b>Other</b>	<b>2%</b>	<b>2%</b>

- **Mail respondents report somewhat poorer health status**

	Mode	
	Web	Mail
<b>Excellent - Good</b>	<b>86%</b>	<b>82%</b>
<b>Fair - Poor</b>	<b>14%</b>	<b>18%</b>

# 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

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

- 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

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

\*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**