

# DO SHORTER SURVEYS INCREASE RESPONSE RATES?

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Testing a Short-Form Version of the CG-CAHPS

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## EXECUTIVE SUMMARY

Pacific Business Group on Health's (PBGH) Patient Assessment Survey (PAS) program tested an ultrashort version of the [CG-CAHPS](#) survey to learn if a shorter survey would yield higher response rates than the regular length survey. The test included 27 medical groups and a sample of ~10,000 patients. Three main research questions were investigated: 1) Would patients be more likely to respond to a shorter survey, and would it make a difference if we told them it was short in the invitation? 2) Would asking patients for feedback on just one or two aspects of their experience (instead of the 5 topics covered in the standard survey) lead to different patient feedback? 3) Would different types of patients respond to a shorter survey?

### Key Findings

Results of the study were surprising. The researchers had anticipated that a survey invitation telling the patient the survey was short would entice patients to open the survey, and that having a small number of questions on the survey itself would lead to drastically more people taking and finishing the survey. However, results of the survey showed:

- Respondents were only slightly (1%) more likely to engage in the survey process if they were told the survey was short in advance
- Once patients started the survey, they were likely to finish it irrespective of the survey length (99% completion rate for the ultrashort survey, vs. 91% for the standard survey)
- Patients gave similar feedback on their care between the ultrashort and the standard survey
- Respondents to the email survey were younger and more educated than respondents to the mailed survey

The findings are instructive for provider organizations and health plans using the CG-CAHPS instrument to assess the quality of care delivery and are looking for methods to encourage greater patient engagement. The survey findings suggest the following five steps can make a meaningful difference:

1. **Focus on engaging patients.** Telling patients a survey is short in the invitation might not lead to higher engagement – experiment with a variety of invitation language, length, and visual formats to see what resonates most with users and entices them to engage with your surveys; when you find a method that increases your response rate use it as widely as possible.
2. **Use email to reach patients.** Most CG-CAHPS surveys are sent by mail. Emailing patients the survey can increase response rates by approximately 9%, while lowering costs (the outgoing sample can be reduced by 25%). A mixed-mode approach with email, mail and telephone follow-up will get the best response rates. Email will also help you reach younger and more educated populations.
3. **If you plan to collect patient feedback on one or two topics only, keep surveys short.** Surveys with 12 questions or less can increase your completion rates by 8%, compared to the regular-length CG-CAHPS survey (28 questions). However, consider how much information you are trying to gather – if you are asking patient for feedback on all five standard domains of care, you will likely need to field the full CG-CAHPS instrument. If you are only interested in the topic of Access, then your response rates will likely increase if you only include the survey questions specific to Access.
4. **Place important questions earlier.** If certain questions are essential to your project, consider placing those at the beginning of the survey to reduce the risk of patients getting distracted and not completing the survey.
5. **Explore sending surveys by text message.** Response rates to surveys sent to patients by email, mail, and telephone are going down every year. With 80% of people owning a smartphone, text messaging could be a promising way to reach patients, and at a lower cost. Explore the legal implications of texting patients and consider sending patients a link to an online survey by text messaging; if response rates increase then consider moving more of your surveys to text message.

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## BACKGROUND

Stakeholders have expressed concern that patient experience surveys are too lengthy. The most widely used tool is the [CG-CAHPS](#)® instrument. It is considered the gold-standard instrument to measure patient experience in ambulatory settings. The instrument consists of 22 questions and nine demographic items. The survey measures five domains of patient care:

- 1) Getting Timely Appointments, Care, and Information
- 2) How Well Providers Communicate with Patients
- 3) Providers' Use of Information to Coordinate Patient Care
- 4) Helpful, Courteous, and Respectful Office Staff
- 5) Patients' Rating of the Provider

The largest user of the CG-CAHPS tool is the Patient Assessment Survey (PAS) program at the Pacific Business Group on Health (PBGH). The PAS program uses a modified CG-CAHPS 3.0 instrument, with topics added at the discretion of the PAS Committee. The Reporting Year 2018 instrument contained 30 survey questions and eight demographic items. The core medical group-level survey is sent to approximately 150,000 patients across California with HMO or POS coverage.

Stakeholders have expressed concern about the length of the CG-CAHPS instrument, and declining response rates. Investigating survey length and ways to improve response rates has been identified as a key research priority by the Agency for Health care Research and Quality (AHRQ), the CAHPS steward<sup>i</sup>. Important benefits can be gained from increasing the response rates, such as lower fielding costs, reduced administrative burden, and lower fielding times.

Evidence is mixed regarding the impact of survey length on response rates<sup>ii</sup>. Methods to shorten surveys can include compressing space, removing supplemental items, reducing the number of core items, and adjusting other design elements<sup>iii</sup>. One study found little relationship between CG-CAHPS survey length and response rates<sup>iv</sup>, while another showed adding questions could lead to a reduction on the CAHPS Medicare Advantage and Prescription Drug Plan Survey<sup>v</sup>. It might be possible to maintain reliability while reducing the number of items in certain composites, but only one published study has investigated this on the CG-CAHPS<sup>vi</sup>. Compressing surveys can reduce printing costs while maintaining response rates and data quality<sup>vii</sup>.

No research has been published on modular administration of CG-CAHPS composites<sup>viii</sup>, where patients receive very short surveys of one or two composites. The PAS short-form test was conducted to investigate this mode of fielding. The three main evaluation questions were:

1. Would respondents be more likely to respond to a short-form survey than a longer form, and would it make a difference if we told them it was short in the invitation?
2. Did the modular email survey result in a different response demographic?
3. Did the short survey, with a fractional question design, lead to different responses?

## METHODS

### STUDY DESIGN

The short-form survey was compared with the standard PAS survey (web and paper administration only; CATI data was not included in this study). See Table 1 below for a summary of the study design.

**Table 1. Study Design**

	Test Survey – Regular Invite	Test Survey - Test Invite	Regular Survey (Email)	Regular Survey (Mail)
<b>Survey Length</b>	2 composites ( $\leq 10$ survey q's) + 8 demographic q's. Composites were randomly assigned and each composite was included in a survey as often as every other composite	2 composites ( $\leq 10$ survey q's) + 8 demographic q's. Composites were randomly assigned and each composite was included in a survey as often as every other composite	Standard 5 composites (30 survey q's) + 8 demographic q's.	Standard 5 composites (30 survey q's) + 8 demographic q's.
<b>Fielding Mode</b>	Email	Email	Email	Mail
<b>Invitation Language</b>	Half of the cohort was randomly selected to receive the traditional email invitation:  “The physicians of [GROUP_VARIABLE] are committed to providing high quality health care and to meeting our patients' expectations for care and service. The survey link below gives you the chance to tell us what you think about the care and service you received from us.”	Half of the cohort was randomly selected to receive the test email invitation:  “We listened. Patients say that health care surveys are too long. So, we designed this short, 2-minute survey for you. Please fill it out and let us know how we're doing so that we can improve.”	The whole cohort received the traditional email invitation:  “The physicians of [GROUP_VARIABLE] are committed to providing high quality health care and to meeting our patients' expectations for care and service. The survey link below gives you the chance to tell us what you think about the care and service you received from us.”	The whole cohort received the traditional mailed survey with a one-page cover letter.

The PAS instrument includes all of the CG-CAHPS 3.0 questions, plus additional items added based on participating medical group and health plan interest.

**Table 2. PAS Composites**

Performance Area	Individual question	Item abbreviation
<b>Access to Care Composite</b>	Timely appt. for care needed right away	urgentapt
	Timely appt. for check-up or routine care	checkupapt
	Same day response to office hours contact	callback
<b>Provider Communication Composite</b>	Doctor explanations easy to understand	drexplain
	Doctor listens carefully	drlisten
	Doctor shows respect	drrespect
	Doctor spends enough time	drtime
<b>Care Coordination Composite</b>	Doctor knows important medical history	drmedhist
	Office followed up on test results	followtest
	Discussed all Rx medicines	askmed
	Doctor informed about other care	informed
<b>Office Staff Composite</b>	Clerks and receptionists helpful	oshelpful
	Clerks and receptionists courteous and respectful	osrespect
<b>Ratings Composite</b>	Overall rating of doctor	ratedoc
	Overall rating of care	ratecare

## MEDICAL GROUP RECRUITMENT

27 reporting units (unique Department of Managed Health care DMHC IDs) were recruited to participate in the pilot, as listed below.

**Table 3. Summary of Pilot Groups**

Reporting Units	Sampled – Avg. per Reporting Unit	Sampled – Total
27	359	9,691

## SAMPLING AND FIELDING

For the regular Group Survey, the standard sample is 900 patients (450 PCP-related visits and 450 Specialist-related visits) who had an office visit between January and October of 2016.

The Group Survey standard survey protocol consists of three emails (where email addresses are available) to complete the survey via website, two mailed surveys with a cover letter option to complete the survey via the survey website, using a unique Web ID, and up to four attempts by Computer Assisted Telephone Interview (CATI) where phone numbers are available. Emails were sent in early December over a one-week period. The first mailing occurred in mid-January 2017; the second occurred in mid-February and was sent only to patients who did not respond to the first mailing. Patients who did not respond to the second mailing were contacted by phone in mid-March.

For the pilot short-form survey, a sample was drawn after sufficient sample sizes had been reached for the regular Group Survey. The pilot sample included patients who had a doctor's visit between August-October 2016.<sup>ix</sup> The pilot survey was fielded by email on December 12, 2016 with a reminder email one week later. Some emails were bounced back from respondent accounts as undeliverable, but some of those responded to the email anyway. Respondents contacted by email could access the survey via a website.

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## RESULTS

### RESPONSE RATES

Email protocol respondents went through similar but not identical protocols for the regular PAS survey and the short-form pilot. For the short-form pilot, an email was first sent to the sample frame member from Patient\_Feedback@surveys.cssresearch.org. The email title named the medical group. For the test message, the email title started with the words "Quick Feedback for," followed by the name of the group. The regular PAS invitation message included, "Feedback for <medical group>" without "Quick."

The email recipient could choose to open the email or not. If they did open it, the administrator might or might not receive a notice that the email was opened because some browsers block server access links. Notice was received in 47% of emails attempted. About 30% of those known to open the email clicked on the link; for the remainder group, 3% still managed to click on the link. In both cases, the impact of demographics and survey message type were similar. After clicking on the link, the recipient had to enter a correct year of birth; those who did not enter or put in the wrong year were screened out. This line is referred to as "Screened YOB."

At this point, the short-form pilot and the regular PAS protocols diverged. In the short-form pilot, respondents were presented with the first "is this your regular doctor?" question. If they answered "Yes", then survey questions appeared underneath, but the result was not sent back to the administrator server. They had to go through the survey, and at the appropriate time click "Next". The act of starting to answer the short form survey questions seems to have resulted in some people concluding that they had not visited the doctor recently and quitting the survey. At that point, results were transmitted back to the server and a record appeared in the database. In the regular PAS, "Next" followed the regular doctor screener and that triggered a database record. Then, there were two other questions and in particular Question 3, which asked about visits in the last 6 months. If the respondent answered "No Visits", the respondent skipped over the bulk of the survey and only was asked about demographics. Following that, groups of questions were presented in groups of three, with a record sent to the server after each group of three.

The protocol divergence made it difficult to say exactly what happened with regard to answering the regular doctor question and starting the survey. However, after a few questions, the process for the short-form pilot and the regular PAS converged. By the time 7 questions were answered, PAS respondents would have navigated the regular doctor and screener questions in the regular PAS, and short-form respondents would have navigated the regular doctor question and encountered enough survey material to determine it was applicable. The line "Answered 7 Qs" presents this summary.

Finally, short-form respondents needed to complete a few more questions and the demographics to finish the survey, whereas regular PAS respondents needed to go through a long survey. If they finish at least one of the demographics from the short form, they were defined as "Complete."

We can compare the fraction who complete “Answered 7 Qs” or the percent of the entire email sample frame. Both perspectives are shown in the table below. All percentages are adjusted for age, gender, and last visit month.

**Table 4. Progression Rates Comparison**

Step	Denom. (N)	Short-form, Test Invite	Short-form, Reg. Invite	Regular PAS, Email
<b>Invitations (N)</b>	21,386	4,824	4,867	11,695
<b>Click Link</b>	21,386	17.8%	17.0%	16.7%
<b>Screened YOB</b>	3,633	88.9%	88.6%	90.9%
<b>Q’s Answered</b>	3,267	7.4	7.3	27.2
<b>Answered 7 Qs</b>	3,267	90.4%	89.5%	91.6%
<b>Complete / Ans 7</b>	2,968	<b>99.1%*</b>	<b>99.0%*</b>	<b>91.0%*</b>
<b>Complete / Scr YOB</b>	3,267	<b>90.7%*</b>	<b>90.0%*</b>	<b>85.5%*</b>
<b>Complete / Invited</b>	21,386	<b>14.3%*</b>	<b>13.6%*</b>	<b>13.0%*</b>

\* Results significant with a two-sided P value less than .05

This table shows that the short-form email was slightly more successful than the regular PAS in persuading people to enter the survey process, but it wasn’t a home run. The fact that 58% do not even read the email, and 70% of those that did read the email did not click the link to start the survey is a major obstacle to the success of email survey administration. Experimentation with the sender, the subject line, and the email content should be a high priority, but at least we know that stating that the survey will be short only had a small effect. Once people have started the process, it appears that both ways of handling the personal doctor question are equally effective.

Finally, once people have made it through the intro (answering at least one substantive question), it is clear that a much higher percentage (99 vs. 91 percent) are able to complete the survey. The longer the survey, the greater the chance that something will happen—the doorbell will ring, the pot will boil over—that takes the respondent away from the survey, never to return. However, the longer survey yields more information: responses to 27 questions versus 7. It isn’t clear which approach is better; if only the last question matters, better to ask it first or use a short survey.

Mailed surveys in the regular PAS for the groups participating in the pilot followed a completely different protocol that does not fit into the above table except for the last line. They had a 28.1% yield rate; sample frame members that had email invites first followed up by mail if necessary, had an overall completion yield rate of 37.5%. The email invites are picking up another 9.4% response. To attain an equivalent number of responses, the outgoing sample can be reduced by 25%, and there is another 4% cost savings on top of that. The protocol of using email first, followed by mail still seems like a winner.

## **SURVEY RESPONSE DEMOGRAPHICS**

Various response pathways led to somewhat different demographics. The sampling data tell us about age, sex, and last visit month, the time delay between the visit and the survey (delay); the surveys tell us about general health (gh1), mental health (mh1), education (educ, here percent with any college), and whether English is spoken at home. The regular PAS also includes a phone component. Phone differs from mail in both the nature of who responds and how the answers are given. That distorts the analysis of email vs. mail, so phone surveys were dropped, but mail surveys from periods two and three were included.



**Table 5. Scores on Demographic Items**

Variable	Denom . (N)	Short-Form	Regular PAS Email	Regular PAS “Late” <sup>x</sup>	Regular PAS Mail
gh1 (0-100, 100 healthy)	6,066	62.8	61.4	63.0	<b>58.3*</b>
mh1 (0-100, 100 healthy)	6,076	71.0	71.1	71.9	<b>68.5*</b>
Educ (% any college)	6,054	88.8	<b>85.8*</b>	<b>85.1*</b>	<b>65.2*</b>
Homeeng (% English)	5,873	89.8	91.6	89.7	<b>87.2*</b>
Age (Years)	6,315	53.5	<b>54.9*</b>	<b>55.8*</b>	<b>63.5*</b>
Male (%)	6,315	38.6	38.7	39.1	41.7
Lastvisitmonth (calendar)	6,315	8.8	<b>9.1*</b>	<b>9.0*</b>	<b>9.1*</b>
Delay, visit to survey (days)	6,315	101.7	<b>93.5*</b>	<b>148.1*</b>	<b>145.4*</b>

\* Results significant with a two-sided P value less than .05

The short-form column is bolded if the various short form versions differed among themselves based on an F test (all tests are at 5% significance without adjustment for multiple testing). The Regular PAS Email column is bolded if it is significantly different from the short-form column; the Regular PAS “Late” if significantly different from the first two columns combined, and the Regular PAS Mail column if different from respondents with email. Mail respondents are older and less well educated than respondents with emails; they differ significantly on the other variables as well, but the differences are not large. The short-form group is not broken out into short-form test vs. regular message because there were no significant differences due to the email message.

## SURVEY RESULTS

The next table shows individual survey questions from the pilot. These are either percentages that pass a screener, percentages that answer a question, or percentages that answer always in the always to never framework. All variables are evaluated on the full sample of responses, keeping in mind that some respondents to the pilot might have answered some of these questions but never clicked on “Next” so their responses were not recorded at all.

**Table 6. Comparison of Item Scores**

Item	Short-Form	Regular PAS Email	Regular PAS “Late”	Regular PAS Mail
scurgapt	75.9	<b>61.2*</b>	<b>54.4*</b>	<b>49.3*</b>
urgentapt	65.6	<b>59.0</b>	61.4	57.9
scrchapt	<b>76.2*</b>	73.9	<b>77.7*</b>	<b>81.6*</b>
checkupapt	62.6	60.0	63.8	63.0
scrclback	54.7	53.1	<b>47.9*</b>	<b>44.1*</b>
callback	64.7	<b>57.2*</b>	56.8	56.1
ansdrexpln	<b>98.6*</b>	<b>92.4*</b>	<b>97.5*</b>	<b>98.1*</b>
drexplain	82.2	80.6	<b>86.8*</b>	<b>88.0*</b>
drlisten	81.5	81.9	<b>85.6*</b>	<b>87.8*</b>
drmedhist	69.7	73.4	<b>78.5*</b>	<b>78.7*</b>
drrespect	<b>84.7*</b>	84.9	<b>89.4*</b>	88.8

<b>drtime</b>	77.3	75.4	<b>84.3*</b>	<b>84.5*</b>
<b>scrinform</b>	59.3	59.7	<b>53.9*</b>	<b>52.8*</b>
<b>ansinformed</b>	60.2	56.1	54.5	55.9
<b>informed</b>	59.6	60.5	63.7	64.8
<b>testscr</b>	88.8	86.6	85.9	<b>83.2*</b>
<b>followtest</b>	68.2	66.0	<b>69.6*</b>	66.2
<b>askmedscr</b>	87.4	89.0	<b>85.8*</b>	85.6
<b>askmed</b>	55.1	<b>49.3*</b>	<b>55.0*</b>	53.8
<b>ratedoc</b>	75.9	72.0	<b>78.8*</b>	78.6
<b>ratecare</b>	68.6	67.9	<b>74.6*</b>	<b>75.1*</b>
<b>oshelpful</b>	71.5	<b>66.5*</b>	<b>71.9*</b>	68.8
<b>osrespect</b>	82.4	79.7	82.3	81.2

Significance was evaluated similarly to the demographics table above. Generally speaking, the short-form survey resulted in equivalent answers compared to the regular PAS email survey, but other groups that responded (mostly) by mail had slightly different responses on more variables than one might expect at random. These differences are relatively small and could be accounted for by omitted variables. In general, the pilot had higher affirmation of the screeners (scrurgapt), and a higher rate of answering the first questions on other versions (ansdrexpln and ansinformed). This probably reflects a change of heart after the respondent said he was a patient and then the survey appeared and the respondent saw the 6-month qualifier and ended the whole survey thinking it was irrelevant (this resulted in no record for the pilot surveys).

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## CONCLUSION

The short-form survey and test invite led to slightly higher response rates and substantially higher completion rates than those who responded to the regular email survey, despite low engagement rates and protocol differences. Survey results were comparable to the regular survey, and demographics did not substantially differ from the regular email survey. However, mail respondents to the regular survey were older and less educated than email respondents.

To date, the most successful protocol tested to increase response rates is email followed by mail. It is recommended to obtain and use as many email addresses as possible – the finding that email followed by mail increases response rates approximately 10% is encouraging. We then have another task – to make our emails enticing and worthy of a “click.” Stating the survey would be short only had a small effect. Further experimentation with the sender, the subject line, and the email content is needed. A potential limiting factor with email is the concern around phishing and viruses; having the medical group send out the surveys directly would help, but this is logistically challenging. Other modes of communication, such as text messaging, should also be studied.

Once we are able to engage patients, over 90% complete the regular survey, and 99% complete the shorter instrument. A key consideration is how much information is needed by the medical group – the average number of questions answered by the short form respondents was approximately 7, vs. approximately 27 for the regular length respondents. What is the right balance between having a short enough survey to get more responses versus having fewer patients complete a survey but get more

content? Patients could be given choices of the different survey lengths (short or long), depending on how much information the medical group wants to obtain.

Engaging patients to take surveys is a high priority. Low response rates indicate that we face a combination of survey saturation, a lower sense of responsibility for others in society, and ascendency of communication methods beyond mail and email. Further investigation is needed to alleviate these barriers – streamlining surveys, showing the positive impact of taking surveys on the larger population, and focusing on other modes of communication (i.e., text messaging).

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## ABOUT

### THE PACIFIC BUSINESS GROUP ON HEALTH (PBGH)

PBGH's member organizations -- private employers and public agencies -- are the most powerful voice for consumers and patients in the U.S. Ultimately, the profound concern of purchasers about the high cost and poor quality of health care puts them on the same side as the American public when it comes to driving improvement throughout the health care system. PBGH's approach is to use the clout and concentrated power of our member organizations to test innovative health care methods in specific markets, and then to take successful approaches to scale across the U.S. PBGH also uses educational forums, user groups, and networking events to maximize our Members' impact. PBGH manages the Patient Assessment Survey (PAS).

### THE PATIENT ASSESSMENT SURVEY (PAS)

The PBGH Patient Assessment Survey (PAS) program has been gathering patient feedback and producing provider organization ratings for almost 20 years. PAS is the largest nonprofit, multi-stakeholder program in the country. Every year, feedback is gathered from over 65,000 patients across over 180 medical groups in California. Results on the Commercial HMO and POS survey are made publicly available for consumers through the California Department of Managed Health Care's Office of the Patient Advocate consumer website. Performance on the survey accounts for 30% of the Quality Composite Score for the Integrated Health care Association's Value-Based Align. Measure. Perform. (AMP) value-based incentive design.

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## CONTACT

Questions? Please contact Emily London at [elondon@pbgh.org](mailto:elondon@pbgh.org).

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- <sup>viii</sup> Based on a 10/7/19 literature search.
- <sup>ix</sup> Patient visits from the July sample could be out of date by the time a survey arrived.
- <sup>x</sup> Mostly mail responses.