

## Memo

**Date:** January 8, 2009 Memo: 37v1  
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**Subject:** CPQS: Summary of the Nonresponse Followup Analysis

### Introduction

After the field period for Waves 6 and 7, a postcard with the overall examination quality item (Q7) was sent to nonrespondents that were rotating out of the sample. The objective was to get a picture of how the nonrespondents would have responded to the main survey had they actually participated. Nonresponse can induce bias into survey estimates, and the amount of bias is commonly thought of as a function of two components: the response rate (which we know), and the difference between those that respond and those who do not respond (which we don't know). Sending a followup postcard to nonrespondents and comparing their responses to the same item from the main survey is an attempt at measuring that difference in the second component.

### Results Summary

There were about 200 customers in each wave that sent back their postcard out of about 600. The wave samples were combined to allow for more statistical power when making comparisons. A chi-square test shows a significant relationship between the Q7 responses and whether or not the respondent came from the wave sample or the followup sample. As you can see, follow-up responses were 9 percentage points higher for the Good/Excellent category.

Q7	Wave Respondents		Follow-up Respondents		Difference		Chi-Square p-value
	Estimated Percent	Standard Error	Estimated Percent	Standard Error	Estimate	Standard Error	
Very poor/Poor	24.78	1.452	21.86	2.627	-2.92	3.024	0.0397
Fair	46.70	1.762	40.17	3.570	-6.53	4.237	
Good/Excellent	28.52	1.580	37.97	3.107	9.45	3.841	

### **Impact of Results**

While there is likely potential for bias in the followup sample estimates, the results are an indication that the overall examination quality is more favorable than is currently presented in the wave analysis reports. In addition, based on this result, waves with lower response rates relative to other waves could actually have a higher 'hidden' boost than waves with higher response rates.