

CHANGES IN THE GENERAL HEALTH STATUS (GHS) AND GENERAL MENTAL HEALTH (GMH) VARIABLES IN THE CAHPS MEDICARE SATISFACTION SURVEYS

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Overview

The CAHPS Medicare Satisfaction Surveys ask respondents to rate their own health status in the *About You* section at the end of each survey. Among the health status items are questions asking respondents to rate their general health status (GHS) and their general mental health (GMH). CAHPS data were first collected from fee-for-service (FFS) beneficiaries in 2000. There are slight differences between the managed care (MMC) and fee-for-service (FFS) surveys in the wording of the GHS variable. Also, the placement of the questions differs in the 2001 surveys.

We believe that the shift in placement and/or wording differences in the FFS survey may have systematically affected responses to these questions. In this memorandum, we describe how the questions differ between surveys and present analyses of how these variations are related to differences in response patterns. We conclude that the data from these questions on the 2001 FFS CAHPS survey are not comparable to the 2000 FFS survey or the MMC surveys.

Background

Research on the health status of Medicare beneficiaries has consistently found that those enrolled in Medicare managed care (MMC) are healthier than those enrolled in traditional fee-for-service Medicare (FFS). CAHPS data were collected from beneficiaries in both FFS and MMC for the first time in 2000, making it possible to verify this finding with CAHPS data. An analysis of the 2000 CAHPS data showed, as expected, that enrollees in managed care rated their health as being better than those in fee-for-service Medicare. However, the 2001 data seem to suggest otherwise, with FFS beneficiaries rating their general physical and mental health as being better on average than MMC enrollees are.

In the 2000 FFS survey, the placement of the GHS question was comparable to the Medicare Managed Care (MMC) survey. In 2001, however, the placement was changed. In 2000, only the FFS survey contained the GMH variable; in 2001, this question was added to the MMC survey and its location was changed in the 2001 FFS survey. We believe that responses to these questions on overall health and mental health status are susceptible to context (ordering) effects and that these changes in the survey instruments have affected FFS beneficiaries' responses so that they rate themselves as being physically and mentally healthier than MMC enrollees overall.

This memo describes the change in self-rated physical and mental health between 2000 and 2001 among FFS beneficiaries and examines differences in the CAHPS questionnaires used to collect these data from Medicare beneficiaries in 2000 and 2001. The four questionnaires that we focus on are the 2000 Medicare Satisfaction Survey (MMC version), 2000 Medicare Satisfaction Survey (FFS version), 2001 Medicare Satisfaction Survey (MMC version), and 2001 Medicare Satisfaction Survey (FFS version).

Differences Between Surveys:

1. *Wording of questions:*

In both 2000 and 2001, there is a slight difference in wording between the MMC and FFS surveys. In the MMC surveys, the question is worded “In general, how would you rate your overall health now?” whereas in the FFS surveys it is “In general, would you say your health is: _____.” (See Table 1 for the response choices, which are the same for both surveys.)

2. *Ordering of questions:*

The questions are in the same order for the MMC version of the survey in both 2000 and 2001. The only differences are that five questions asking about specific medical conditions (heart disease, cancer, stroke, COPD, diabetes) were dropped in 2001 and that a question on overall mental health was added in 2001. All these changes come after the question on overall health, which was the first question on health status in both surveys.

However, the order of health status related questions, and specifically, the placement of the overall health (GHS) and mental health (GMH) questions in the 2001 FFS survey differs from the 2000 FFS survey as well as from the MMC surveys.

GHS:

Whereas GHS is always the first question in the *About You* section of the MMC survey, it follows several other questions in the FFS survey.

- In the 2000 FFS survey, the questions preceding the question on general health status (GHS) ask beneficiaries about being hospitalized in the last 12 months (Question 49), whether they have any conditions that have lasted over 3 months (Question 50), whether they have seen a doctor more than twice for any of these conditions (Question 51), and whether they have taken prescription medicine for at least 3 months for any of these conditions (Question 52).
- In the 2001 FFS survey, GHS (Question 55) follows all of these same questions (Questions 50 through 53) but also directly follows the question about the beneficiary’s general mental health (Question 54).

GMH:

- In 2000, the question on general mental health (Question 71) is only present in the FFS survey where it is one of the last variables in the *About You* section. It follows 20 other questions including a number of SF-36 questions assessing physical and emotional health problems, limitations in physical and social activities due to emotional or physical health problems, and psychological distress and well-being.
- In the 2001 MMC survey, the general mental health question follows questions on general health status (Question 65), changes in health status since the previous year (Question 66), whether they have been hospitalized in the past 12 months (Question 67), whether they have

any conditions that have lasted over 3 months (Question 68), whether they have seen a doctor more than twice for any of these conditions (Question 69), and whether they have taken prescription medicine for at least 3 months for any of these conditions (Question 70).

- In the 2001 FFS survey, the general mental health question follows the same questions on hospitalization in the past 12 months (Question 50), whether they have any conditions that have lasted over 3 months (Question 51), whether they have seen a doctor more than twice for any of these conditions (Question 52), and whether they have taken prescription medicine for at least 3 months for any of these conditions (Question 53) but comes *before* any questions assessing general health (GHS) or any of the other SF-36 questions.

Table 1 shows the health related variables in the *About You* sections of the four questionnaires and their locations for comparison.

Self-Rated Health Status of MMC and FFS Beneficiaries in 2000 and 2001:

Both the FFS and MMC CAHPS surveys ask respondents to rate their general health (GHS). The frequency distributions for the GHS variable are summarized in Table 2 (see appendix for complete frequencies). The table suggests that the distribution of health status remained consistent from 2000 to 2001 in MMC but that among FFS beneficiaries fewer respondents rated themselves as being in “fair” or “poor” health and more rated their health as “very good” or “excellent” in 2001.

Table 2. Self-Rated General Health (GHS) by Survey.

GHS		<i>MMC 2000</i>	<i>MMC 2001</i>	<i>FFS 2000</i>	<i>FFS 2001</i>
Percent responding:					
1	= Excellent	7.44	6.92	6.75	8.53
2	= Very Good	23.23	23.79	23.57	27.50
3	= Good	37.94	38.70	34.92	34.55
4	= Fair	25.16	24.59	26.39	22.65
5	= Poor	6.22	6.00	8.36	6.77

Both of the FFS surveys and the 2001 MMC survey ask respondents to rate their general mental health (GMH). The frequencies for GMH do not show as great a difference between 2000 and 2001 as we observe for GHS. However, in 2001, FFS respondents were slightly more likely to rate their general mental health as being “very good” or “excellent” and less likely to respond that their mental health was “fair” or “poor” than they were in 2000.

Table 3. Self-Rated General Mental Health (GMH) by Survey.

GMH		<i>MMC 2000</i>	<i>MMC 2001</i>	<i>FFS 2000</i>	<i>FFS 2001</i>
Percent responding:					
1	= Excellent	NA	26.87	23.51	29.30
2	= Very Good	NA	32.97	33.39	31.60
3	= Good	NA	28.67	26.95	25.21
4	= Fair	NA	9.52	12.85	11.08
5	= Poor	NA	1.98	3.29	2.81

Weighted means of health status variables were calculated by taking the mean FFS and mean MMC survey responses for each county, generating an overall mean for each county (weighted by the MMC and FFS population weights for that county), and taking a mean over all counties (weighted by a sum of the MMC and FFS population weights for each county) to obtain a national mean.

Using weighted data, we examined the global health status (GHS) and global mental health (GMH) ratings and six binary variables: whether the respondent has been hospitalized in the past year (INPAT), has a physical or medical condition lasting over three months (MED3CND), needs help with personal care needs (HLPCARE) or routine needs (HLPNEED), has a condition that interferes with independence (CONDITN), or is disabled (DISABLD). In 2000, each of these variables indicated that MMC beneficiaries are healthier than FFS beneficiaries (see Table 4). In 2001, all the binary indicators also indicate that MMC beneficiaries are healthier than FFS beneficiaries, but in 2001 both the GHS variable and GMH variable suggest that beneficiaries in FFS are slightly healthier than those in MMC (see Table 4).

We also assessed whether differences in the geographical distribution of respondents between the two years might account for the higher GHS and GMH ratings among FFS respondents in 2001. We did this by calculating the weighted means using the 2000 population weights in 2001 and vice versa in order to simulate what the means would have looked like if the geographical distribution of respondents had remained constant over the two years. These means were virtually identical to the means shown in Table 4. We conclude that the higher ratings are not due to shifts in the geographic distribution MMC and FFS of respondents.

Table 4. Weighted Means of Health-Related Variables by Year and Coverage*

Variable	2000 data			2001 data		
	Overall	MMC	FFS	Overall	MMC	FFS
<i>ghs</i>	3.030	2.987	3.039	2.909	2.983	2.874
<i>ghslast</i>	3.075	2.932	3.118	3.019	2.951	3.039
<i>gmh</i>	2.381	NA	2.381	2.239	2.267	2.225
<i>inpat</i>	0.208	0.199	0.214	0.202	0.192	0.209
<i>med3cnd</i>	0.707	0.645	0.726	0.701	0.661	0.717
<i>hlpcare</i>	0.077	0.060	0.083	0.073	0.060	0.079
<i>hlpneed</i>	0.215	0.157	0.232	0.204	0.159	0.225
<i>conditn</i>	0.268	0.196	0.291	0.255	0.194	0.282
<i>disabld</i>	0.079	0.068	0.086	0.083	0.061	0.096

* Lower numbers indicate better health (i.e., **bold** = healthier population according to that measure).

If the shift in GHS and GMS scores was due to a change in context effects, there should be a shift that is independent of the distribution of the other health status indicators. Thus, we estimated regression models of the relationship between GHS and GMH and the other health-related indicator variables for both the MMC and FFS respondents, and assessed whether there was an independent effect of year on the GHS and GMH scores. In both years, those who stated they had been hospitalized, had a condition that lasted over 3 months or interfered with independence, or needed help with personal or routine care needs rated their general health and mental health as being worse (i.e., rated GHS and GMH higher). However, given similar health profiles, FFS respondents were likely to rate themselves as healthier (i.e., rated GHS and GMH lower) in 2001 than in 2000 whereas the year of survey administration did not make a difference for MMC respondents.

MMC:

Dependent Variable: GHS		General Health Status			
Parameter	Estimate	Standard Error	t Value	Pr > t	
Intercept	2.409413531	0.00307942	782.43	<.0001	
inpat	0.222822972	0.00417120	53.42	<.0001	
med3cnd	0.516352940	0.00348102	148.33	<.0001	
hlpcare	0.144855527	0.00808396	17.92	<.0001	
hlpneed	0.366879463	0.00605226	60.62	<.0001	
conditn	0.659036825	0.00531092	124.09	<.0001	
year	0.001730902	0.00318465	0.54	0.5868	

FFS:

Dependent Variable: GHS		General Health Status			
Parameter	Estimate	Standard Error	t Value	Pr > t	
Intercept	2.336208902	0.00451175	517.81	<.0001	
inpat	0.204331926	0.00525096	38.91	<.0001	
med3cnd	0.469632274	0.00479515	97.94	<.0001	
hlpcare	0.194101653	0.00913864	21.24	<.0001	
hlpneed	0.388494281	0.00682081	56.96	<.0001	
conditn	0.819879538	0.00603222	135.92	<.0001	
year	-0.143769751	0.00413940	-34.73	<.0001	

Dependent Variable: GMH		General Mental Health Status			
Parameter	Estimate	Standard Error	t Value	Pr > t	
Intercept	2.040461630	0.00529705	385.21	<.0001	
inpat	0.048838499	0.00617048	7.91	<.0001	
med3cnd	0.077964340	0.00563324	13.84	<.0001	
hlpcare	0.343348632	0.01075341	31.93	<.0001	
hlpneed	0.290226946	0.00801635	36.20	<.0001	
conditn	0.635032990	0.00708811	89.59	<.0001	
year	-0.128735828	0.00486385	-26.47	<.0001	

Conclusions:

All health variables other than GHS and GMH consistently indicate a less healthy population in FFS than in MMC and the relationship between GHS and the other health variables changes between the two years of surveys studied. Thus, we conclude that the differences in GHS and GMH

that we have observed between FFS beneficiaries in 2000 and 2001 are due to differences between the surveys. Specifically, we think that the placement of the GMH variable immediately before the GHS variable in the 2001 questionnaire influenced respondents by biasing ratings of their general health upward. In this population, respondents rated their mental health as being better than their general physical health. We believe that respondents may have rated their general health more favorably after being reminded of their more positive mental health status. We also think that the increase in ratings of general mental health (GMH) that we observe in the 2001 FFS data, relative to the 2000 data, may be due to the fact that the GMH question no longer follows the SF-36 questions.

Recommendations:

- Researchers who wish to examine differences in health and mental health status across years or between MMC and FFS probably should not rely on the GHS and GMH variables alone for their analyses.
- Efforts should be made to revise the 2003 Medicare CAHPS surveys so that the placement and wording of health status question are comparable.

Table 1: Health-related questions and their positions in the questionnaires.

Variable Name	Question Number				Actual Question	Response Categories
	MMC 2000	MMC 2001	FFS 2000	FFS 2001		
GHS	65	65	53	55	In general, how would you rate <u>your overall health</u> now? (MMC 2000, MMC2001) In general, would you say your health is: (FFS 2000, FFS 2001)	1 = Excellent 2 = Very Good 3 = Good 4 = Fair 5 = Poor
GHSLAST	66	66	65	56	Compared to one year ago, how would you rate your health in general now?	1 = Much better now than one year ago 2 = Somewhat better now than one year ago 3 = About the same as one year ago 4 = Somewhat worse now than one year ago 5 = Much worse now than one year ago
INPAT	67	67	49	50	<u>In the last 12 months</u> , have you been a patient in a <u>hospital</u> overnight or longer?	0 = No 1 = Yes
MED3CND	68	68	50	51	Do you now have any physical or medical conditions that have lasted for <u>at least 3 months</u> ?	0 = No 1 = Yes
MD2TIME	69	69	51	52	In the last 12 months, have you <u>seen a doctor</u> or other health provider <u>more than twice</u> for any of these conditions?	0 = No 1 = Yes
RX4CND	70	70	52	53	Have you been taking <u>prescription medicine for at least 3 months</u> for any of these conditions?	0 = No 1 = Yes

Variable Name	Question Number				Actual Question	Response Categories
	MMC 2000	MMC 2001	FFS 2000	FFS 2001		
GMH	NA	71	71	54	In general, how would you rate your overall <u>mental</u> health now?	1 = Excellent 2 = Very Good 3 = Good 4 = Fair 5 = Poor
HEART	71	NA	NA	NA	Has a doctor ever told you that you had heart disease?	0 = No 1 = Yes
CANCER	72	NA	NA	NA	Has a doctor ever told you that you had cancer?	0 = No 1 = Yes
STROKE	73	NA	NA	NA	Has a doctor ever told you that you had a stroke?	0 = No 1 = Yes
COPD	74	NA	NA	NA	Has a doctor ever told you that you had COPD-Chronic obstructive pulmonary disease?	0 = No 1 = Yes
DIABET	75	NA	NA	NA	Has a doctor ever told you that you had diabetes?	0 = No 1 = Yes
HLPCARE	76	75	72	72	Because of any impairment or health problem, do you <u>need the help</u> of other persons <u>with your personal care needs</u> , such as eating, dressing, or getting around the house?	0 = No 1 = Yes
HLPNEED	77	76	73	73	Because of any impairment or health problem, do you <u>need help with your routine needs</u> , such as everyday household chores, doing necessary business, shopping, or getting around for other purposes?	0 = No 1 = Yes

Variable Name	Question Number				Actual Question	Response Categories
	MMC 2000	MMC 2001	FFS 2000	FFS 2001		
CONDITN	78	78	66	68	Do you have a physical or medical condition that seriously <u>interferes with your independence</u> , participation in the community, or quality of life?	0 = No 1 = Yes
	NA	NA	54	57	Does <u>your health now limit</u> you in doing <u>moderate activities</u> , such as moving a table, pushing a vacuum cleaner, bowling, or playing golf? If so, how much?	1 = Yes, limited a lot 2 = Yes, limited a little 3 = No, not limited at all
	NA	NA	55	58	Does <u>your health now limit</u> you in climbing <u>several</u> flights of stairs? If so, how much?	1 = Yes, limited a lot 2 = Yes, limited a little 3 = No, not limited at all
	NA	NA	56	59	During the <u>past 4 weeks</u> , have you <u>accomplished less</u> than you would like as a result of your physical health?	0 = No 1 = Yes
	NA	NA	57	60	During the <u>past 4 weeks</u> , were you limited in the <u>kind</u> of work or other regular daily activities you did as a result of your physical health?	0 = No 1 = Yes
	NA	NA	58	61	During the <u>past 4 weeks</u> , have you <u>accomplished less</u> than you would like as a result of any emotional problems, such as feeling depressed or anxious?	0 = No 1 = Yes
	NA	NA	59	62	During the <u>past 4 weeks</u> , did you do work or other regular daily activities <u>less carefully</u> than usual as a result of any emotional problems, such as feeling depressed or anxious?	0 = No 1 = Yes
	NA	NA	60	63	During the <u>past 4 weeks</u> , how much did <u>pain</u> interfere with your normal work, including both work outside the home and housework?	1 = Not at all 2 = A little bit 3 = Moderately 4 = Quite a bit 5 = Extremely
	NA	NA	61	64	How much of the time, during the <u>past 4 weeks</u> , have you felt calm and peaceful?	1 = All of the time 2 = Most of the time 3 = A good bit of the time 4 = Some of the time

Variable Name	Question Number				Actual Question	Response Categories
	MMC 2000	MMC 2001	FFS 2000	FFS 2001		
						5 = A little of the time 6 = None of the time
	NA	NA	62	65	How much of the time, during the <u>past 4 weeks</u> , did you have a lot of energy?	1 = All of the time 2 = Most of the time 3 = A good bit of the time 4 = Some of the time 5 = A little of the time 6 = None of the time
	NA	NA	63	66	How much of the time, during the <u>past 4 weeks</u> , have you felt downhearted and blue?	1 = All of the time 2 = Most of the time 3 = A good bit of the time 4 = Some of the time 5 = A little of the time 6 = None of the time
	NA	NA	64	67	During the <u>past 4 weeks</u> , how much of the time has your <u>physical health or emotional problems</u> interfered with your social activities (like visiting with friends, relatives, etc.)?	1 = All of the time 2 = Most of the time 3 = Some of the time 4 = A little of the time 5 = None of the time
	NA	NA	68	69	How much of the time <u>in the past 4 weeks</u> have you felt so down in the dumps that nothing could cheer you up?	1 = All of the time 2 = Most of the time 3 = Some of the time 4 = A little of the time 5 = None of the time
	NA	NA	69	70	How much of the time <u>in the past 4 weeks</u> have you been happy?	1 = All of the time 2 = Most of the time 3 = Some of the time 4 = A little of the time 5 = None of the time
	NA	NA	70	71	How much of the time <u>in the past 4 weeks</u> have you been very nervous?	1 = All of the time 2 = Most of the time 3 = Some of the time

Variable Name	Question Number				Actual Question	Response Categories
	MMC 2000	MMC 2001	FFS 2000	FFS 2001		
						4 = A little of the time 5 = None of the time

Appendix: Frequency Distributions

2000 Medicare Satisfaction Survey - MFFS

The FREQ Procedure

General Health Status

ghs	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	5549	6.75	5549	6.75
2	19382	23.57	24931	30.32
3	28716	34.92	53647	65.24
4	21699	26.39	75346	91.64
5	6878	8.36	82224	100.00

Frequency Missing = 1421

GHS Compared to Last Year

ghslast	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	4524	5.53	4524	5.53
2	7247	8.85	11771	14.38
3	48118	58.79	59889	73.18
4	17550	21.44	77439	94.62
5	4402	5.38	81841	100.00

Frequency Missing = 1804

General Mental Health Status

gmh	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	19173	23.51	19173	23.51
2	27234	33.39	46407	56.90
3	21985	26.95	68392	83.85
4	10485	12.85	78877	96.71
5	2687	3.29	81564	100.00

Frequency Missing = 2081

2001 Medicare Satisfaction Survey - MFFS

The FREQ Procedure

General Health Status				
ghs	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	8178	8.53	8178	8.53
2	26354	27.50	34532	36.03
3	33108	34.55	67640	70.58
4	21703	22.65	89343	93.23
5	6489	6.77	95832	100.00

Frequency Missing = 2939

GHS Compared to Last Year				
ghslast	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	5902	6.16	5902	6.16
2	9077	9.47	14979	15.63
3	58441	60.98	73420	76.61
4	18809	19.63	92229	96.24
5	3608	3.76	95837	100.00

Frequency Missing = 2934

General Mental Health Status				
gmh	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	27869	29.30	27869	29.30
2	30049	31.60	57918	60.90
3	23975	25.21	81893	86.11
4	10535	11.08	92428	97.19
5	2674	2.81	95102	100.00

Frequency Missing = 3669

2000 Medicare Satisfaction Survey - MMC

The FREQ Procedure

General Health Status

ghs	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	12569	7.44	12569	7.44
2	39262	23.23	51831	30.67
3	64112	37.94	115943	68.61
4	42522	25.16	158465	93.78
5	10516	6.22	168981	100.00

Frequency Missing = 4414

GHS Compared to Last Year

ghslast	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	14109	8.36	14109	8.36
2	18368	10.88	32477	19.25
3	106056	62.85	138533	82.09
4	25167	14.91	163700	97.01
5	5050	2.99	168750	100.00

Frequency Missing = 4645

2001 Medicare Satisfaction Survey - MMC

The FREQ Procedure

General Health Status

ghs	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	9704	6.92	9704	6.92
2	33339	23.79	43043	30.71
3	54243	38.70	97286	69.41
4	34467	24.59	131753	94.00
5	8409	6.00	140162	100.00

Frequency Missing = 3521

GHS Compared to Last Year

ghslast	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	10057	7.17	10057	7.17
2	14712	10.50	24769	17.67
3	89504	63.85	114273	81.52
4	21703	15.48	135976	97.01
5	4198	2.99	140174	100.00

Frequency Missing = 3509

General Mental Health Status

gmh	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	37621	26.87	37621	26.87
2	46150	32.97	83771	59.84
3	40133	28.67	123904	88.51
4	13321	9.52	137225	98.02
5	2770	1.98	139995	100.00

Frequency Missing = 3688