

## Analysis of the Follow-up Survey of Non-Respondents

A second approach used to assess the comparability and representativeness of the survey respondents to the total physician population involved mailing a one-time, brief "fact sheet" questionnaire to all non respondents following the close of the NPS survey completion phase. The fact sheet asked all of these physicians, who were non-respondents to the original NPS survey, to provide their basic information on the key work profile comparison variables - hours worked, main work setting, number of patient visits. This survey was completed by the middle of August 2007. Of the 41,572 physicians who did not reply to the original questionnaire, and were asked to reply to the brief fact sheet, 93 were found to have no known address, or to be retired, residents, or working abroad. Eliminating these cases reduced the eligible population to 41,479 physicians considered to have had the opportunity to respond to the 2007 NPS follow-up fact sheet. Of these, 6,046 returned their one page survey, resulting in a 14.6% response rate for the NPS non-responders.

When comparing the 19,239 physicians who responded to the original NPS survey – 'NPS Respondents' – with the 6,046 physicians who responded to the follow-up fact sheet – 'NPS Non-Respondents' – they were found to be very similar for a number of characteristics:

- The average total work hours (excluding on-call) per week was 51.09 for NPS Respondents and 51.32 for NPS Non-Respondents. These averages are not significantly different ( $p=0.37$ ).
- The mean age (50.69 years old among NPS Respondents vs. 50.68 years old among NPS Non-Respondents) did not differ significantly ( $p=0.95$ ).
- The percentage in group practice (46.9% of NPS Respondents vs. 46.9% of NPS Non-Respondents) was not significantly different ( $p=1.0$ ).

It should be noted that census studies of very large populations, such as this one, may indicate that rather small differences between large groups are statistically significant. This may, or may not be due to actual differences of practical interest or relevance between the groups being studied. In addition, the weighting process used to create the NPS Database ensures that the weighted file is representative of the FP/GP versus other specialist proportions, as well as the male to female, and provincial proportions in the NPS Masterfile.

Differences between NPS Respondents and NPS Non-Respondents that had statistical significance are indicated below.

- A greater percentage of NPS Respondents than NPS Non-Respondents were family physicians/general practitioners compared to other specialists (53.4% of NPS Respondents were family physicians general practitioners, compared to 49.3% of NPS Non-Respondents,  $p<0.0001$ ).
- A greater percentage of NPS Respondents than NPS Non-Respondents were females (62.4% males and 37.6% females among NPS Respondents and 65.4% males and 34.6% females among NPS Non-Respondents,  $p<0.0001$ ).
- A smaller percentage of NPS Respondents than NPS Non-Respondents do on-call (72.3% of NPS Respondents and 75.8% of NPS Non-Respondents,  $p<0.0001$ ).
- A smaller percentage of NPS Respondents provide patient care compared with NPS Non-Respondents (96.0% of NPS Respondents and 96.7% of Non-Respondents,  $p=0.009$ ).

- The percentage who completed their undergraduate medical education in Canada (79.4% of NPS Respondents and 77.5% of NPS Non-Respondents,  $p=0.002$ ).

The following tables compare the NPS Respondents and NPS Non-Respondents with respect to their Current Situation (Table 3), Method of Remuneration (Table 4), Population Primarily Served (Table 5), and Main Patient Care Setting (Table 6):

**Table 3: Current Situation for Physicians Who Responded to the Original National Physician Survey (NPS Respondents) and Physicians Who Responded to the Follow-Up Fact Sheet (NPS Non-Respondents)**

Current situation	Proportion of NPS Respondents (n=18,899)	Proportion of NPS Non-Respondents (n=6,044)	p value
In full-time or part-time medical practice	92.8%	93.0%	$p=0.6$
Semi-retired	5.8%	5.8%	$p=1.0$
Locum tenens	3.8%	3.5%	$p=0.3$
Employed in a another medical/medically related field	19.1%	25.5%	$p<0.0001$
On leave/sabbatical	1.3%	1.3%	$p=1.0$

Note: Includes only respondents who provided a valid response.

Differences with p values less than .05 are significant at a 95% confidence level.

Sources: 2007 National Physician Survey Database. 2007 NPS Non-respondent follow-up survey.

Table 4 presents some similarities and differences in the methods of remuneration between NPS Respondents and NPS Non-Respondents. (Differences with p values less than .05 are significant at a 95% confidence level.) In Table 4 we see a number of categories where small differences in percentages were found to be statistically significant. Among both the NPS respondents and the NPS Non-respondents, about half reported that their remuneration was 90% or more from fee-for-service, but the percentage for NPS respondents was about 3 percentage points lower than that for the NPS Non-Respondents.

**Table 4: Method of Remuneration Among Physicians Who Responded to the Original National Physician Survey (NPS Respondents) and Physicians Who Responded to the Follow-Up Fact Sheet (NPS Non-Respondents)**

Method of Remuneration	Proportion of NPS Respondents (n=18,414)	Proportion of NPS Non-Respondents (n=5,951)	p values
90+% Fee-for-Service	49.9%	52.9%	$p<0.0001$
90+% Salary	8.7%	8.8%	$p=0.8$
90+% Capitation	0.5%	0.8%	$p=0.2$
90+% Sessional/per diem/hourly	3.9%	3.1%	$p=0.003$
90+% Service contracts	2.8%	2.6%	$p=0.4$
90+% Other	1.9%	1.5%	$p=0.03$
Not 90+% of any one	32.2%	30.3%	$p=0.006$

method			
Total	100.0%	100.0%	

Note: Includes only respondents who provided a valid response.

Differences with p values less than .05 are significant at a 95% confidence level.

Sources: 2007 National Physician Survey Database. 2007 NPS Non-respondent follow-up survey.

Table 5 presents some similarities and some differences in the primary populations served by NPS Respondents and NPS Non-Respondents. Only two of the differences here are statistically significant. When compared to the NPS Non-respondents, the NPS respondents slightly under-represent inner city physicians, and over-represent small town physicians.

**Table 5: Population Primarily Served by Physicians Who Responded to the Original National Physician Survey (NPS Respondents) and Physicians Who Responded to the Follow-Up Fact Sheet (NPS Non-Respondents)**

Primary population served	Proportion of NPS Respondents (n=17,823)	Proportion of NPS Non-Respondents (n=5,670)	p value
Inner city	12.2%	13.5%	p=0.012
Urban/suburban	58.3%	58.7%	p=0.6
Small town	14.3%	12.2%	p=0.0001
Rural	7.1%	7.2%	p=0.8
Geographically isolated/remote	1.7%	1.4%	p=0.1
Cannot identify a primary population	5.6%	6.2%	p=0.1
Other	0.8%	0.8%	p=1.0
Total	100.0%	100.0%	

Note: This table only includes respondents who provide patient care and provided a valid response.

Differences with p values less than .05 are significant at a 95% confidence level.

Sources: 2007 National Physician Survey Database. 2007 NPS Non-respondent follow-up survey.

Table 6 contrasts NPS Respondents and NPS Non-Respondents with respect to their main patient care setting. The NPS Respondents reported community clinic/health centre and other settings more often than the NPS Non-respondents, while the NPS Non-respondents reported working in a private office/clinic more often than the NPS respondents.

**Table 6: Main Patient Care Setting Among Physicians Who Responded to the Original National Physician Survey (NPS Respondents) and Physicians Who Responded to the Follow-Up Fact Sheet (NPS Non-Respondents)**

Main patient care setting	Proportion of NPS Respondents (n=18,190)	Proportion of NPS Non-Respondents (n=5,747)	p value
Private office/clinic	47.2%	48.7%	p=0.05
Academic health sciences centre	19.6%	20.1%	p=0.4

Community hospital	13.1%	13.8%	p=0.18
Emergency department	5.6%	5.0%	p=0.07
Community clinic/ community health centre	5.8%	4.6%	p=0.0002
Other settings	8.7%	7.7%	p=0.01
Total	100.0%	100.0%	

Note: This table only includes respondents who provide patient care and provided a valid response.

Differences with p values less than .05 are significant at a 95% confidence level.

Sources: 2007 National Physician Survey Database. 2007 NPS Non-respondent follow-up survey.

**CONCLUSION:** This comparison found that those who responded to the NPS, and those NPS non-respondents who subsequently responded to the one page follow-up study are comparable with respect to many of their demographic and practice profile characteristics. Where the two groups do differ statistically, the size of the difference is generally small relative to the total population. Although we don't know whether either of these two groups is truly representative of the population of interest, the biases due to the observed over/under-representation of some groups will not have a large impact on most estimates for the total population.

This comparison was based on the unweighted files of NPS Respondents and NPS follow-up study respondents. Weights have been assigned to the NPS respondent records to account for the initial sampling (for the detailed questionnaire), for non-response, and to make it more representative. For some characteristics of the population of physicians, the weighting process ensures that the weighted file is representative of the NPS Masterfile. These characteristics are age distribution, sex, FP/GP status versus other specialist status, and province/territory in which they mainly practice. Potential biases for characteristics that are correlated with age, sex, geographical setting and FP/GP versus other specialist status will be reduced by using the weights for estimation.

Many efforts were made to make the estimates from the NPS as representative as possible of the population of interest. The analyses here, and above in the comparison of demographic distributions in the 2007 NPS Database and the total physician population, have shown that for many characteristics, there is little evidence that the respondents differ in an important way from the population of interest. However, for some characteristics, there were significant differences observed between the respondents and the follow-up respondents, suggesting that there may be an insufficient representation with respect to these characteristics in the NPS analysis file. Even though these differences were often very small proportionately, they indicate that some caution should be used when interpreting related estimates.

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