In order to bill for care plan oversight, the following conditions must be met:

1. the beneficiary must require complex or multi-disciplinary care modalities requiring ongoing physician involvement in the patient's plan of care;

2. the care plan oversight services should be furnished during the period in which the beneficiary is receiving Medicare covered home health care services;

3. the physician who bills for care plan oversight must be the same physician who signed the home health plan of care;

4. the physician must furnish at least 30 minutes of care plan oversight within the calendar month for which payment is claimed; and,

5. no other physician can be paid for care plan oversight for the same patient during the relevant month.

The CMS representatives indicate that the number of physicians claiming care plan oversight reimbursement has been below projections. Some believe this indicates that the availability of this reimbursement has not increased physician involvement in the way it was hoped. This has led to ongoing discussions about other approaches that might be effective in increasing physician involvement.

New payment for certification of plan of care

Another change related to physicians with home health patients involves new payments for physician certification and re-certification of patients' plans of care. As of January 1, 2001, physicians are able to bill for these services under HCPCS code G0180, for certification, and HCPCS code G0179, for re-certification. The final rule establishing these payments indicates that the "certification (and re-certification) services being paid for include creation and review of a plan of care for a patient and verification that the home health agency initially complies with the physician's plan of care." In addition, these payments include "the physician's work in reviewing data collected in the home health agency's patient assessment, including Outcome and Assessment Information Set (OASIS) data." CMS does not require physicians to review the OASIS, but if they do, this work is included in the payment for certification or re-certification.

The CMS introduced these new payments in hopes of increasing physician involvement, particularly given the implementation of the prospective payment system. Physicians will be able to claim these payments in addition to reimbursement claimed for care plan oversight. Unlike care plan oversight, nurse practitioners, physician assistants and clinical nurse specialists cannot bill for certification or re-certification of the home health plan of care. Physician payments for these services will be, on average, $73 and $61, respectively.

Physician Group Established by the Centers for Medicare and Medicaid Services

The Physician Regulatory Issues Team was created by CMS in 1998 to help make Medicare rules clear and reasonable for physicians. The Team provides physicians with a forum to discuss how Medicare regulations and other program rules and guidelines affect their practices and their patients. One of its main goals is to reduce the regulatory burden on physicians.

Prior OIG Work on Physician Involvement in Home Health Care

Two previous OIG studies have examined physician involvement in Medicare home health care. As indicated earlier, *The Physician's Role in Home Health Care*, OEI-02-94-00170, surveyed both home health agencies and the physicians who referred patients to them. The study provided a description of physicians' involvement in home health at the time. It found that physicians were most involved in referring patients, approving plans of care, and monitoring the progress of complex patients. They appear to have been less involved in coordinating services, visiting patients at home, and participating in interdisciplinary conferences. Physicians and agencies both cited problems in communicating with each other and difficulties in getting the plan of care signed. Some agencies felt physicians lacked adequate education in home health care and an understanding of the home health benefit.

Another OIG report issued in 1996, *Results of the Operation Restore Trust Audit of Medicare Home Health Services in California, Illinois, New York, and Texas*, A-04-96-02121, found that 40 percent of services in a sub-sample of the home health claims reviewed did not meet Medicare reimbursement requirements. These inappropriate claims included services not reasonable and necessary, services to beneficiaries who were not homebound, services that did not have a valid physician's order, and services that did not have supporting documentation. The study found the majority of physicians relied on home health agencies to assess their patients' needs and to make the homebound determination. The audit report suggested that inadequate physician involvement was a leading cause of the unallowable services identified in the audit. In a follow-up audit conducted in 1998, *Review of Medicare Home Health Services in California, Illinois, New York, and Texas,* A-04-99-01194, the OIG found that the error rate for inappropriate home health services dropped to 19 percent; however, the error rate associated with payments for these services was higher at 30 percent.

Related Work

The American Medical Association (AMA) released a report in 1993 discussing two potential conflicts of interest physicians may come across in referring patients to home health care. In some instances, home health agencies may offer payment to physicians for their services or referrals. The AMA advises physicians not to accept these payments, as they may compromise physician objectivity in choosing the most appropriate home health agency for their patients' needs. Physicians may also come across situations where they may want to refer patients to agencies in which they have an ownership interest. The

AMA advises against this practice of self-referral unless the physician provides direct care under the agency or there is a community need for the agency and no alternative financing is available. In 1998, the AMA published a report entitled *Medical Management of the Home Care Patient: Guidelines for Physicians*. It provides an overview of the physician's role in home health care and discusses related Medicare policies and fraudulent practices.

A 1998 report released by the Massachusetts Medical Society, entitled *Physician's Practice Patterns, Attitudes Towards, and Perceptions of Home Health Care*, found that physicians in their sample were less than moderately involved in the selection of the home health agency. These physicians also reported a low level of knowledge of home care payments and regulations. At the same time, the physicians acknowledged the importance of improving physician education in these areas. Very few physicians reported submitting care plan oversight charges. The majority were not aware they could charge for oversight services. Only 39 percent of sample respondents reported making home visits. The study suggested that "while respondents are not satisfied with their current level of oversight, and would like to see a greater level of control, they don't wish to undertake this themselves."

METHODOLOGY

We obtained data for this study from a number of different sources. These included the following: a physician mail survey; a mail survey of home health care beneficiaries; a telephone survey of home health agencies; and, CMS claims data.

We conducted our mail surveys subsequent to the implementation of the home health prospective payment system which went into effect on October 1, 2000. In addition, our physician survey was conducted after the implementation of the calendar year 2001 physician payment fee schedule, which authorizes payments for certification and re-certification of the home health plan of care.

Sample Selection

Using the CMS National Claims History File, we identified all Medicare beneficiary HHA claims for services begun during the last 6 months of calendar year 2000[4]. Based on CMS data, we identified all physicians who signed the home health plan of care associated with the claim. To assure we had physicians that refer beneficiaries to home health with some frequency, we eliminated physicians who signed home health plans of care for only one beneficiary during the six month period. After eliminating duplicate physicians and invalid provider numbers, we then selected a simple random sample of 600 physicians.

[4]This sample was pulled during the third week of February 2001.

Physician Mail Survey

A self-administered mail questionnaire was sent to all 600 sample physicians. Our questions focused primarily on the experiences of physicians when ordering and overseeing Medicare home health services; obstacles they face in performing this function; whether the availability of additional Medicare payments provides sufficient incentive for physicians to be more involved in the provision of home health services to their patients; and, how, if at all, the physician role has changed since the implementation of the home health prospective payment system. In order to maximize our response rate, we sent a letter prior to the questionnaire, reminder postcards after the questionnaire, and a second mailing of questionnaires to non-respondents. We received responses back from 349 physicians, giving us an overall response rate of 58 percent.

Beneficiary Mail Survey

For this study, we included a limited number of questions as part of a larger self-administered mail questionnaire being sent by the OIG to a separate sample of Medicare home health beneficiaries. This questionnaire was sent to 700 beneficiaries with a usable address. Our questions focused primarily on beneficiary experiences with their physicians at the time home health care was ordered, as well as during their home health episode. The overall response rate for that survey was 74 percent.

Home Health Agency Survey

We conducted telephone interviews with a random sample of 30 home health agencies. Our questions focused on their perception of the physician's role in home health care. Due to the small sample size we consider these data descriptive in nature and do not project to the universe based on this data.

Analysis of Claims

We used the five percent sample of Part B claims from CMS' National Claims History File to determine how often physicians bill for care plan oversight. Our analysis involved looking at the percentage of HHA claims that had a physician care plan oversight bill associated with them in 1999 (as a proportion of all home health claims in that year). We also analyzed data from prior years to identify whether this percentage is increasing, decreasing, or remaining constant. Similarly, we identified the percentage of physicians who submitted claims for the certification or re-certification of care plans in the first few months of 2001, the year these payments became available.

In addition, we used National Claims Data to determine how familiar physicians are with their patients prior to signing their plans of care, as well as how much they remain involved with patients after they start receiving home health care. To do this, we identified **all** beneficiaries who started home health services in the last 6 months of 2000. We analyzed the number of patient visits billed to Medicare by the physician who signed the plan of care in the 12 month period preceding their signature on the care plan.

Similarly, we analyzed physicians' involvement once home health services began by looking at the number of patient visits billed by the physician for the duration of the patient's stay in home health, up to 3 months[5].

Limitations

Our sample selection methodology focused on physicians who signed multiple plans of care in an effort to ensure that respondents had sufficient experience to answer our questions. Therefore, our results are projectable to physicians who sign more than one plan of care in a given 6 month period.

In addition, for all analyses where CMS claims data are utilized, data for more recent periods will be somewhat less complete than prior period data.

[5]Please note that **not** all beneficiaries included in this analysis received home health care for the entire 3 month period.

FINDINGS

Physicians play a key role in Medicare's home health benefit

A majority of physicians have had contact with patients prior to signing the plan of care

Virtually all physicians in our sample (97 percent) report that they have some familiarity with most of the patients for whom they sign a home health plan of care. A majority of Medicare patients (82 percent) concur with physicians, reporting that they know the doctor who ordered their home health. Recent claims data are consistent with the reported experiences of physicians and patients. These data show that 85 percent of all beneficiaries saw the physician who signed their plan of care at least once in the 12 months prior to the start of their home health care.[6] At present, there is no requirement that physicians see patients before signing their care plan.

Physicians help determine and initiate home health services

Most physicians are involved in identifying the specific home health services their patients need. Over half report working jointly with home health agencies or hospital staff to determine the services their patients will receive. Another quarter say they do this themselves, while 15 percent leave the determination of what a patient needs to the home health agency.

Many physicians are also involved in finalizing the initial plan of care. Just under a third report they sometimes make changes to the plan of care. The majority of those who make changes do so when the home health agencies include different services than they think are appropriate. They also make changes to plans of care when they believe there are too many or too few services listed, or when a change in medication or patient needs occurs.

Recent changes in Medicare guidelines allow home health agencies to begin services immediately after receiving a physician verbal order or a signed prescription. Previously, agencies were required to wait for physicians to sign the plan of care to commence services. About half of physicians report they currently initiate services by providing a verbal order describing the services needed with just under a quarter saying they are providing a prescription. Only 21 percent say they sign the plan of care to initiate services[7]. The 30 home health agencies we spoke with also report that most physicians are now providing a verbal order to initiate home health services. It should be noted that all physicians are still required to sign the finalized care plans for their Medicare patients.

[6]Note that any additional claims that were submitted by physicians after 2/28/01 are not reflected in this analysis, possibly understating this percentage.

[7]Nine percent report that they initiate services in some "other way."

Physicians remain involved with their home health patients

Almost all physicians (86 percent) report that they see their patients at least once a month while they are receiving home health services. These visits include both office and home visits. Claims data generally support the reported experiences of physicians. Claims data indicate that during the 3 month period following the start of home health care, at least 60 percent of beneficiaries received services from the physician who signed their plan of care.[8]

Additionally, physicians report they spend some time communicating with home health agencies and reviewing their patients' records. About a third say they spend at least half an hour a month doing this for each patient, while 60 percent spend less than half an hour. Only 7 percent report that they do not spend any time communicating with home health agencies or reviewing their patients' records.

Overall, physicians are satisfied with the home health care their patients are receiving. Fifty-four percent report they are somewhat satisfied with their patients' care, while another 37 percent report they are very satisfied.

Few urban and rural differences

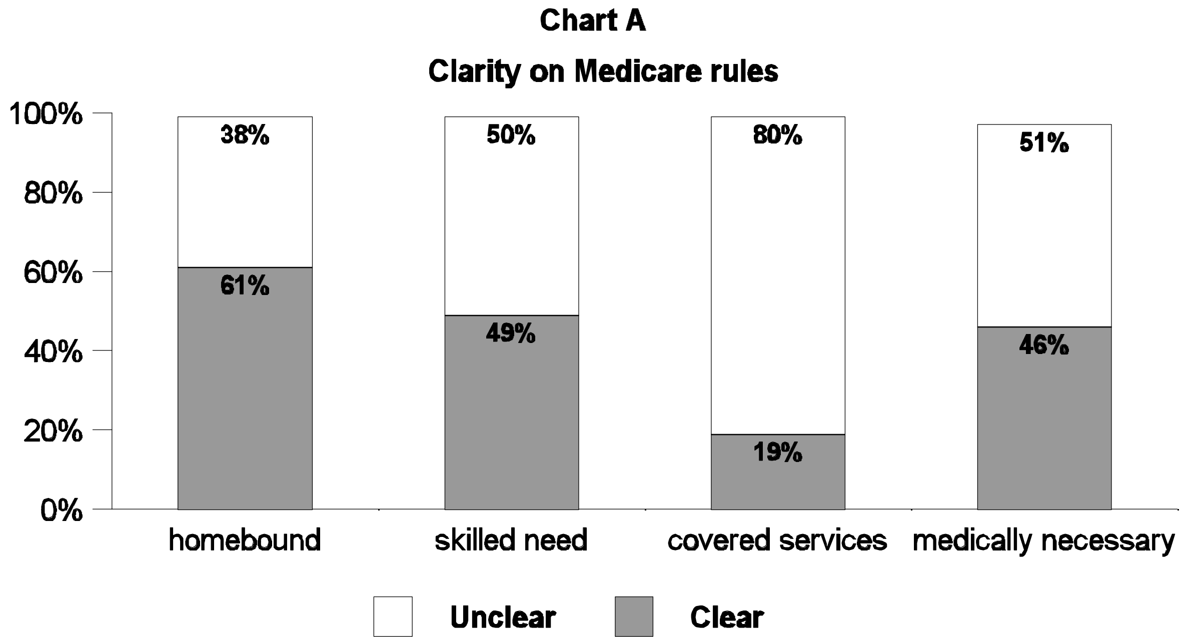
Because there is some concern that the experiences of home health patients differ by geographical region, we looked for differences in opinions and reported practices of the physicians in our sample that practice in rural versus urban areas. We found only two statistically significant differences in our key findings. First, more rural physicians report making the initial determination that Medicare home health services are needed, while more urban physicians report that someone other than the physician makes this determination. Secondly, more rural physicians report they would prefer that the oversight of home health patients be done by physicians, while more urban physicians report they would prefer the oversight role be performed by someone else. (See Appendix B for more information.)

Physicians report a lack of knowledge of Medicare home health rules

As indicated earlier, the Centers for Medicare and Medicaid Services require that all Medicare home health patients be certified by a physician as homebound to be eligible for home health services. However, as indicated in the chart on the next page, 38 percent of physicians report that they are unclear on the Medicare criteria for "homebound." In addition, just under half of all Medicare physicians report that they are not clear on the

[8]Note that additional claims that were submitted by physicians after 2/28/01 are not reflected in this analysis possibly understating this percentage and not all beneficiaries received home health services for the entire 3 month period.

definition they are expected to apply when certifying that planned home health services are medically necessary. Although Medicare does not explicitly require physicians to certify that a given patient has a "skilled need" or that a given medical service is, in fact, covered by Medicare, in practice there is a need for physicians to have knowledge of Medicare rules in these areas. However, a full 80 percent report that they are unclear on what services are covered by Medicare and 50 percent do not know what Medicare considers a "skilled need."



* Note: percentages do not total 100 in each case due to non-response

Source: OEI physician survey, 2001.

Physicians rely on several sources for home health information

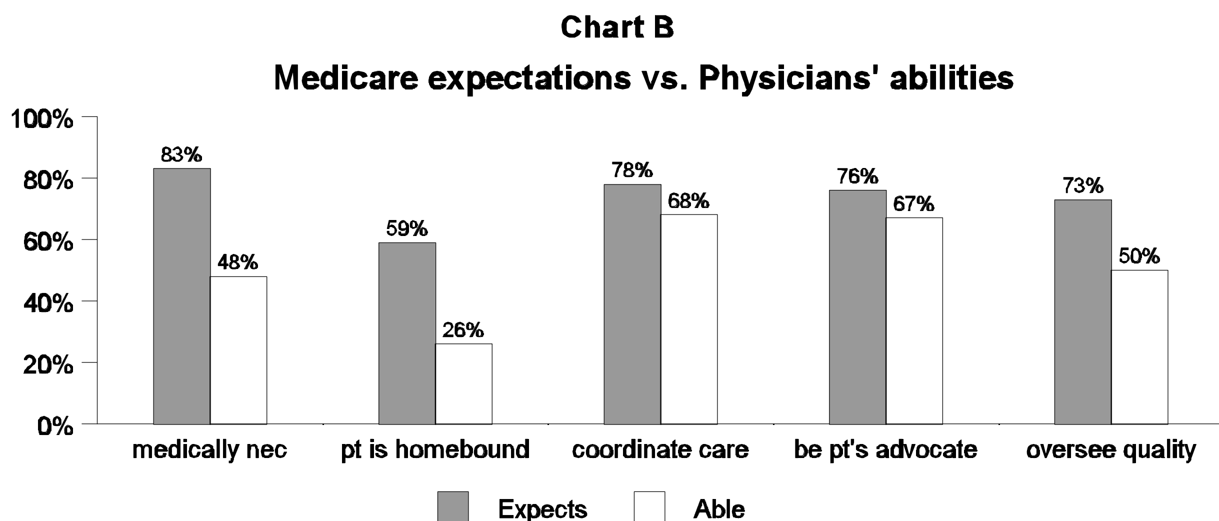
We asked physicians what guidance on home health, if any, had been most helpful to them. It is worth noting that the majority of physicians do not obtain their information from CMS. The top three answers they gave were: guidance from hospital staff such as discharge planners (76 percent), guidance provided by home health agencies (55 percent), and guidance from physician publications that cover home health issues periodically (16 percent). At present, only 11 percent of physicians report relying on program memoranda issued to physicians by Medicare Carriers. The number of doctors that report getting information from the Medicare website or Medicare conferences is also low, 1 percent and 5 percent respectively. When we asked physicians what suggestions they have for future initiatives to provide them with guidance about Medicare home health rules, just over 20 percent volunteered that they would like simplified information and more concise literature.

Physicians believe not all Medicare expectations of them can be met

Under the home health prospective payment system, the Centers for Medicare and Medicaid Services are relying on physicians to fulfill two distinct expectations. First, physicians are required to certify that Medicare beneficiaries are homebound and have a medical need for services. Secondly, because agencies are now paid fixed rates, possibly providing an incentive for some home health agencies to limit services, physicians are being relied upon to help ensure that patients get all of the care for which they are eligible. A recent CMS program memorandum indicated that "physician responsibility in the PPS environment is to be the determiner of the patient's health care needs and advocate for the services required to meet those needs."

Most physicians know what CMS expects of them but many believe they are not able to provide this oversight

We asked physicians a number of questions about the functions Medicare expects them to perform with regard to home health patients. In addition, we asked them whether they believe they are able to perform these functions. There is wide discrepancy between what physicians believe they are expected to do and what they believe they are able to do. For example, while 83 percent of physicians believe that Medicare expects them to ensure that only medically necessary services are on the plan of care, only 48 percent believe they are able to ensure that this is the case. There is also a large difference between the percentage of physicians that believe Medicare expects them to ensure that home health patients are homebound and the number that believe that they are able to ensure this (59 versus 26 percent). Chart B, below, provides additional information on the differences that exist between what physicians believe Medicare expects them to do and what they believe they are able to do.



Source: OEI physician survey, 2001

Interestingly, the 30 home health agencies we spoke with were more likely to say that physicians can fulfill CMS expectations than physicians were. Returning to the issue of whether physicians are able to ensure that only medically necessary services are on the plan of care, 24 of the 30 home health agencies we spoke to say "yes." As indicated above, only 48 percent of physicians say they are able to do this. Sixteen of the home health agencies report that physicians can ensure patients are homebound, while only 26 percent of physicians report that this is the case.

Concerns over physician liability

In addition to reporting concerns about their ability to meet CMS' oversight expectations, some physicians are confused about the degree to which they can be held liable for inappropriate certifications. One quarter of physicians report that they have heard about the 1999 Fraud Alert issued by the Office of Inspector General that addresses physician liability for home health certification. Of physicians aware of this directive, 24 percent volunteer concerns about being held personally liable for well intentioned certifications of their patients' home health care. Another 10 percent report that they have been made nervous by the Fraud Alert.

In addition to finding concerns among physicians who are aware of the Fraud Alert, we found a large degree of misunderstanding on the part of all physicians. Only 25 percent correctly report that physicians can be held liable for inappropriate certifications only when they knowingly sign false or misleading certifications. The balance of physicians report incorrectly that they can be held liable for any inappropriate certifications they sign (41 percent) or that they have no clear understanding of what their liability may be (27 percent).

Physicians divided on who should perform the oversight role

Despite the fact that physicians report reservations about their ability to fulfill the role Medicare expects of them, there is no consensus on the issue of who should perform this function. Forty-one percent of physicians report that they would like to see independent case managers, an unspecified person, home health agency medical directors, or independent ombudsman perform this function[9]. However, 56 percent report that the oversight of home health patients should not be done by someone other than the physician.

[9]Three percent of physicians did not respond to this question on the survey instrument.

Over half of Medicare physicians are unaware of new home health prospective payment system

As indicated earlier, under the prospective payment system, physicians are being relied upon to ensure that patients get all the care for which they are eligible. We asked physicians whether or not they were aware of the new prospective payment system. About 60 percent of physicians report they have never heard of the Medicare home health prospective payment system (PPS), which went into effect October 1, 2000. Physicians who have heard of it, report having learned about it through physician publications, home health agencies, and hospital staff.

We asked physicians who are aware of PPS if the implementation of the prospective payment system has changed their interactions with home health agencies or Medicare beneficiaries. Seventy-three percent report that it has not affected their interactions with agencies or beneficiaries.

Effectiveness of physician payments is questionable

Beginning in 1995, physicians were permitted to bill for care plan oversight. Reasons for the implementation of this payment include a desire on the part of the Centers for Medicare and Medicaid Services to recognize work physicians were performing, as well as to encourage additional physician involvement. Recent claims data indicate that physicians bill for care plan oversight at a rate of less than 3 percent of total home health claims. This low billing rate indicates that, at present, there is little willingness on the part of physicians to pursue these payments. Historic data show that these billings have been consistently low since they became available in 1995.

Over two-thirds of all physicians report that they either do not know what constitutes home health care plan oversight or are not aware that they can bill for it. Of those physicians that report being aware that they can submit these bills, 82 percent say they choose not to. Physicians report that there is too much paperwork involved in submitting these claims and the payment amount is not high enough to make it worthwhile. In addition, many claim that it is unclear what Medicare requirements physicians must meet in order to qualify for reimbursement. In fact, a full one-third of the small number of physicians who are submitting bills to Medicare for home health care plan oversight report being unclear about requirements.

A similar story is unfolding with regard to newly available payments for certification and re-certification of the plan of care. We analyzed early data on physician billings for these payments. Data for the first quarter of 2001 reveal that physicians billed for these payments at a rate of less than 3 percent each.[10] Ninety percent of physicians report being

[10]Based on physician claims received by April 30, 2001. Denominator is total number of Medicare home health claims submitted for the same period.

unclear on the requirements associated with certification/re-certification payments at the present time. Interestingly, despite a low initial billing rate and confusion about billing requirements, one-third of physicians report that they plan to submit bills to Medicare for these payments in the future.

We asked home health agencies if they believe the amount of time physicians spend with their home health patients has increased, decreased or remained the same since CMS' 1995 implementation of the care plan oversight payment. Fifteen agencies say it has remained the same; nine say the amount of time physicians spend with their home health patients has increased; one agency reports that the amount of time has decreased; and, five say they "don't know."

Physicians report desire for simplified rules and cite obstacles to more effective physician involvement

As indicated earlier, just over 20 percent of physicians volunteered that they would like to see simplified Medicare rules related to their role in certifying home health and more concise guidance on the subject. When asked what obstacles they see to increased physician involvement in monitoring Medicare home health patients, physicians cite burdensome paperwork, a lack of time, and limited Medicare reimbursement.

RECOMMENDATIONS

Physicians are currently playing an important role in initiating, certifying and monitoring the care for Medicare home health beneficiaries. However, they are doing so despite limited knowledge of key Medicare rules as well as discomfort with CMS' expectations. At present, the availability of reimbursement for their oversight role does not seem to be having a significant impact on physicians who care for Medicare home health patients. In order to address physician concerns and improve the Medicare home health services, we recommend the following.

- The Centers for Medicare & Medicaid Services should review relevant informational materials available to Medicare physicians to determine areas where improvements and clarifications can be made.

- The Centers for Medicare & Medicaid Services should establish a workgroup composed of physicians, home health representatives, and departmental designees, or utilize an existing workgroup such as the Practicing Physicians Advisory Council or the Physician Regulatory Issues Team to discuss issues related to Medicare home health care. We offer the following issues for consideration by the workgroup.

  - The need for more effective and widespread home health education for physicians;

  - Further clarification of payment and coverage policies, including the home health definitions for "homebound" and "medically necessary;"

  - The simplification of home health certification forms;

  - An analysis of the costs and benefits associated with the promotion of physician home visits;

  - The possibility of requiring home health agencies to employ medical directors;

  - The consideration of whether CMS oversight expectations of physicians can be realistically met; and,

  - The creation of a system enabling patients to appeal if they feel they are receiving inadequate care.

COMMENTS

We received comments on our draft report from several physician and home health organizations: The American Academy of Home Care Physicians, The American College of Physicians-American Society of Internal Medicine, The American Medical Association, and The National Association for Home Care. These organizations generally agreed with our findings and recommendations. They also provided specific suggestions on how to increase physician understanding of the Medicare home health benefit and to promote further physician involvement with their home care patients. (We include these organizations' comments in full in Appendix E.)

We also received comments on our draft report from the Centers for Medicare & Medicaid Services (CMS). The CMS concurred with our findings and also made a number of technical comments that we incorporated into the report when appropriate. In addition, CMS had two methodological concerns. First, they expressed concern that our sampling time frame did not include a long enough period of time when the prospective payment system (PPS) was in effect. We acknowledge that our work occurred in the early stages of PPS implementation. However, it is important to note that physician knowledge of PPS is only one issue among several that we sought to address. Second, CMS stated that our sample may be biased against respondents who have had enough experience signing plans of care. We were also concerned about this. Therefore, in our methodology we included only physicians who signed two or more home health plans of care during the 6 month sampling time frame.

APPENDIX A

Selected List of Recent Office of Inspector General Home Health Inspections

Office of Inspector General, US Department of Health and Human Services, "The Physician's Role in Home Health Care," OEI-02-94-00170, June 1995.

Office of Inspector General, US Department of Health and Human Services, "Medicare Beneficiary Access to Home Health Agencies," OEI-02-99-00530, October 1999.

Office of Inspector General, US Department of Health and Human Services, "Medicare Beneficiary Access to Home Health Agencies 2000," OEI-02-00-00320, September 2000.

Office of Inspector General, US Department of Health and Human Services, "Adequacy of Home Health Services: Hospital Re-Admissions and Emergency Room Visits," OEI-02-99-00531, September 2000.

Office of Inspector General, US Department of Health and Human Services, " Medicare Home Health Services: Survey and Certification Deficiencies," OEI-02-99-00532, September 2000.

APPENDIX B

Chi-Square Test for Urban/Rural Differences

We computed Chi-square values for differences in physicians' geographical place of work. All variables were analyzed at the 95 percent confidence level. As shown in the table below, only two variables showed statistically significant differences.

Chi-Square Values for Testing Significance of Geographic Place of Work

Variable	Percents	Degrees of Freedom	Chi-Square	Probability	Significant?
Determination that patient needs home health: Physician Non-physician	Rural Urban 71% 57% 29% 43%	1*	4.45	.03	Y
Preference of person responsible for oversight: Physician Non-physician	Rural Urban 68% 55% 32% 46%	1*	4.00	.05	Y
Familiarity with patients prior to home health		3	1.65	.65	N
Time spent each month with a typical home health patient		1*	2.48	.12	N
Awareness of care plan oversight payment		3	0.35	.95	N
Knowledge of home health PPS		1*	1.97	.06	N
Ability to ensure patient is homebound		3	5.56	.13	N

* When testing for urban rural differences, response categories were combined in some instances in order to better understand any differences.

Confidence Intervals For Key Findings *

We calculated confidence intervals for key findings for physicians. The point estimate and 95 percent confidence interval are given for each of the following:

Key Findings	N	Point Estimate	
Virtually all physicians report that they have some familiarity with the patients for whom they sign a home health plan of care.	343	97%	+/- 1.8
Over half report working jointly with home health agencies or hospital staff to determine services for their patients.	343	55%	+/- 5.3
Almost all physicians see their patients at least once a month while they are receiving home health services.	343	86%	+/- 3.7
Thirty-eight percent of physicians report that they are unclear on the Medicare criteria for "homebound."	343	38%	+/- 5.1
Eighty-three percent of physicians believe that Medicare expects them to ensure that only medically necessary services are on the plan of care.	343	83%	+/- 4.0
Only 48 percent of physicians believe they are able to ensure that only medically necessary services are on the plan of care.	343	48%	+/- 5.3
Fifty-nine percent of physicians believe Medicare expects them to ensure that home health patients are homebound.	343	59%	+/- 5.2
Twenty-six percent of physicians believe they are able to ensure that home health patients are homebound.	343	26%	+/- 4.6
Of the physicians who are aware of the Fraud Alert, 24 percent volunteer concerns about being held personally liable for well intentioned certifications of their patients' home health care.	84	24%	+/- 9.1
Twenty-five percent of physicians correctly report that physicians can be held liable for inappropriate certifications only when they knowingly sign false or misleading certifications.	343	25%	+/- 4.6

* Note: The N values above include item non-respondents. Item non-respondents were included in the denominator used to calculate point estimates. These item non-respondents do not include those survey respondents who were instructed to skip the question at issue. In the majority of the findings above, item non-respondents numbered less than 10.

Physician Non-Respondent Analysis

We tested for the presence of any non-response bias in our sample. For this analysis, a physician who did not complete and return the survey is a non-respondent. We dropped six physicians from the overall sample who told us they did not sign plans of care.

To test for non-response bias in our sample, we analyzed two variables which might influence whether an individual would respond to the survey or that might affect his or her responses: geographical place of work and the number of home health plans of care signed by the physicians within a given 6 month period.

For the purpose of this analysis, geographical place of work was divided into urban and rural. For the number of home health plans of care signed within a given 6 month period, we divided the physicians into three categories:

1. Physicians with an average of less than one plan of care signed a month,
2. Physicians with an average of one but less than two plans of care signed a month, and
3. Physicians with an average of two or more plans of care signed a month.

These categorical variables were tested using Chi-square with the appropriate degrees of freedom. In order for the results to be statistically significant at the 95 percent confidence interval, the Chi-square value must be higher than 3.84 with 1 degree of freedom.

The results of this analysis are presented in Tables A and B. The Chi-square values given in the tables provide a test of difference between the distribution of respondents and of non-respondents for the variable of interest. Also provided in the tables are the response rates by the different values of the variables.

Tables A and B show no statistically significant differences between respondents and non-respondents for either geographical place of work or the number of home health plans of care signed by the physicians.

Table A
Geographical Place of Work*

	Respondents	Non-Respondents	Total	Percent
Urban	252 (46%)	193 (35%)	445	81%
Rural	70 (13%)	37 (7%)	107	19%
Total	322	230	552	58%
Chi-square= 2.74 Degrees of freedom= 1				

* The overall sample size is only 552 because there were no matches on the urban/rural indicator for 42 physicians.

Table B
Average Home Health Plans of Care Signed a Month

	Respondents	Non-Respondents	Total	
< 1 /month	206 (35%)	139 (23%)	345	58%
1-2 /month	83 (14%)	66 (11%)	149	25%
> 2 /month	54 (9%)	46 (8%)	100	17%
Total	343	251	594	58%
Chi-square= 1.38 Degrees of freedom= 2				

APPENDIX E

Comments

In this appendix, we present in full the comments from the Centers for Medicare and Medicaid Services, the American Academy of Home Care Physicians, the American College of Physicians-American Society of Internal Medicine, the American Medical Association, and the National Association for Home Care.