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*Health Affairs* 15, no.4 (1996):145-155

doi: 10.1377/hlthaff.15.4.145

Cite this article as:

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The Home Health Visit: An Appropriate Unit For Medicare Payment?

An evaluation of ways to control the rapidly rising cost of home health care.

by Christine E. Bishop, Randal S. Brown, Barbara Phillips, Grant Ritter, and Kathleen Carley Skwara

ABSTRACT: To contain costs and increase incentives for efficient provision of care, prospective payment methods are being proposed for Medicare home health services. Although a shift to per episode payment is much discussed, the methods rely on the home health visit as a fundamental building block in setting rates and ceilings. Some propose setting fixed per visit prices in the interim until episode payment can be developed. Findings from the evaluation of a Health Care Financing Administration (HCFA) demonstration of per visit payment suggest that this could shorten the length of visits provided to Medicare beneficiaries. Because of home health agencies’ discretion over visit length, we question whether the visit is the appropriate basic unit for developing prospective payment methods for Medicare home health.

MEDICARE’S HOME HEALTH COSTS grew at an average rate of 33 percent per year between 1990 and 1995. Concerned about these costs, the Health Care Financing Administration (HCFA) has been studying ways to use prospective payment for Medicare home health, using the visit or the episode as the unit for payment. Even as demonstrations of prospective methods were being implemented, Congress passed (and President Bill Clinton vetoed) legislation requiring a major overhaul of the Medicare home health payment method.

The Clinton administration has presented a competing proposal, which also moves away from cost-based payment toward prospective payment, and the home care industry has developed a variant of this method. All three plans would, immediately or eventually, cap home health agencies’ revenue according to the number and case type of Medicare home health...

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episodes; home health agencies that keep visits below per case norms would earn bonus payments, which would open the first opportunity for agencies to gain net revenue (profit) from the provision of Medicare home health services. Agencies that exceed per episode revenue norms would have to return excess revenue to the Medicare program.

However, the visit, although a reasonable unit for measuring service in a cost-based system, may not be an appropriate basis for building a prospective payment system. Research we conducted as part of our evaluation of a HCFA demonstration of prospective per visit payment for Medicare home health services sheds light on the stability of the visit as a unit for prospective payment.

The implementation challenges and provider incentives inherent in a prospective, case-mix-adjusted per episode payment for home health services, and its parallel, a prospective per episode or per beneficiary revenue cap, have been discussed on a preliminary basis by others and are not the focus of this DataWatch. We instead contribute some insights, gleaned from the evaluation, concerning the use of fixed versus cost-based per visit payment as an interim payment method and as a building block for setting prospective prices or caps.

**The Visit And Medicare Home Health Payment**

Medicare pays for home health visits provided by certified home health agencies to beneficiaries with qualifying medical needs. The visits must be provided by one of six types of providers: skilled nurses, physical therapists, home health aides, medical social service workers, speech therapists, or occupational therapists. Clarifications of beneficiary eligibility rules have allowed increases in the duration and intensity (visits per week) of services provided under the Medicare home health benefit and, to a lesser extent, in the number of beneficiaries eligible to receive Medicare-paid home health services. These increases are responsible for much of the recent growth in Medicare home health expenditures; Medicare payment per visit has not been growing faster than health care cost inflation.

**Current payment method.** Under current law, home health agencies are paid their average cost per visit for the visits they provide, as long as total Medicare payments do not exceed a ceiling determined for each agency. This ceiling is determined by multiplying the number of visits supplied by each discipline by 112 percent of the national mean cost for that visit type, with a labor portion adjusted by an index based on local hospital wages; adding the amounts for the six provider disciplines produces an agency cost
The proportion of agencies with costs above the limits has been rising and is not evenly distributed by agency type: In 1995 HCFA estimated that 44 percent of freestanding agencies and 81 percent of hospital-based agencies would exceed the limits.

**Proposed payment method.** Under current payment method proposals, home health agencies would no longer be reimbursed their costs up to an agency-specific ceiling, but instead would be paid prospective prices for each visit they provide (limited by aggregate revenue caps). Agencies with average costs per visit below this wage-adjusted average would make net revenue on every visit they provided, as long as they remained below the agency per episode visit cap. Per episode ceilings and rates would be built up from average costs per visit by discipline and visits per case by discipline type. In many systems, prospective per visit rates also are used to pay for care delivered beyond a standard episode duration (for example, 165 days).

If agencies can keep the difference between the prospective payment and the cost for each visit by discipline type, they will have a strong incentive to reduce average cost per visit and to increase the number of visits they provide. If the prospective price per visit is set low, as in proposals that freeze per visit payment at past-year average cost, with no updating, the carrot of profit becomes a stick that threatens survival.

Some agency cost containment strategies, such as cutting overhead expenses or reducing cost per labor hour by cutting wages or benefits, would not affect the content of visits. Agencies have substantial discretion about the content of home health visits supplied to particular patients and thus could respond to fixed per visit prices by reducing staff time per visit. Cost per visit could be cut simply by encouraging personnel to carry out over two visits tasks that are now performed in a single visit. With this cost-cutting strategy, the total amount of care supplied to patients would remain the same, but it would be distributed over more visits, thereby increasing Medicare payments.

Home health visits vary in length and content, even for a specific provider discipline, because patients need different treatments. Also, patients' needs do not have a fixed relationship to the number of visits. Current patterns of assigning tasks to visits have evolved under the existing cost-based payment system, so that visit length is, on average, reasonably consistent with Medicare cost ceilings. These practice patterns could shift radically in response to per visit pricing.
The HCFA Demonstration

In 1991 HCFA mounted a demonstration of a fixed per visit payment method for Medicare home health care that allows us to look at how home health agencies might adjust visit length in response to per visit pricing. The forty-seven agencies that applied to participate in the demonstration were randomly assigned to a treatment group (twenty-six agencies) and a control group (twenty-one agencies). Treatment agencies were paid a fixed price per visit for the six visit types, with the price based on their own past average costs. Agencies could keep most of the difference between revenue per visit (the prospective rate) and their cost per visit if their average cost per visit rose less than the demonstration inflation factor. Agencies bore most of the loss if their costs grew faster than the inflation rate. Thus, the demonstration provided treatment agencies with a financial incentive to restrain the growth of costs per visit and, if they could keep cost per visit down, to increase the number of Medicare visits they provided. We evaluated the effect of this payment method, using data gathered from the two groups of agencies for the three-year demonstration period and for a baseline period of three years before the prospective payment method was implemented.

The evaluation showed that this short-term trial of per visit payment had little measurable effect on cost per visit. In addition, despite its inherent incentive to increase Medicare visits, the demonstration payment method did not lead agencies to increase their number of visits, to decrease quality of care, or to be more selective about the patients they served. The evaluation results suggest stable Medicare home health agency behavior in response to payment method change. Although generalizability may be limited because of the temporary nature of the demonstration and the small number of agencies involved, the results are reassuring as policymakers consider extending per visit rates to all Medicare home health services.

However, the investigation of effects on visit length, measured in minutes of staff time, uncovered one of the few statistically significant differences between treatment and control agencies: Home health aide visits provided by agencies that were paid using the per visit rate were much shorter than those provided by agencies that were paid their costs.

Effect On Visit Length

The data for the visit length investigation came from a survey of 2,108 patients during the demonstration period, conducted within three to four weeks of their admission to home health care by a treatment or control agency. Patients, or their proxies, were asked
to identify which of four types of personnel (nurse, aide, therapist, or medical social worker) had provided the most recent home health visit and to estimate the amount of time spent with the patient. Study resource constraints precluded independent verification of patients’ recall; however, the data represent one of the few windows on home health visit length and the only measure taken for the per visit payment demonstration. We examined visit length separately by discipline. Because the number of reported visits for medical social services was so small, and because the questionnaire did not differentiate among types of therapy visits, the analysis considers only nursing and home health aide visits in detail.

Findings. Visits varied widely in length (Exhibits 1 and 2). The mean for skilled nursing visits was forty-two minutes, but twenty-three beneficiaries reported visits of less than fifteen minutes, and one patient, served by a treatment agency, reported a visit of sixteen hours. Home health aide visits averaged seventy-nine minutes, ranging from fifteen minutes to twenty-four hours (reported by a control agency patient). Reasoning that care lasting more than eight hours would be provided by more than one staff member and thus would represent more than one visit, we truncated visits to eight hours. When the length of skilled nursing visits for treatment and control agencies were compared, we found no significant differences

![Exhibit 1](http://content.healthaffairs.org/)

**EXHIBIT 1**

**Length Of Home Health Nurse Visits, By Percentage Of Patients Receiving Visits Of Various Durations**

<table>
<thead>
<tr>
<th>Visit length (hours)</th>
<th>Treatment</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 0.5</td>
<td>60%</td>
<td>30%</td>
</tr>
<tr>
<td>1</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>1.5</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>2.5</td>
<td>5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>3</td>
<td>2.5%</td>
<td>1.25%</td>
</tr>
<tr>
<td>3.5</td>
<td>1.25%</td>
<td>0.625%</td>
</tr>
<tr>
<td>4</td>
<td>0.625%</td>
<td>0.3125%</td>
</tr>
</tbody>
</table>

**SOURCE:** Home Health Patient Survey, Home Health Prospective Payment Demonstration.

**NOTE:** Each set of bars represents the amount of time between the numbers on either side. For example, the first set of bars represents visits that were 0 to 0.5 hours in duration. The final set of bars represents visits that lasted more than four hours.
EXHIBIT 2
Length Of Home Health Aide Visits, By Percentage Of Patients Receiving Visits Of Various Durations

<table>
<thead>
<tr>
<th>Percent of patients</th>
<th>Treatment</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
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<tr>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Visit length (hours)

SOURCE: Home Health Patient Survey, Home Health Prospective Payment Demonstration.
NOTE: Each set of bars represents the amount of time between the numbers on either side. For example, the first set of bars represents visits that were 0 to 0.5 hours in duration. The final set of bars represents visits that lasted more than four hours.

(mean were forty-one minutes for treatment agencies and forty-three minutes for control agencies). However, home health aide visit lengths reported by patients served by treatment agencies were statistically significantly shorter than those reported by patients served by control agencies (averaging seventy-three minutes and eighty-nine minutes, respectively). More than three-quarters (76 percent) of home health aide visits in treatment agencies lasted less than one hour, compared with about half (53 percent) of home health aide visits in control agencies, which demonstrates that the observed difference in means is not attributable to control-group outliers.

Observed differences in visit length might be attributable to differences in agency characteristics or to chance differences in the types of patients served by the two groups of agencies. Regional and agency practices by ownership type may set patterns for visit length, which suggests that we include these agency variables in a statistical model to isolate the effect of the payment method. Although there were no significant differences in average case-mix measures between treatment and control agencies, previous research on nursing productivity in home health care has documented an association between patient characteristics and length of visit that might appear in a multivariate analysis. However, these studies also included indicators of treatments provided and tasks performed as independent variables to explain variation in visit length. Such an
approach recognizes that a patient’s condition cannot by itself predict visit length; it is the treatments that are prescribed to meet these needs and the way they are apportioned over visits that determine what nurses do during visits and thus how much time they spend. Productivity studies thus mix patient characteristics and tasks performed. However, statistical models that include indicators of tasks performed are not appropriate for our analysis because agencies that are paid prices per visit could lower their costs per visit by spreading procedures and tasks over more visits.\textsuperscript{15}

Nonetheless, we hypothesized that a patient’s condition might affect visit length. In focus groups, home health nurses identified a patient’s need for intravenous therapy; presence of a complicated wound, gastrostomy, or tracheotomy; a cancer diagnosis; and terminal illness as being associated with longer visits.\textsuperscript{16}

In light of the wide potential variation in the way home health care is provided and the lack of relevant guidance from previous research, we took an agnostic approach to explaining variation in visit length. We regressed reported visit length on an indicator for membership in the treatment or the control group, and on variables representing age, race, and sex; we allowed other available variables describing patient condition and agency characteristics to enter the model if their coefficients achieved a $p$ value below 0.2.\textsuperscript{17}

The analysis of visit length data showed that treatment agencies provided shorter home health aide visits than control agencies did, even after accounting for differences in patient and agency characteristics. The difference, about eighteen minutes, was about the same as the difference in means.\textsuperscript{18} There were no significant differences in the length of skilled nursing visits supplied by treatment and control agencies, which is consistent with the observed difference in means.\textsuperscript{19}

**Implications For Home Health Payment**

The fixed per visit payment method appears to have led home health agencies to shorten their home health aide visits. This finding must be considered suggestive, because it is based on a small set of observations from a patient survey that could not be validated. However, the finding and the wide variation in minutes per visit for both types of visits reinforce our contention that the home health visit is not a well-defined unit. This has important implications for payment methods that set prices for the visit as a unit of service, either for direct payment or, more likely, to build up to appropriate costs per episode or per person served. Under cost reimbursement, Medicare pays for both short and long visits (as long as total Medicare cost does not exceed the agency ceiling). In contrast, when
payment is made at a fixed per visit rate, agencies are not paid in full for long visits. They generate net revenue whenever the cost of a visit is less than the Medicare payment rate. Under these circumstances, agencies would be expected to reduce the length of visits to reduce costs per visit. This incentive would hold for many situations under the proposed per episode payment systems: Agencies with numbers of visits below the episode caps would still be paid on a fixed per visit basis, as would agencies with visits in the “tail” of long outlier episodes. The effects of this incentive could be averted by setting standards for visit content or by using a different definition of service altogether.

**Standards for visit content.** It is critically important that Medicare, as a purchaser of a service for its beneficiaries, establish specifications for the services it wishes to buy. How can a buyer assure that care provided by a particular agency in a visit or an episode is worth the price built up from past average visit costs and past average visit allocations? If the resources used to produce a visit (or an episode) are highly variable and under agencies’ control, payments based on past costs may tempt some providers to sharply reduce inputs, Even if standards for visits could be set, they would be hard to monitor. Outcomes-based monitoring at the episode level may show more promise because it implicitly specifies what Medicare is willing to pay for and challenges agencies to provide it with a least-cost number and mix of visits by type. If length and number of visits fall sharply as successful agencies meet outcome standards, will this be seen as a gain in efficiency or a loss of access? Limiting profits to a percentage of total Medicare revenue, as some proposals do, will deter providers from making drastic changes in the resources they allocate to patients and perhaps allow a smoother transition to a more efficient system.

**A different service definition.** Home health agencies supply care at home, which is an input or “intermediate good” in the provision of care for beneficiaries with specific medical needs. Medicare, or an integrated managed care organization prescribing health services at home for its members, should attempt to purchase the services that are most effective in meeting members’ needs. The visit is certainly not the best unit to assure that effective home-delivered services are prescribed and paid for, and the episode may not be much better. Although it may seem like a step backward in the rush toward
increasingly global payment, care inputs required by beneficiaries' health conditions might be specified in terms of treatments provided or tasks performed. After all, certain services provided at home can be provided in hospitals, nursing homes, and outpatient settings. Payment per service could be consistent across settings. Current and proposed payment methods treat home health care as an isolated service and thus may not encourage efficient substitutions across alternative care types.

Home health agencies could conceivably perform needed tasks in fewer long visits or multiple short visits, depending on cost and effectiveness, if their output were not measured and paid for by the visit. Service units other than visits often are used by agencies to price the portions of their business that are not reimbursed based on cost. Medicare might consider purchasing hours of skilled nursing time, as private patients do for private-duty nursing; units of physical therapy, measured in fifteen-minute increments, might be more comparable to care provision in other settings. When blocks of aide time are used by Medicaid and private home care payers, payment per aide visit differs depending on whether an aide stays one hour or four hours. In conjunction with case management to assure that services are appropriate to patients' needs, pricing these intermediate inputs to home health care could move the Medicare home health sector toward efficient provision of services to beneficiaries, both in and out of patients' homes.

This project was funded by the Health Care Financing Administration (HCFA), Contract no. 500-90-0047 and Grant no. 440145. The opinions expressed are those of the authors and not those of HCFA.
NOTES


2. The Seven Year Balanced Budget Reconciliation Act, H.R. 2491, was passed by Congress in November 1995; its home health payment method is referred to as the Republican or congressional payment plan.

3. The administration proposal is similar but not identical to the payment reform included in the Democratic budget proposal, The Common Sense Balanced Budget Act (H.R. 2530). The National Association for Home Care (NAHC) has proposed a Revised Unified Prospective Payment System. See Margaret J. Cushman, president, VNA Health Care, Hartford-Plainville, Connecticut, testimony before the House Ways and Means Subcommittee on Health, on behalf of the NAHC, 23 July 1996.

4. It is notable that HCFA, most familiar with ongoing research demonstrating the difficulties of defining case-mix-adjusted episodes, has presented the proposal that is most cautious about moving to prospective per episode payment based on national or regional norms.


6. HCFA, Transmittal 222, revising Health Insurance Manual-II (1 July 1989). These clarifications expanded qualifying services and enabled beneficiaries to receive twenty-four-hour care at home for some portion of their home health episode, to receive visits seven days a week for some portion of their episode, and to continue to receive care for much longer episodes of care than previously allowed.


10. Under the congressional payment method, agencies would be paid at fixed rates for the visits they provide to Medicare patients. These rates would be set at national average cost per visit by type computed for 1994 data and adjusted by an area wage index. At the end of the year, an agency revenue cap would be computed by classifying agency episodes of up to 165 days by case type and multiplying the number in each episode group by an area ceiling for that type of case. These per episode ceilings would be derived from the area averages for visits by type provided during the first 120 days of care for each episode type, multiplied by area-adjusted average cost per visit. Many episodes now run longer than 120 days, and agencies that continue to provide long episodes of care, or episodes involving many visits, are likely to lose revenues under the 120-day cap. An agency that can serve Medicare patients using fewer visits per episode, or visits by providers from less expensive disciplines (for example, home health aides instead of skilled nurses), would find that its total revenue is less than its aggregate cap; Medicare will pay it a bonus of half this difference, up to 5 percent of total revenue. Most worrisome for agencies is the discrepancy between the 120-day episodes for which standard revenue for each case type is to be determined and the longer episodes that many now provide. Under the cap, agencies will be responsible for visits provided during the first 165 days of each episode of care.

11. R. Brown et al., “The Effects of Predetermined Payment Rates for Home Health


13. This affected only one nurse visit, delivered by a treatment agency, and one home health aide visit, delivered by a control agency.


15. Cost containment pressure also might encourage nurses to carry out given tasks more quickly, resulting in genuine efficiency gains—the same care for fewer resources. The demonstration survey could not collect detailed information on the tasks carried out in the sampled visits to address this question. A recently initiated HCFA research project will support a much-needed investigation of visit content, although of course without the controlled experimental design of paying some agencies on a fixed per visit basis. It might be interesting to compare visit content for agencies with costs above per visit caps, which cannot recoup the cost of any excess staff time above the limits, with those paid at cost.


17. The variables available for selection are listed in C.E. Bishop et al., "The Effects of Per-Visit Rate Setting for Medicare Home Health Care on Agencies' Provision of Services" (Final report under HCFA Contract no. 500-90047, Mathematica Policy Research, Princeton, New Jersey, and Institute for Health Policy, Brandeis University, Waltham, Massachusetts, December 1995).

18. The variables that entered the home health aide regression that had a positive effect on visit length included whether the patient lived alone (21 minutes), and whether the patient had any of the following home health diagnoses or conditions: monitoring after heart surgery (53 minutes), decubitus ulcer (122 minutes), hypertension (21 minutes), or incontinence (39 minutes). Recent hospitalization had a negative effect on the length of the home health aide visit (–32 minutes). Home health aide visits in Texas were shorter than visits elsewhere, by about twenty-six minutes. All of these coefficients were significantly different from zero at p < 0.10.

19. For nursing visits, the characteristics significant at p < 0.10 were African American (9 minutes), living alone (6 minutes), recent hospitalization (6 minutes), dependence in bathing (5 minutes), stroke with compromised use of limbs (16 minutes), incontinence (6 minutes), and chronic lung disease (–7 minutes). Patients in Florida and Illinois reported shorter skilled nursing visits, by about seven minutes. Also in the equation with values less than 0.2 were stable medical condition (–3 minutes), dependence in wheeling/walking (–3 minutes), diabetes (–5 minutes), and less serious cardiopulmonary condition (–8 minutes).