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Home Health Payment Reform: Trends in the Supply of Rural Agencies and Availability of Home-Based Skilled Services

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Prior to the enactment of the Balanced Budget Act (BBA) in 1997, home health care was among the fastest growing areas of Medicare. Between 1990 and 1996, Medicare home health expenditures grew at an annual rate of 29 percent.[1] Much of the growth in home care expenditures was fueled by the cost-based system under which home health agencies were reimbursed at the time. To curtail this growth, the BBA mandated that the Health Care Financing Administration (HCFA) - now the Centers for Medicare and Medicaid Services- transition home health to a prospective payment system (PPS).

To restrain costs until the PPS could be developed, HCFA established an interim payment system (IPS). The IPS lowered the per visit cap that was in place prior to enactment of the BBA, and introduced a per-beneficiary cap which effectively limited an agency's reimbursement to their 1994 average beneficiary cost. HCFA implemented the home care PPS in October 2000. Under this payment system, agencies receive a case-mix adjusted amount per 60-day episode of care. The case-mix adjustment system classifies patients into Home Health Episode Groups (HHEG) based on clinical characteristics and functional status. Another element of the classification system that determines reimbursement is patient's use of therapy. Specifically, episodes of care that include at least 10 therapy visits – physical (PT), occupational (OT) or speech (ST) — qualify for the highest rates of reimbursement.

[1] Komisar HL, Feder J. "The Balanced Budget Act of 1997: Effects on Medicare's Home Health Benefit and Beneficiaries who Need Long-term Care." A report to the Commonwealth Foundation, February 1998.

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Although set to expire in spring 2005, medicare reimbursement policy also provides additional payment, currently a 5 percent add-on, for treating residents in rural areas.

There is some evidence that the transition to a PPS led to dramatic changes in the structure of the home health industry. In terms of provider supply, data indicate that the IPS created a financial strain on many home health agencies and contributed to many closures. According to the GAO, in the two-year period following implementation of the IPS, about 14 percent of Medicare home health agencies closed.[2] Data from MedPAC suggests that the number of agency closures was higher, 21 percent.[3] We know little about how the PPS has affected agency service mix and, specifically, agencies' willingness or ability to offer skilled services that include PT, OT, ST, and medical social work services. Because episodes of care that incorporate therapy visits are higher paid, it is plausible that more agencies would consider having these services available.

Changes in the availability of post-acute providers or the scope of services that are offered by these providers have implications for access and quality, particularly in rural communities that have historically had difficulty in recruiting and retaining health professionals. The NORC Walsh Center for Rural Health Analysis conducted a study of the availability of home health services in rural communities. As part of this study, we examined trends in the supply of home health agencies for three periods in time: before the BBA was enacted, during the time in which the IPS was in place, and following the implementation of the PPS. Data to analyze trends in agency supply were obtained from the 1997 and 2003 Medicare Providers of Services Files.

For a cohort of 5,685 agencies that were in operation in both 1997 and 2003,[4] we also examined changes in the proportion that offered OT, PT, ST and medical social work.[5] In a related analysis, we estimated the odds that, in 2003, rural and urban agencies would offer these skilled services.

Throughout these analyses, we used a modified version of the Department of Agriculture Rural and Urban Continuum Codes to identify metropolitan counties and establish non-metropolitan county subgroups. Metropolitan (metro) counties were designated as counties of any size that were located in a metropolitan area. We grouped non-metropolitan county subgroups, based on both size and adjacency to a metropolitan, as follows:

- Non-metropolitan counties with an urban population of more than 2,500 that are located in an area adjacent to a metropolitan area are referred to as 'metro adjacent.'

2 General Accounting Office (GAO). Medicare Home Health Agencies: Closures Continue, with Little Evidence Beneficiary Access is Impaired. GAO Pub. No. HEHS-99-120, Washington, DC; May 1999.

3 Medicare Payment Advisory Commission (MedPAC). Report to the Congress: Medicare Payment Policy, March 2004.

4 The number of agencies included in this analysis constitutes approximately 81 percent of agencies that are estimated to be in operation.

5 Agencies are certified every three years. As such, 1997 data may reflect availability between 1995 and 1997 whereas 2003 data may reflect availability of services between 2000 and 2003

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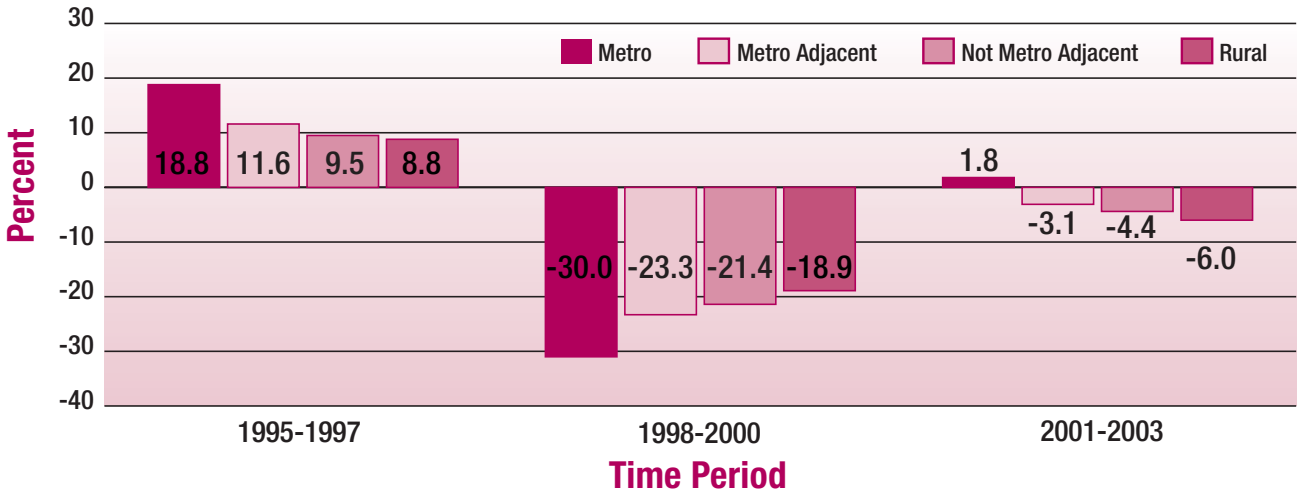
Figure 1. Changes in Supply of Home Health Agencies



- Non-metropolitan counties with an urban population of more than 2,500 that are located in an area that is not adjacent to a metropolitan area are referred to as 'non-metro adjacent.'
- Counties in which no place has a population larger than 2,500, whether located adjacent to a metropolitan area or not, were considered to be "rural" counties.

Trends in Home Health Agencies

As shown in Figure 1, between 1995 and 1997, when home health agencies received cost-based reimbursement, agency supply increased in metro and non-metro counties. Rates of increase were highest in metro areas (18.8 percent) and lowest for rural areas (8.8 percent). Between the time that the IPS was in place and the PPS was implemented, 1998 through 2000, large declines in agency supply occurred, 31.0 percent of metro agencies, 23.3 percent of metro adjacent agencies, 21.4 percent of non-metro adjacent agencies, and 18.9 percent of rural agencies closed. The period following implementation of the PPS was characterized by only modest (between 3 and 6 percent) declines in the supply of non-metropolitan agencies. A slight increase in supply (1.8 percent) was noted in metropolitan areas.

Table 1 presents data on the proportion of agencies that offered therapeutic and medical social work services in the period prior to and following the enactment of the PPS (1997 and 2003). These data indicate that while non-metro agencies, and particularly rural agencies, were less likely than metro agencies to offer physical therapy services in 1997, by 2003 the gap between metro and non-metro agencies had narrowed. Despite this trend, nearly 7 percent of rural agencies did not offer physical therapy services in 2003.

Most of the growth in service provision was noted in the area of occupational therapy. Between 1997 and 2003, the proportion of metro-adjacent agencies that made OT services available increased by 13.4 percentage points (72.5 percent v. 85.9 percent) and the proportion of non-metro-adjacent agencies that offered OT services increased by 15.8 percentage

Table 1: Trends in Availability of Physical Therapy, Occupational Therapy, Speech Therapy and Medical Social Work – Agencies (%) Providing these Services in 1997 and 2003, N = 5,685

			Non-metro					
	Metro		Metro Adjacent		Not Metro Adjacent		Rural	
	1997	2003	1997	2003	1997	2003	1997	2003
Physical Therapy	95.4	97.5	94.1	96.4	89.4	96.5	82.5	93.1
Occupational Therapy	89.9	94.1	72.5	85.9	65.9	81.7	41.1	68.3
Speech Therapy	89.5	91.6	81.2	82.3	75.1	80.7	53.9	64.3
Medical Social Work	90.4	90.0	72.6	73.0	67.0	65.7	43.6	40.4

points (65.9 percent v. 81.7 percent). Most dramatically, a 27.2 percentage point increase (41.1 percent v. 68.3 percent) in the proportion of rural agencies that provided OT services was noted. Despite the considerable increase in the number of agencies that offered this service, nearly one-third of rural agencies did not provide OT services in 2003.

More modest increases in the proportion of non-metro agencies providing speech therapy were observed. The largest increase occurred among agencies in rural counties, where the proportion that offered ST increased from 54 percent to 64 percent. Unlike the other services that we examined, agencies were generally as likely, or slightly less likely, to offer social work services in 2003 than in 1997. Non-metro agencies were less likely than their metro counterparts to provide medical social work. Whereas 90 percent of metro agencies offered social work services, only 73 percent of metro-adjacent, 66 percent of non-metro-adjacent, and 40 percent of rural agencies provided this service in 2003.

We examined the odds that agencies located in Health Professional Shortage Areas (HPSA) and those that are not located in a HPSA would offer PT, OT, speech and social work services. Controlling for geographic region and agency characteristics (presence of branch offices, ownership, profit status, facility-based status), the odds that the home health services listed above were offered were between 1.4 and 2 times higher (depending upon which service is considered) for agencies that were not located in a HPSA than for those in a HPSA. Interestingly, even after controlling for location in a HPSA and other agency characteristics, non-metropolitan agencies were significantly less likely to offer PT, OT, speech and social work services. The likelihood of offering any of these services was lowest for the most rural agencies.

As shown in Table 2, depending upon the degree of rurality, the odds that non-metro agencies offers physical therapy services, were between one-half to three-fourths that of metro agencies. The odds of non-metro agencies offering occupational therapy services were between one-fifth and one-half that of metro

agencies. Similarly, the odds of non-metro adjacent agencies providing speech therapy were between one-quarter and almost one-half of the odds for metro agencies. Finally, for metro-adjacent agencies, the odds of having medical social services available were slightly more than one-third that of metro agencies. For agencies that were non-metro adjacent and rural, the odds were about one-quarter and one-tenth, respectively, that of metro agencies.

Implications of Findings

Findings from this study suggest that changes in home health reimbursement were associated with dramatic reductions in the supply of home care agencies; however, these reductions appear to have occurred primarily during the time in which the IPS was in place. Although proportionately fewer rural agencies closed between 1998 and 2000, the closure of a rural agency may have a greater impact on access since many rural communities are experiencing critical shortages of providers. In the post-PPS period, agency supply became more stable but closure rates were higher among rural agencies. This finding suggests the need for continued monitoring of the financial impact of the home care payment system particularly as the rural add-on is set to expire in 2005.

Compared to 1997, a greater proportion of agencies in both metro and non-metro counties provided PT, OT and speech

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Table 2: Adjusted* Odds Ratio of Home Health Agencies Providing Physical Therapy, Occupational Therapy, Speech Therapy and Medical Social Work Services

(Odds Ratio = Odds for non-metro beneficiaries / Odds for metro beneficiaries)†

	Odds Ratio	95% Confidence Limit
Physical Therapy		
Metro Adjacent	0.72	0.48 – 1.09
Non-metro Adjacent	0.61	0.41 – 0.90
Rural	0.45	0.25 – 0.80
Occupational Therapy		
Metro Adjacent	0.46	0.36 – 0.58
Non-metro Adjacent	0.31	0.25 – 0.39
Rural	0.21	0.16 – 0.29
Speech Therapy		
Metro Adjacent	0.48	0.39 – 0.59
Non-metro Adjacent	0.39	0.32 – 0.48
Rural	0.24	0.18 – 0.33
Medical Social Work		
Metro Adjacent	0.36	0.30 – 0.44
Non-metro Adjacent	0.23	0.19 – 0.28
Rural	0.12	0.09 – 0.16

*Adjusted for geographic region, presence of branch offices, ownership, profit status, facility-based status, and location of agency in a Health Professions Shortage Area.
†Values less than 1.0 indicate that the odds that a non-metro agency provides the service is less than the odds for metro agencies.

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services in 2003. Yet, non-metropolitan agencies are still less likely to offer these services, suggesting that large disparities in access to home-based therapy and social services continues to exist. Many factors could explain why non-metro and, especially, rural agencies do not offer these services. Most obviously, rural shortages of therapists and social workers may be affecting agencies' ability to offer services. Differences in patient needs as well as differences in practice patterns, including the possibility that rural physicians are less apt to prescribe home-based therapy, that services are being provided in other settings (e.g., outpatient, skilled nursing facilities) or that services are being provided by non-skilled workers, may also account for these differences. It is necessary to gain an understanding of the factors that drive agency supply and service mix in order to understand how refinements to the payment system will affect home health access and quality.

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