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**The Effect of New Medicare Reimbursement Methodologies  
on Rural Home Health Agencies  
and Their Beneficiaries**

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# The Effect of New Medicare Reimbursement Methodologies on Rural Home Health Agencies and Their Beneficiaries

*A report by:*

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The Center for Rural Pennsylvania is a bipartisan, bicameral legislative agency that serves as a resource for rural policy within the Pennsylvania General Assembly. It was created in 1987 under Act 16, the Rural Revitalization Act, to promote and sustain the vitality of Pennsylvania's rural and small communities.

For more information about the research or a copy of the full report, contact the Center for Rural Pennsylvania at 200 North Third St., Suite 600, Harrisburg, PA 17101, telephone (717) 787-9555, fax (717) 772-3587, or visit our website at [www.ruralpa.org](http://www.ruralpa.org).

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## Introduction

The Medicare home health provisions of the Balanced Budget Act of 1997 set in motion two sequential payment methods. The first, the Interim Payment System (IPS), operating from 1998 to 2000, was implemented to immediately control spending under the then existing cost-based system, a system that paid agencies based on what it cost the agency to provide each visit within standardized limits. The second, the Prospective Payment System (PPS) was a mandate to the U.S. Secretary of Health and Human Services to set into place a case-mix system that would permanently build efficiency incentives into the home health

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payment structure and pay agencies on a prospective rather than a cost reimbursement method. A case-mix system adjusts payment rates for persons with different levels of expected service needs. Home health payments under PPS are based on expected service levels associated with different categories of patients over a standard period of service referred to as a “60-day episode.” Under the cost-based system, the critical unit of service was the visit, but under PPS, the critical unit of service is the episode. Under the cost-based system, the elements that drove program expenditures were the costs for each type of visit and the number of visits delivered. Under PPS, program expenditures are driven by the payment level associated with the 60-day episode and the ultimate number of episodes delivered. Under the previous cost-based system, service provision was based on whatever was determined to be clinically necessary with no agency incentives to be particularly efficient. Under PPS, there are predetermined expectations of how much care is required based on the results of a standardized assessment, and the responsibility of delivering the care in an efficient manner rests with the agency’s ability to manage the care as efficiently as possible. Under the cost-based system, reimbursement was based on agency costs; under PPS, payments are based on a national standard rate.

Under PPS, agencies receive a fixed payment for a 60-day episode of care for each patient. The payment level for a specific patient is based on the expected level of service associated with a combination of characteristics presented by the patient obtained through the use of the Outcome and Assessment Information Set (OASIS) assessment. The predetermined amount is expected to cover all costs of services furnished during the episode including routine and non-routine medical supplies and therapeutic services provided under an established plan of care. PPS went into effect on October 1, 2000. Since that time, evaluations of its impact have not been widespread.

This study, conducted by researchers from the Pennsylvania Office of Rural Health and the Edward and Esther Polisher Research Institute is one of the first to investigate the impacts of PPS on home health agencies and their beneficiaries.

In general, the purpose of the research was to explore the current state of Medicare certified home health agencies and changes in the manner and composition of the populations that they serve. More specifically, there were several distinct goals to this inquiry. First, the researchers assessed the effect of changes in Medicare reimbursement methodologies on the functioning and viability of rural home health agencies within the commonwealth. Second, the researchers assessed the effect of these reimbursement changes on the range of services and populations that these home health agencies serve. Finally, the researchers documented the level and geographic variation in Medicare home health services across the commonwealth, directing special attention to areas in which service levels are relatively low.

The research employed numerous data sources to trace the impacts of both IPS and PPS on rural home health agencies in Pennsylvania. These sources include individual cost claims and Medicare cost

reports, a survey of Medicare-funded rural Pennsylvania home health providers and interviews with home health experts.

### Defining Rural

For the research, counties in which 50 percent or more of their residents were classified as non-urbanized by the 1990 Census were considered rural. Fifty of Pennsylvania's 67 counties were classified as rural under this scheme; the remaining 17 were considered urban. This definition is the most liberal of the commonly used definitions of rural since it classifies more counties as rural than do alternative definitions. Because of this, some of the urban/rural contrasts reported here may be somewhat attenuated from what would be found using alternative definitions. This is a consequence of including counties with a slightly greater urban character in the pool of rural counties than would be included with the use of other definitions. For more information on the research methodology, turn to the Appendix.

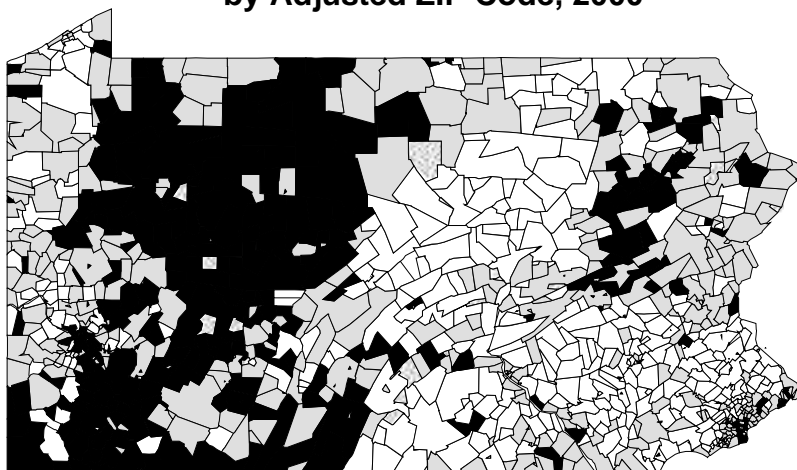
## Residual Effects of the Interim Payment System

Although PPS replaced IPS starting in October 2000, the lingering effects of IPS continue to haunt many rural Pennsylvania home health agencies. The IPS resulted in substantial and rapid declines in Medicare revenues and benefit utilization for home health agencies throughout the nation as well as within rural Pennsylvania. Nationally, under IPS, between 1997 and 1999, Medicare home health revenues dropped 43 percent, visits plunged 55 percent, and the number of beneficiaries served declined 24 percent, according to the Health Care Financing Review 1999 Statistical Supplement. Meanwhile in Pennsylvania, Medicare home health revenues dropped 45 percent, average payments per patient visits declined by 31 percent, and beneficiaries served declined 21 percent. These dramatic declines have affected rural Pennsylvania beneficiaries as well. For rural Pennsylvania agencies, between 1997 and 1999, Medicare home health revenues dropped 54 percent, from approximately \$182 million to \$83

million; the total number of visits declined by nearly 39 percent, from 1.4 million to 882,804; and the number of beneficiaries served dropped only 17 percent, from 65,632 to 54,599 patients. Average Medicare payment per beneficiary fell 45 percent, from \$2,775 to \$1,524.

Map 1 shows the concentration of Medicare home health users in Pennsylvania in 2000

**MAP 1: Change in Home Health Use by Adjusted ZIP Code, 2000**



Home Health Users Per 100 Medicare Beneficiaries

- Low (0.0 to 6.6)
- Medium (6.7 to 9.0)
- High (More than 9.0)
- Data Not Available



based upon home health claims data for adjusted ZIP Codes. The areas in black are areas in which use is highest; the white areas are those with the lowest use and the gray areas are those with moderate use. More specifically, the white areas indicate use between zero and 6.6 users for every 100 persons aged 65 or older; the gray areas indicate use between 6.7 and 9.0 users per 100, and the black areas indicate use between 9.1 and 25 users per 100.

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There are equal numbers of adjusted ZIP Codes in each color group. The speckled areas represent areas in which data was not available.

Inspection of the map reveals an area of high use in the western region of the commonwealth extending from Greene County northward to McKean and Potter Counties in the Northern Tier. Much of this area is rural in character, although the area includes a good portion of the Pittsburgh metropolitan area. An additional area of high use exists in the Wilkes-Barre/Scranton area.

A rather large area of low use can be found extending from the southeast and south central regions of the state northward to Bradford and Susquehanna Counties in the Northern Tier. This low use stream bypasses Philadelphia County, but includes much of the metropolitan area.

User rates in ZIP Codes exhibit some association with social and economic characteristics of the ZIP Code. Most significantly, areas with the highest poverty tend to have a greater percentage of home health users (correlation = 0.35, sig.<.05). Likewise, ZIP Codes with high percentages of elderly with mobility limitations tend to have higher user rates (correlation = 0.23, sig.<.05), and ZIP Codes with higher percentages of people 65 or older have higher user rates (correlation = 0.21, sig.<.05). Other characteristics (percent elderly in poverty, agricultural base, percent rural, and percent of population 85 or older) exhibit small or non-significant association with user rates. In general, the level of home health utilization, as indicated by user rate, shows rather

strong regional geographic patterns and, to a lesser degree, patterns related to the social and economic character of the local area. Rural areas of the commonwealth include large regions of both high and low utilization, with areas of moderate utilization interspersed across the state.

Figure 1 on page 7 ranks the rural counties by their level of Medicare home health use. Consistent with Map 1, the greatest concentrations of users per 100 beneficiaries are located in rural counties in the western and west central regions of the commonwealth. The lower use rural counties are predominantly in the southeast and south central regions.

The change in use resulting from the implementation of IPS reflects a general decline in use as shown in Maps 2 and 3 on page 8.

In general, most areas have experienced a decline in home health utilization during the period from 1998 to 2000. As seen in Map 2, only a few areas experienced an increase in use and, similarly, only a few areas experienced user rates that were stable over that time period. Use has decreased in 88 percent of ZIP Codes across the commonwealth. On average in 1998, for every 100 persons aged 65 or older in a ZIP Code, about 10.6 persons received Medicare home health services. By 2000, this rate had decreased to 8.2. Furthermore, ZIP Codes are becoming more similar in their user rates over time; that is, there has been a decrease in the variance in use levels across ZIP Codes.

Map 3 is based on the same data as Map 2. However, in this map, shading is based on *relative change* in user rates. That is, the commonwealth is partitioned into three equally sized groups of ZIP Codes: those with the greatest decrease (-20.0 to -2.9) in user rates (black); those with moderate decreases (-2.8 to -1.4) in user rates (gray); and those with the smallest decrease or an increase (-1.3 to 10.5) in user rates (white). Again, the speckled areas represent areas in which data was not available.

**FIGURE 1: Ranking of Rural Counties by Level of Medicare Home Health Use, 2000**

Highest (Greater Than 9 per 100)		Mid Range (Between 7 and 9 per 100)		Lowest (Less Than 7 per 100)	
County	Users Per 100 Beneficiaries	County	Users Per 100 Beneficiaries	County	Users Per 100 Beneficiaries
Elk	14.04	Schuylkill	8.8	Northumberland	6.65
Clearfield	13.35	Warren	8.78	York	6.49
Jefferson	13.23	Somerset	8.51	Mifflin	6.28
Cameron	12.33	Butler	8.49	Snyder	6.28
Indiana	11.96	Bedford	8.46	Juniata	6.24
Venango	11.65	Potter	8.37	Bradford	6.22
Fayette	11.3	Huntingdon	8.19	Columbia	5.94
Clarion	11.06	Tioga	8.02	Adams	5.88
Forest	10.79	Lawrence	7.73	Centre	5.77
Fulton	10.74	Monroe	7.7	Union	5.69
McKean	9.89	Wayne	7.68	Lancaster	5.69
Greene	9.86	Crawford	7.68	Lebanon	5.31
Armstrong	9.78	Pike	7.6	Cumberland	5.23
Cambria	9.44	Mercer	7.55	Clinton	5.01
Carbon	9.29	Wyoming	7.53	Sullivan	4.94
		Perry	7.45	Franklin	4.58
		Susquehanna	7.33	Lycoming	4.53
				Montour	3.45

**MAP 2: Change in Home Health Users Per 100 Medicare Beneficiaries by Adjusted ZIP Code, 1998-2000**



■ Decrease    ■ Relatively Stable    □ Increase    ▨ Data Not Available

**MAP 3: Change in Home Health User Rate by Adjusted ZIP Code, 1998-2000**



Change In Users Per 100 Medicare Beneficiaries

■ High Decrease    ■ Middle Decrease    □ Lowest Decrease/Increase    ▨ Data Not Available

A comparison of Maps 1 and 3 reveals a rather striking observation: areas with the highest use rates are areas that also have experienced the greatest decrease in these rates and areas with the lowest use are areas that have experienced the least amount of decrease. This pattern suggests that service use patterns are becoming more uniform over time. This tendency is consistent with the intended goals of IPS and PPS.

According to a 2002 research project by the Polisher Research Institute entitled “Impact of a Further Payment Reduction in the Medicare Home Health Benefit,” much of the decline resulted directly from the imposition of reduced reimbursement under IPS, which reduced payments to below 1993 levels. Indirectly, the declines affected rural Pennsylvania beneficiaries because access to Medicare home health was curtailed as a result of reduced availability of providers. The effects of IPS have also left many agencies operating under financially challenging circumstances.

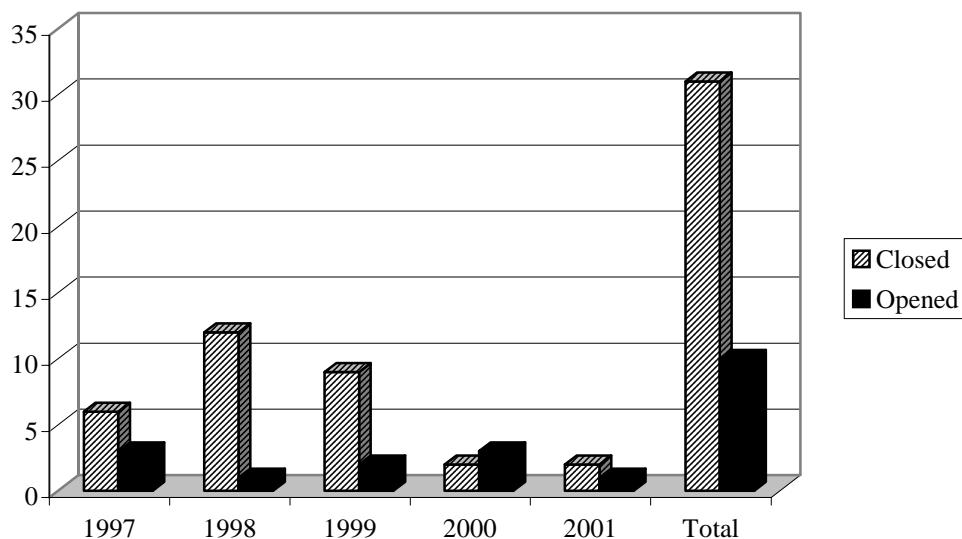
### **Reduction in Available Providers**

Nationally, between 1998 and 2001, nearly 4,000 home health agencies withdrew from participating in the Medicare home health program, a reduction of 36 percent, according to the research “Impact of a Further Payment Reduction in the Medicare Home Health Benefit.” Because Pennsylvania home health agencies were generally operating more efficiently<sup>1</sup> than providers in most states prior to the imposition of IPS, fewer agencies in Pennsylvania withdrew from the program or closed. In contrast to the national figures, only about 3 percent of the home health agencies in the commonwealth withdrew from the Medicare program between 1997 and 1999.<sup>2</sup> Although few rural home health agencies have outright closed their doors to Medicare beneficiaries, access to home health has changed as a result of closures of branch agencies. Prior to implementation of IPS, about 45 percent of the rural Medicare home health agencies in Pennsylvania had branch offices. By 2001, less than 29 percent of the

<sup>1</sup> Franco, S. and Leon, J. (2000) “Rural Home Health Agencies: The Impact of the Balanced Budget Act of 1997,” Policy Analysis Brief, 3:2 April.

<sup>2</sup> Leon, J., Smith, BM, Davitt, JK, and Marainen, J (2002) “Impact of a Further Payment Reduction in the Medicare Home Health Benefit,” Polisher Research Institute, Abramson Center: Horsham PA

**FIGURE 2: Branch Office Openings and Closings  
1997 - 2001**





agencies continued to maintain such branch offices. Over the five-year period, from 1997 to 2001, 31 branch offices closed while only 10 offices opened. During the IPS period, 1997 to 1999, 23 percent of the rural agencies reported closing at least one branch office while during the PPS period, 2000 to 2001, only 6 percent of the agencies reported branch closures. As shown in Figure 2 on page 9, most of the branch closures occurred in 1998 and 1999.

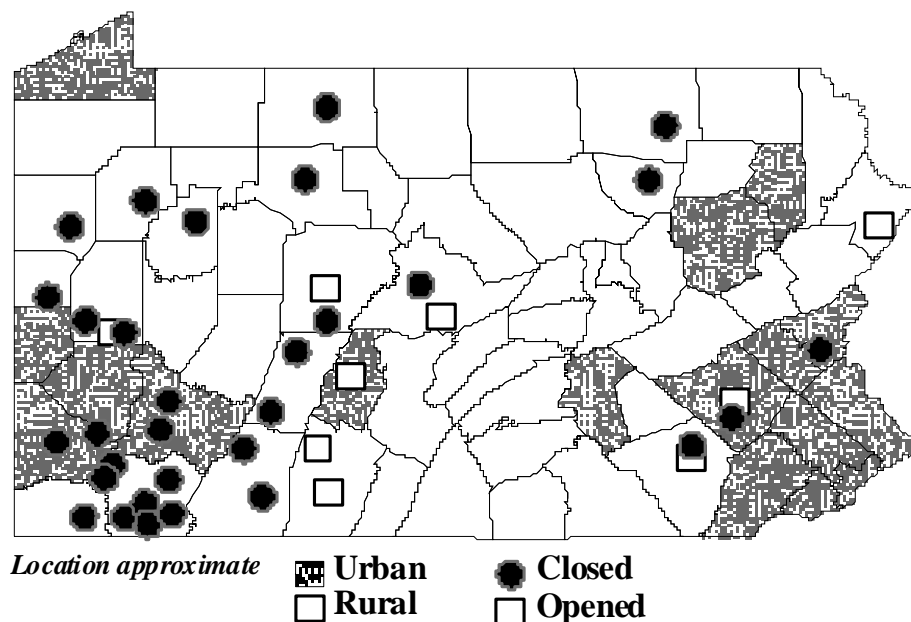
During the IPS period, branch office closures exceeded branch office openings by almost five to one. This pattern begins to reverse under PPS, indicating that agencies might be expecting that the implementation of PPS could have a more positive effect on agency finances.

Map 4 is a representation of the location of rural home health agency branch office openings and closings during the period 1997 through 2001.<sup>3</sup> The new branch offices are few and scattered through the commonwealth, while the closures are more numerous and disproportionately located in the western half of Pennsylvania. The areas, as previously mentioned, are areas with higher than average utilization rates and higher than average decreases in those rates during the last few years of the 1990s.

### **Financial Vulnerability of Agencies**

Many rural Pennsylvania Medicare home health agencies are financially vulnerable. Again, much of this vulnerability is a lingering effect of IPS. The IPS

**MAP 4. Rural Home Health Agency Branch Office Openings and Closings  
1997-2001**



<sup>3</sup> These data are based upon survey responses. They only include branch office changes in the 83 percent of agencies responding to the survey.

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home health reductions were so deep and occurred so quickly that many agencies were not aware of the full impact the cuts would have on their reimbursements, particularly since most agencies did not even know their reimbursement limits until months after care was delivered. However, payment uncertainties arising from the current PPS system also contribute to the perceived instability by rural providers.

Nationally, nearly 60 percent of the nation's home health agencies exceeded the payment limits established under IPS.<sup>4</sup> This meant that reimbursement levels under IPS were dramatically lower than the costs of delivering services. Until agencies adjusted to the new payment realities, many incurred repayment debt to Medicare. Thus not only were agencies receiving less for the services being delivered, many were forced to rescind payments back to the Medicare program or simply forego future payments to cover the existing overpayments.

Results from this study indicate that, in 2001, 40 percent of the current Medicare home health agencies in rural Pennsylvania could be considered financially vulnerable and 24 percent expressed concern that the fiscal uncertainties arising out of PPS threaten the continued operation of their agencies.

Agencies identified as financially vulnerable are not geographically clustered, rather they are dispersed throughout the commonwealth. For an agency to be identified as financially vulnerable, it must report either that it has concerns about its financial viability or that it experienced a 50 percent decrease in reimbursements from 1996 through 1999. A high threshold of 50 percent was chosen to exclude trivial changes in reimbursement.

## PPS Reimbursement and Access

According to the survey of administrators, 59 percent of rural home health agencies indicated that

PPS reimbursement levels make it more difficult to adequately service certain patient groups. The patient groups identified as most difficult to serve under the new system include persons requiring wound care, patients without family caregivers living in the same household, patients suffering with congestive heart failure, and those with a complex set of conditions that require high levels of care. These are the same patient groups that were most adversely affected under the cutbacks imposed by IPS. While agencies did not indicate that they would not continue to serve such patients, they did indicate that under PPS, such patients pose severe strains on their agencies. Surprisingly, the reported difficulty in serving these patients was not related to size of the agency nor its status as financially vulnerable. Certainly, this would not be an issue under a cost-based system, since costs for all care the agency deems necessary is reimbursed. Adjusting the PPS system for cost-outlier patients would attenuate the potential losses and uncertainty associated with the current system.

The patient most frequently identified as most difficult to serve are those requiring wound care. Nearly 58 percent of the agencies anticipating difficulties reported concerns over caring for wound care patients. In explaining their concerns, most agency administrators targeted the costs for medical supplies and frequency of required visits. As previously mentioned, the episode payment is calculated to cover all costs associated with a given patient incurred during a 60-day episode. Referred to as "consolidated billing," the payment includes the expected costs for all services as well as routine and non-routine medical supplies. Because of the concerns over the ability to control the costs for medical supplies, 68 percent of the rural Pennsylvania agencies reported having tightened their procedures regarding the handling of medical supplies. There is a

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<sup>4</sup> Leon, J., Smith, BM, Davitt, JK, and Marainen, J (2002) "Impact of a Further Payment Reduction in the Medicare Home Health Benefit," Polisher Research Institute, Abramson Center:Horsham PA.



very strong and significant relationship between an agency's reported implementation of tighter control over medical supply procedures and reported difficulties in adequately serving patients under PPS reimbursement levels.

Eighty percent of the agencies reporting difficulties in serving certain patient groups under PPS reimbursement have also initiated stricter controls over medical supplies. Such changes include changes in the purchasing and acquisition of supplies, storage, and distribution to staff. Although it is impossible to discern from the present data, it is likely that the imposition of greater control over the access to and use of medical supplies falls hardest on wound care patients since dressings and bandages are a vital aspect of wound care. While few agencies reported changing their admission criteria, the added costs of providing care to wound care patients raises concerns over whether patients requiring heavy wound care are finding access to care more difficult.

visit lengths have increased because they are trying to accomplish more with each visit. However, PPS is designed to create incentives to move towards efficiency, so a decrease in the number of visits per patient and a decrease in length of service could be expected.

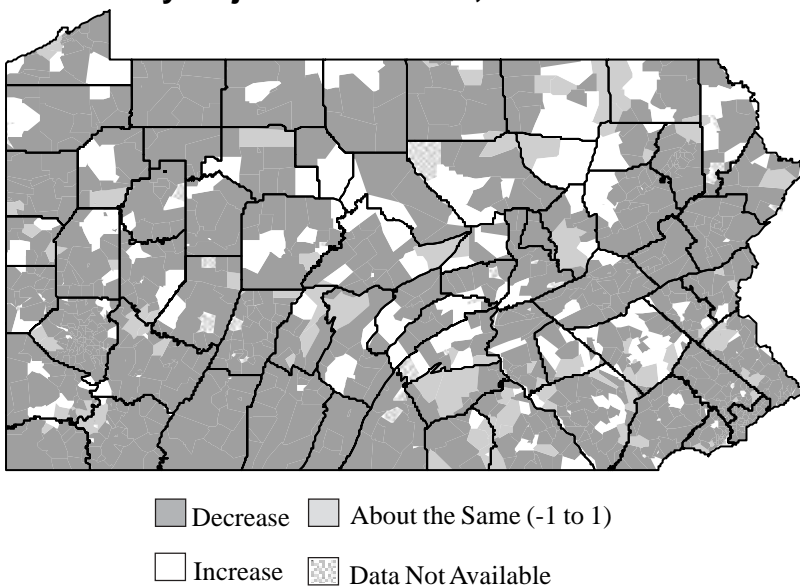
In general, decreases such as these could be problematic for patients requiring more intensive levels of care. Thirty-eight percent of the administrators explained that the decreases in visits per beneficiary resulted from increased use of case management and clinical pathways, while another 35 percent explained the decreases as a result of greater efficiencies in their operations. In their words, "they make every visit count" and have reduced the number of unnecessary visits. Administrators cite greater efforts at efficiency as the reason for decreasing the length of time of service. The present data cannot evaluate whether the decreases are simply the results of the imposition of better management and more judicious use of resources or the

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### ***Decreased Number of Visits and Length of Time of Service***

Other reported changes under PPS that could raise concerns over access and adequacy of care are a reported decrease in the number of visits per patient and a decrease in the length of service for patients. Fifty-four percent of the rural home health agencies reported decreases in visits per beneficiary and 49 percent reported decreases in the length of service. Equally important, 64 percent of those providers reporting a decrease in the number of visits also reported decreases in time of service and 49 percent reported that average

**Map 5: Change in Home Health Visits Per User by Adjusted ZIP Code, 1998–2000**



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result of inappropriate tighter controls on use of personnel. The research revealed, however, that the decreased number of visits per beneficiary is significantly associated with increased use of telephone contacts with patients, supporting the idea that decreased visits are an expression of increased efficiency and not simply an effort to restrict care. However, concerns over decreased visits per beneficiary does raise red flags that require further study.

Geographically, nearly all areas have experienced a decrease in the number of visits per user (patient). Map 5 on page 12 indicates that, except for a few isolated regions, every area has shown a decrease in the number of visits per patient between 1998 and 2000.

The areas that have experienced the greatest decreases in visits per user are scattered throughout the commonwealth, but they include much of the southwest part of the state—the same area experiencing a substantial decrease in user rates over the same period.

### ***Fewer Beneficiaries Receiving Care***

A more problematic finding is that while 49 percent of the administrators reported no change in the number of beneficiaries receiving home health services, 36 percent reported reductions. While a decrease in the amount of service delivered to each patient could be an expected result of the efficiency incentives behind a PPS payment system, a large reduction in the number of beneficiaries runs contrary to expectations. The number of Medicare enrollees is increasing and the age structure among these beneficiaries is continually edging upward, and with this comes an associated increase in illnesses and functional and cognitive impairments. These factors could add beneficiaries to the home health service system.

The decrease in the number of beneficiaries using home health services extends the downward trend imposed under IPS. Among the providers reporting a decrease, 56 percent reported lower referrals and many attribute the decline in referrals directly to the

reluctance on the part of physicians to refer. In explaining the decreases in referrals from physicians, administrators indicated that some physicians are fearful of the potential financial and possibly criminal liabilities arising out of a pattern of inappropriate referrals. Since the passage of the Balanced Budget Act of 1997, there has been a determined anti-fraud effort to ensure that only eligible beneficiaries receive care, and regulations have been enacted that place the liability for inappropriate referral on the shoulders of the physician. However, the basic eligibility criteria for Medicare home health services have remained consistent since the dramatic changes introduced in 1980. The drop off of referrals from physicians has prompted a response from the providers, and nearly 20 percent of providers have initiated specific marketing programs directed towards educating physicians about how PPS works.

### ***Staffing Problems***

Another disturbing trend initiated under IPS that appears to be continuing under PPS is a reduction in agency staff. Although it could be expected that agencies with decreased patient numbers would reduce staff, findings from the survey indicate that under PPS, a significant percentage of agencies not experiencing patient reductions are still reducing agency staff. Overall, 55 percent of all agencies indicated staff reductions. Although agencies with reduced patient censuses are more likely to report staff reductions (84 percent), a significant percentage (38) of other agencies also reported staff reductions. Staff reductions could be another sign of attempts at increased efficiency, but they could also indicate reduced capacities in providing adequate levels of services.

Implementation of PPS has altered other staff related issues and problems. Over 51 percent of the agencies reported that as a result of PPS, certain staff are now performing activities that they previously did not perform. Examples include the use of



therapeutic staff for conducting mandated Outcome and Assessment Information Set (OASIS) assessments and the use of nurses to perform tasks previously conducted by aides. Independent of staff reductions or the use of staff to perform unaccustomed tasks, 84 percent of the agencies reported that as a result of PPS, staff experienced increased job-related stress. Also as a result of PPS, 53 percent of agencies reported increased staff turnover and 59 percent reported increased use of overtime.

Not surprisingly, increased stress appears to contribute to increased staff turnover and is associated with increased staff overtime.

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### ***PPS Effects on Mix of Services and Patients and Informal Caregiver Burden***

Agencies indicated that as a direct consequence of PPS, they are delivering a different mix of home health services and placing increased importance on rehabilitative therapies and less emphasis on home health aide services. Reports from the agency survey indicate that 51 percent of the agencies have increased the amount of therapy services (physical, occupational, and speech) while nearly 60 percent reported reduced levels of aide services. The increases in therapy services and the decrease in aide services are independent of one another; even among agencies reporting reduced staffing levels, 37 percent reported increases in therapy services.

In addition to reporting a shift toward more therapeutic services, agencies are also reporting that as a result of PPS, greater caregiving demands are falling on informal caregivers such as family members, friends, and neighbors and that agencies are providing substantially more education regarding self-care to both patients and their informal caregivers. Over 82 percent of the agencies reported increased demands on informal caregivers and 78 percent reported greater self-care education. This greater emphasis on self-care, combined with a greater role for informal caregivers, heightens concern over whether older and frailer beneficiaries without informal caregivers are

receiving adequate levels of care. As a result of PPS, more financial burdens are being placed on patients and families because of an increased use of private-duty services. Forty-nine percent of the agencies reported increases in patient use of private-pay nursing and aide services. Such a trend raises concerns about access to adequate care for lower income patients and families.

### ***Discharge Procedures Under PPS and Patient Care After Discharge***

Following the implementation of PPS, 31 percent of the rural Pennsylvania home health agencies changed their discharge procedures. Among those that altered their procedures, the most frequently identified changes included more careful final assessments and more in-depth documentation. Only one-quarter of the agencies indicated a change in the actual discharge destination, but for those identifying a change, 71 percent indicated that patients were more frequently being discharged to either nursing homes or personal care/assisted living facilities. About one third of the agencies indicating a change reported an increase in discharging patients back to the hospital.

Importantly, 68 percent of the agency administrators indicated that as a direct result of the implementation of PPS, they are more frequently assisting patients in applying for continuing services under state supported Area Agencies on Aging (AAA) and Medicaid home and community-based waiver programs. There is also a clear and direct relationship between agencies reporting such increased efforts to mobilize community resources on behalf of their patients and the agencies' change in staffing. Agencies that have experienced staff reductions and agencies that have curtailed their use of home health aide services are the agencies that more frequently report helping patients access other state supported aging network services.

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### ***Preparedness to Cope with the New Complexities and Uncertainties Under PPS***

Beyond the problem of financial vulnerability and patient care issues, home health agencies are attempting to cope with new operational complexities imposed by the PPS. The payment system mechanics of PPS are complex and contain many uncertainties. The level of preparedness of the agencies to cope with these changes may either facilitate or impede their adaptation to the new system and their ability to respond to additional changes.

Overall management capacities are critical under PPS. Although many large corporate and non-profit agencies have been anticipating the transition to PPS and the additional skill set requirements, many of the smaller agencies are not as well prepared. Partly as a result of the residual effects of IPS and partly as a matter of history and momentum, small rural agencies have had limited financial and technical resources to prepare for PPS and now face enormous administrative challenges. These challenges have included changes in the way agencies market their services, organize their labor force and their medical supply procedures, use admission criteria, manage the care provided to patients, and discharge patients. These problems result from diseconomies of scale for smaller agencies that inhibit developing the administrative overhead to accommodate the management functions required to operate under PPS. For example, more than 38 percent indicated that they are having difficulties complying with the demands imposed by the new OASIS assessments, stating that the added administrative requirement of conducting the assessments and completing the paperwork interfere with the provision of direct care. Thus, while the intention behind PPS is to create a payment system that rewards efficiencies, small providers are expressing concern regarding their ability to make the transition from the long-standing cost-based reimbursement system.

## **Summary of Key Findings**

The analyses presented here indicate that, although service reductions resulting from IPS were uniformly severe across the commonwealth, rural counties experienced somewhat greater cuts than urban counties. However, the analysis on home health service areas in rural counties supports a general conclusion that Medicare home health services are available across rural Pennsylvania counties. Branch closures of agencies did occur during the IPS period and might have curtailed service availability in some counties to a limited degree. However, in the rural counties where service reductions resulting from reduced IPS revenues led to branch closures, the effects of the closures might have been somewhat mitigated by agencies using contract personnel in more distant areas, thus continuing to make services potentially available.

The combined effects of IPS and PPS have resulted in a considerable number of agencies that appear to be financially vulnerable. If a significant number of these agencies closed, it would appear that rural portions of the commonwealth could experience a sizable access problem. At this time, most rural areas of the commonwealth are being served by more than one home health provider. The residual effects of IPS appear to continue to haunt many Medicare home health providers in rural Pennsylvania. The dramatic reductions in Medicare revenues have weakened some providers to the point that many continue to report being financially vulnerable and concerned about their continued survival. On the other hand, if these agencies respond to the financial incentive now existing under PPS, most agencies could be expected to survive. However, rather than major geographic inequities in terms of access, the analysis has raised concerns over access to care for particular segments of the Medicare beneficiary population across the commonwealth. Specifically, the groups of principal concern are those who are more chronically ill with complex medical status. Evidence from previous studies shows that access to



care for high cost patients and patients with high intensity service needs are the most likely groups to be threatened. These are beneficiaries who began to experience access problems as a result of IPS. There is no evidence that these segments of the home health population are any less vulnerable under PPS.

The introduction of PPS has had a pronounced effect on the industry. Agencies weakened under IPS have found the transition more difficult. A majority of rural Pennsylvania agencies report difficulties in their abilities to service high cost, high intensity patients.

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In accordance with the financial incentives under the PPS system, agencies report trying to make their operations more efficient. They report making fewer but longer visits and relying much more on telephone contact as a means for monitoring patient status and as a vehicle for replacing the final discharge visits. While the use of telephone services is more cost efficient, its effect on the quality of patient care needs to be determined. Other reported efficiency efforts are the greater use of case-management and clinical pathways.

Agencies also reported that as a result of the greater administrative tasks imposed under PPS, they have reduced the time and energy spent on patient care. In the words of one administrator, “For us, the biggest impact is the need for additional clerical and finance staff in order to handle the more complicated billing.” Of particular concern is the added administrative burden imposed in completing the requirements mandated under the OASIS assessment system.

Although not totally the result of either IPS or PPS, agency staffing issues are another major concern. Agencies reduced staff during IPS as a cost-cutting effort. But because of widespread worker shortages, agencies, even when they are financially able to do so, are finding it difficult to fill vacant positions. More troubling and more directly related to concerns about

access to care is that, under PPS, agencies continue to reduce their staff, and this appears to be directly affecting their service provision patterns. Agencies appear to be responding to the PPS incentives that reward rehabilitation services while cutting back on their supportive services. A majority of agencies reported cutting home health aide services. This means that a substantial segment of the traditional beneficiary population who receive home health care under Medicare are less likely to be receiving such services. As a corollary concern, agencies report that greater burdens are now being placed on family and informal caregivers to care for such patients. Some traditional Medicare home health beneficiaries without these support networks are being diverted to private pay workers or to enrollment in state-supported aging network services. Such trends imply that patients without family or informal caregivers or without the financial wherewithal for privately purchasing such services may more frequently turn to state-supported programs, and in their absence, more costly state-supported residential service programs such as nursing homes and personnel care homes.

Although the new reimbursement procedures could reduce expenditures under Medicare, they could be shifting the expenditures onto private resources and programs supported under commonwealth expenditures.

As agencies emerge from the dramatic reimbursement declines imposed under IPS, they also appear to be responding to the financial incentives created under PPS. This change implies a move to more efficient operations and an increased emphasis on serving Medicare beneficiaries requiring less intensive, short-term, post-hospital care and those requiring rehabilitation services. The implications of these changes lead to a renewed concern about access to care for the more chronically ill, multi-impaired beneficiary.

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## Conclusions

Results from this study indicate that the cumulative effect of IPS and PPS on home health agencies and their beneficiaries has been significant. Seven major conclusions have emerged from the research:

1. There are fewer home health agencies serving the commonwealth and they operate fewer branch offices than prior to the implementation of the new reimbursement methodologies.

2. There are fewer users of Medicare home health services than before the implementation of the new reimbursement methodologies. This pattern is true for most of the commonwealth.

3. There is variance in the rate of use of Medicare home health services across the commonwealth. Rural areas include areas of both high and low use. High use areas are disproportionately represented in the western half of the commonwealth and low use areas in the eastern half.

4. Medicare home health agencies are operating under more financially challenging circumstances than before the implementation of the new reimbursement methodologies. Their total revenues are significantly lower and they must manage more financial risk in treating certain high cost patients.

5. Medicare agencies are under more administratively challenging conditions than before the implementation of the new reimbursement methodologies. These include implementation of the OASIS assessment procedures, managing financial risk, and managing fewer visits per patient to accommodate the episode-based payments of PPS.

6. Certain high cost patients may find it more difficult to obtain traditional Medicare home health services than before the implementation of the new reimbursement methodologies, and other patients more frequently may have to realize that their Medicare home health provider will be spending less time on care.

7. Because of more restricted use and service levels for traditional Medicare home health than before the implementation of the new reimbursement

methodologies, users are being referred to other publicly supported services in the commonwealth.

## ***Recommendations for State Government***

The research indicates that the manner in which home health service is being delivered by Medicare certified agencies has changed significantly since the implementation of the new reimbursement methodologies. However, the details associated with patient service levels and variance within these levels, especially for high cost patients, has yet to be documented. It is recommended that commonwealth agencies with an interest in home health, such as the Departments of Health, Public Welfare, and Aging, fully document the level and variance in service provision. The archives from the OASIS assessment system are available and offer a vehicle for this evaluation. More specifically, the following should be documented: 1) Who is getting home health services and are any groups being excluded from these services? 2) Are patients with similar health status profiles being provided different services depending on payment source, particularly private pay patients versus Medicare or Medicaid? and 3) Does service level vary geographically?

The regional variation in rates for Medicare home health use is quite striking. The reasons for such differentials are puzzling. Commonwealth agencies with a vested interest in home health services should make certain that regional access inequalities do not exist in the commonwealth.

The administrative burden of OASIS and PPS are quite demanding for small rural agencies. Technical assistance to deal with the demands of the new requirements, increased use of electronics for assessment and records, and new marketing strategies are needed. A well-developed support mechanism is available to larger agencies and for-profit chains. These supports are not as readily available to small, rural agencies. The commonwealth should consider offering technical assistance to these agencies directly or through their associations.



The interaction of home health and the Commonwealth Medical Assistance Program is becoming increasingly more complex. The Department of Aging's Waiver Program is attempting to divert costly Public Welfare nursing home services into home and community-based services such as home health. Additional resources may be needed as traditional Medicare beneficiaries may also find their way into the Medical Assistance system. In a health care environment characterized by strong incentives to curb both private and public expenditures, it is important to have a strong viable sector of low-cost providers, such as home health. This is especially true in rural areas where scale economies may delay the emergence of new providers as demand increases. Utilization of home health by the Department of Public Welfare can only serve to strengthen small rural home health agencies by offering new patients and a different payer source.

Given the potential for substitution of Medical Assistance or Area Agency on Aging services from Medicare home health care services, the commonwealth may also consider increasing support for rural Area Agencies on Aging to assist those patients who are unable to get adequate (or any) home health care services through Medicare.

Any decrease in federal payments for home health will, at least in part, increase the financial responsibility of the commonwealth.

When the research was being conducted, rural home health agencies were receiving a 10 percent add-on to their reimbursements for Medicare. The add-on was scheduled to be discontinued.

The researchers suggest that to avoid further taxing commonwealth resources, state legislators approach the Pennsylvania Congressional delegation and ask that it seek a continuance of the add-on. *(Note: In May 2002, the Pennsylvania General Assembly passed House Resolution 576, which urged Congress to extend the 10 percent rural add-on. Congress provided for a continuance of the add-on until spring 2003.)*

### **Recommendations for Rural Home Health Agencies**

The increased administrative burden of OASIS and PPS was one of the most often reported challenges facing rural home health agencies. Best practice models need to be developed for use by these agencies. It is important for lead agencies, provider organizations, or perhaps the commonwealth, to develop such models.

Staff stress and "burnout" due to shifting staff responsibilities was also a key finding in the survey of rural home health agencies. Agencies need to manage this situation via the use of preemptive staff training for new duties and stress management techniques.

In addition to public efforts designed to facilitate technical assistance to address the increased administrative burden under PPS, home health associations should develop technical assistance programs to meet this end.

### **Recommendations for Communities**

Local community health partnerships should increase the importance of home health in their networks. The availability of community resources through local health partnerships will enable home health agencies to better cope with staffing problems, training issues, and coordination with other providers. This is especially important for local health partnerships in which a non-hospital-based home health agency exists.

Evidence has suggested that referrals from physicians have decreased due to confusion over the liability associated with an inappropriate referral. The role of a community health partnership in educating local physicians in the role of home health in the continuum of care and the appropriateness of referrals would be beneficial to both home health providers and the local population.

Home health use and service levels vary considerably across the commonwealth. Local health partnerships need to be cognizant of whether their area is one of low use and assess whether efforts should be conducted to increase user levels or service levels.

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## Appendix: Methods

The purpose of this research was to explore the current state of Medicare certified home health agencies and changes in the manner and composition of the populations that they serve. More specifically, there were several distinct goals to this inquiry. First, the researchers assessed the affect of changes in Medicare reimbursement methodologies on the functioning and viability of rural home health agencies within the commonwealth. Second, the researchers assessed the effect of these reimbursement changes on the range of services and populations that these home health agencies serve. Finally, the researchers documented the level and geographic variation in Medicare home health services across the commonwealth, directing special attention to areas in which service levels are relatively low.

The goals of this research were such that use of a single source of data or a single methodological approach could not adequately result in fulfilling all of the goals. Consequently, the researchers employed several data sources and a multi-method approach.

Five major data sources were obtained or collected and integrated to achieve the research results, including:

1. A survey of administrators in all rural home health agencies in Pennsylvania;
2. Medicare agency cost reports for fiscal years 1996 and 1999;
3. Individual claims data for fiscal years 1998 and 2000;
4. 1990 and 2000 Decennial Census data and compatible geographic information system (GIS) files; and
5. Interview data with home health experts (key informants).

### Survey

A sampling frame was developed from a list of all home health agencies receiving reimbursement for Medicare services. The list was obtained from financial reports provided by the Health Care Financing Administration (HCFA)<sup>5</sup>, the agency charged with reimbursing health care providers for Medicare services. This original list was reviewed and edited to account for new agencies and agencies that no longer provide such service. Eighty-three Medicare certified agencies were identified in rural counties in Pennsylvania. A notice of the researchers' intent to conduct a phone interview with the agency administrator and an informed consent document was mailed to each of the 83 agencies. Each agency was then contacted by telephone to either schedule an interview time or, if it was convenient for the administrator, conduct the interview. Since, in some cases the disposition of the call did not result in an interview, a scheduled interview, or a refusal, several calls were necessary. These were cases that resulted in a no answer, an answering machine, or a message delivered to a non-administrative employee. Agencies received up to five calls attempting to schedule an interview. After this first set of procedures was completed, the agencies that did not have a terminal disposition were mailed the letter of intent once again and contacted by phone no more than three times. The average number of contacts for all agencies was 3.25. Telephone interviews were conducted with 69 of the original 83 agencies that had been identified as Medicare certified rural home health agencies, resulting in a response rate of 83.0 percent.

Each interview was conducted by one of the project staff using a structured interview protocol. The protocol consisted of three sections: a short

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<sup>5</sup>Since the inception of this study, the federal government has changed the name of HCFA to the Centers for Medicare and Medicaid Services (CMS).

section about the structure of the agency; a section on agency administration; and a section concerning patient care and clinical procedures. Questions in the latter two sections focused primarily on changes resulting from the new Medicare reimbursement methodologies. Data from the survey were primarily used to identify procedural and service changes due to new reimbursement methodologies and to obtain an agency self-assessment of the financial viability of the organization.

### **Medicare Cost Reports**

Medicare agency cost reports were obtained from HCFA for fiscal years 1996 and 1999.<sup>6</sup> Among the data in these reports are tallies of the total number of beneficiaries served, total home health visits, and reimbursement totals for each Medicare certified home health agency in Pennsylvania, both urban and rural. These data were used to estimate changes in finances and delivered services during the period in which the new reimbursement methodologies were instituted.

### **Medicare Claims Data**

In addition to agency cost reports, Medicare claims data for fiscal years 1998 and 2000 were also obtained from HCFA. The claims data files contain one record for each claim made by an agency on behalf of a Medicare beneficiary with a Pennsylvania address. Each record includes the ZIP Code of the beneficiary, an identifier for the agency making the claim, and a unique beneficiary identifier. These three data items permitted the research team to enumerate the following for each ZIP Code: the total number of beneficiaries within the ZIP Code receiving Medicare home health services; the number of beneficiaries served by each agency in that ZIP Code; and the number of agencies serving non-trivial numbers of beneficiaries in that ZIP Code. In addition, for each

rural agency, the number of ZIP Codes in which they provide service was tallied.

Some ZIP Codes are quite small. Concomitantly, many have aged populations fewer than 50. In these ZIP Codes, the indicators of utilization and service described above can be quite erratic and unpredictable. Consequently, smaller ZIP codes were combined with adjacent ZIP Codes to form a new set of regions that have been designated as “adjusted ZIP Codes.” The claims data analyses in the report are presented for adjusted ZIP Codes. The adjusted ZIP Code regions are illustrated in Map 6 on page 21.

Calculating a ratio of the number of beneficiaries served in a ZIP Code to a Census enumeration of the number of persons aged 65 or older for that region resulted in an estimate of the home health service level for that ZIP Code. In addition, the count of the number of agencies serving a ZIP Code was considered an alternative indicator of home health service. Once these two estimates were made, GIS procedures were used to map service levels in rural areas of the commonwealth. Inspection of these maps permitted the identification of geographic regions with relatively low, average, or high home service levels.

These data also permitted the research team to identify market areas for each of the 83 rural home health agencies. An agency’s market area consists of ZIP Codes for which it provides non-trivial amounts of home health service.

### **Census Data**

Decennial Census data files for 1990 and 2000 for municipalities, ZIP Codes, and counties were obtained. Only 100 percent (full count) Census data items for the 2000 Census were available at the time of the research. Full count Census population data include age by sex and race. These data were used in counts of total population and population aged 65 or older. All other census data (social and economic

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<sup>6</sup>Historical data describing additional years was also obtained but could not be used because they were incomplete.

characteristics) used were extracted from the 1990 files, the latest available. These data were used as denominators in service level ratios and in mapping areas of potential demand. Electronic geographic representations of the various geographies (municipality, ZIP Code, and county) were matched to the census data to permit mapping of service levels and descriptions of potential demand.

### **Key Informant Interviews**

Unstructured interviews were conducted with a variety of experts in the home health and home health policy fields. Officials from home health professional associations, agency administrators, commonwealth officials, and U.S. Department of Health and Human Service officials were interviewed. Included in the interviews were the following individuals: Vice President of Government Affairs, Geneva Health Services; Director, American Association of Home Health; Director of Public Policy, American Associa-

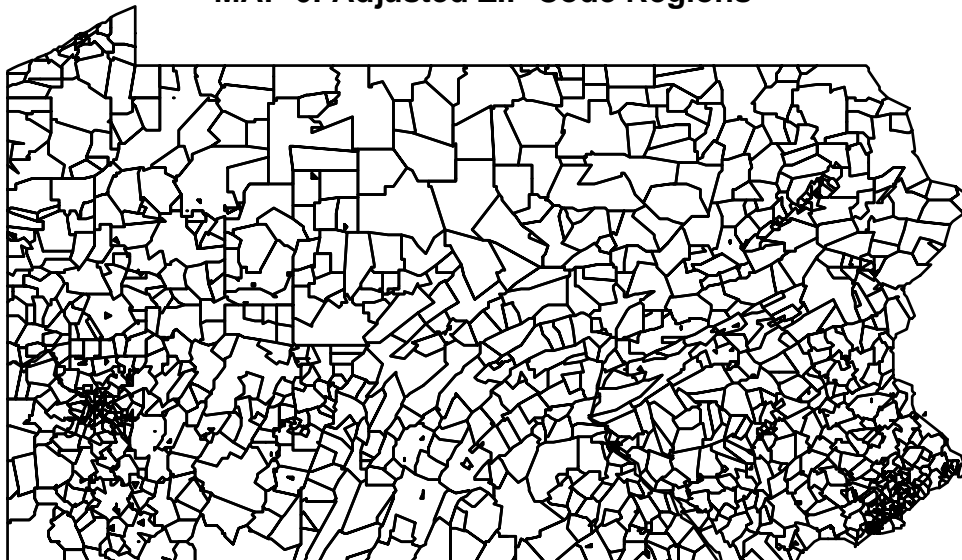
tion of Home Care; President, Independent Home Health Association of Pennsylvania; President, Hospital-Based Home Health Association of Pennsylvania; Policy Analyst for the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services; and Policy Analyst, Pennsylvania Department of Public Welfare. Results of these interviews were used in the development of survey protocols, framing questions for analyses, and drafting policy recommendations.

### **GIS Methods**

GIS methodologies were a key component in the analyses of these data. Every home health agency in the commonwealth, including non-Medicare certified agencies, were geocoded and made available for geographic analyses. Geocoding is a process by which an address is matched to a master database to assign exact coordinates (latitude and longitude) to that address. This information was

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**MAP 6: Adjusted ZIP Code Regions**



used in calculating geographic proximities of home health agencies—more specifically, the road distance in miles between each agency and the next closest agency was calculated. GIS methodology also was the vehicle by which “thematic maps” were constructed. These are maps that allow identification of geographic variability in home health service levels. Finally, GIS methodologies, in conjunction with Census data, were instrumental in assessing characteristics of the population surrounding specific home health agencies.

### ***Master Data File***

Much of the data discussed above were integrated into a single “master data file.” Through the use of a unique identifier for home health agencies, data from a variety of sources were combined into a single data set consisting of one record for each Medicare certified home health agency in the commonwealth. The master data file includes the following:

1. Survey responses;
2. Medicare agency cost report data for fiscal years 1996 and 1999;
3. Proximity data to other home health agencies;
4. Characteristics of the population in areas surrounding the home health agency; and
5. Market area data derived from the claims file.

The research analysis is largely based on these data. Such a structure facilitated the construction of index scores that have components from more than one data source. Two of the key indicators used in this report are indices such as this, the index of financial vulnerability and the index of service level change. The data structure also facilitated cross-classifications of variables from different original sources.

### ***Defining Rural***

This research used a definition of rural that considers all counties as rural in which 50 percent or more of its residents were classified as non-urbanized by the 1990 Census. Fifty of Pennsylvania’s 67 counties were classified as rural under this scheme; the remaining 17 were considered urban.

This definition is the most liberal of the commonly used definitions of rural; that is, it classifies more counties as rural than do alternative definitions. Because of this, some of the urban/rural contrasts reported here may be somewhat attenuated from what would be found using alternative definitions. This is a consequence of including counties with a slightly greater urban character in the pool of rural counties than would be included with the use of other definitions. This definition was chosen to permit the analyses to capture as much variance as possible in the range of “ruralness” that may be important conditions in the delivery of home health services.



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