Economic Impact Analysis
Virginia Department of Planning and Budget

12 VAC 30-120 – Department of Medical Assistance Services
Home and Community Based Waiver Services for Elderly and Disabled Individuals
July 12, 2002

The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with Section 9-6.14:7.1.G of the Administrative Process Act and Executive Order Number 25 (98). Section 9-6.14:7.1.G requires that such economic impact analyses include, but need not be limited to, the projected number of businesses or other entities to whom the regulation would apply, the identity of any localities and types of businesses or other entities particularly affected, the projected number of persons and employment positions to be affected, the projected costs to affected businesses or entities to implement or comply with the regulation, and the impact on the use and value of private property. The analysis presented below represents DPB's best estimate of these economic impacts.

Summary of the Proposed Regulation

The Board of Medical Assistance Services (the board) proposes to make its emergency Elderly and Disabled (E&D) Waiver regulations permanent. The proposed changes will continue to make optional Personal Emergency Response System (PERS) services available to eligible recipients in lieu of supervision services provided under personal care. The proposed changes will also require the department to perform annual desk reviews to assess waiver recipients' ongoing need for Medicaid funded long-term care. Another proposed amendment will decrease the minimum frequency of supervisory visits conducted by a registered nurse supervisor for recipients without a cognitive impairment from every 30 days to every 90 days with the consent of the recipient. Finally, family members of the recipient other than the parents of minor children receiving services, the recipient's spouse, or the legal guardian will be allowed to provide care for the recipient under the waiver program. All other changes are clarifications of the current requirements.

Estimated Economic Impact

These regulations apply to Medicaid's E&D waiver program. The program is established under section 1915(c) of the federal Social Security Act, which encourages the states to provide home and community based services as alternatives to institutionalized care. The states have some flexibility in the program and may waive federal rules such as statewide coverage, comparability of services, and income and resource requirements. Hence, the program is referred to as a waiver program. The purpose of the waiver program is to prevent or delay placement of persons in a nursing home by providing care for individuals in their homes and communities consequently avoiding high long-term care costs. (LeBlanc et al., 2000) Medicaid agencies in all states wishing to implement such waiver programs are required to demonstrate that the costs would be lower under a waiver than they would be without it.

Virginia's E&D waiver program provides personal care, adult day health care, and respite care services. Personal care covers services of aides who provide assistance with activities of daily living such as bathing, dressing, transferring, and cooking and who provide supervision. Adult day health care includes similar personal care services and socialization, nursing, rehabilitation, and transportation services provided by a group of professionals and aides in a congregate setting during the day. Respite care services focus on the need of the unpaid caregiver, who is usually related to the recipient, for temporary, but periodic breaks. Respite care covers reimbursements for aides and licensed practical nurses (LPN) providing personal care services when the caregiver is away. A synopsis of 2001 program activity is provided in the table below.

Some of the proposed requirements are already enforced in practice under emergency regulations effective since February 2002. With this action, the board proposes to make the emergency regulations permanent. One of the changes already implemented is making available PERS services to eligible recipients who wish to use such a system in lieu of supervision services provided under personal care. For eligibility, the recipient must be at least 14 years old, must live alone or be alone for significant parts of the day, must have no regular caregiver for extended periods, and must otherwise require extensive supervision.

Table: E&D Waiver Program Summary Statistics

	Personal Care	Adult Day Health Care	Respite Care	Total
Expenditures	$84,039,347	$2,562,469	$1,395,997	$87,997,813
Number of Recipients	9,316	473	893	10,682
Cost Per Recipient	$9,021	$5,418	$1,563	$8,238
Number of Providers	261	55	212	528
Revenue Per Provider	$321,990	$46,590	$6,585	$166,663

Source: The Statistical Record of the Virginia Medicaid Program and Other Indigent Health Care Programs, State Fiscal Year 2001, Department of Medical Assistance Services.

PERS is an electronic device that monitors recipient safety in the home and provides 24-hour access to assistance in medical or environmental emergencies, e.g., home emergency problems, household accidents, and assault. Access is provided through a phone line and may include medication-monitoring devices as well. A PERS comprises a radio transmitter carried or worn by the user, a console connected to the phone line, and an emergency response center that monitors calls.[1] The user can seek help by activating the transmitter by breath, by touch, or by some other means. Generally, once the transmitter is activated, the console dials a designated emergency telephone number. The emergency center responds to the call and determines the nature of the emergency and dispatches appropriate help from an emergency response organization such as police/fire departments or from an emergency responder such as a 911 dispatcher. If the emergency center determines it is a non-emergency situation, the center contacts a designated neighbor or person on the recipient's contact list.

The research literature indicates that being found incapacitated and unable to get help is common. Gurley et al. (1996) reports that frequency of being found helpless or dead was 3 per 1,000 per year for 60-64 age group and 27 per 1,000 per year for 85 and older. The mortality rate among these cases was 28%, of which 23% were found dead and 5% died in a hospital. Of

[1] Source: Personal Emergency Response Systems, Facts for Consumers, Federal Trade Commission, Bureau of Consumer and Business Education, March 2001.

those who were found alive, 62% were admitted to a hospital on average for eight days and of those admitted, 52% required intensive care. About 62% of the survivors were not able to return to independent living. The mortality rate was 67% among those who were helpless for more than 72 hours, while the deaths were 12% among those who were helpless for more than 1 hour.

Sherwood and Morris (1980) report that the average emergency rate for frail populations was approximately ½ per user per year, or one each week for every 100 users. Of the emergencies, 73% were health related and 27% were environmental. According to Lifeline Central Survey (1988), the most frequent types of incidents were falls, not feeling well, difficulty in breathing, and chest pain. In support of these findings, Dibner (1992) reports that most users are elderly women who live alone, who are 70 to 80 years old, who have cardiac or musculoskeletal problems, and who are subject to falls.

A number of studies analyze the effects of PERS services. These studies compare the outcomes with a PERS unit to outcomes without the system. [2] The comparisons are made between subjects who have 24-hour access to a PERS unit and those who do not have any access to a PERS unit. This should be noted because the population affected by the proposed changes are recipients of the E&D waiver program and may already be receiving personal care and supervision from Medicaid, and thus the research findings mentioned are likely to overestimate the effects on waiver recipients. The department does not have data to determine the average number of hours the recipients are with an aide providing personal care or supervision. Consequently, it cannot be estimated how much the effects may be overstated. In short, since current recipients may already be with an aide for some time of the day, the effects on waiver recipients are likely to be lower than the effects on the research subjects analyzed in the literature. Thus, the effects identified in the literature must be discounted by an unknown factor.

The studies summarized in Montgomery (1992) identify the effects of the system under three categories. These include the effects on the user, effects on the caregiver, and effects on the health care system. The optional feature of PERS services is likely to benefit users. Since PERS is an optional service, recipients are expected to choose it if they perceive it would benefit

[2] More specifically, they employ either repeated measures methods by which the effects on the same subject are compared before and after using the system or cross sectional methods by which the effects are compared between two groups one with the system and another without the system.

them. They also have the option to cancel the service if they are dissatisfied. Recipients are likely to consider a myriad of factors before making a decision on whether to use the system. First, 24-hour availability of a PERS unit may be attractive to some recipients as 24-hour aide supervision is not provided under the program. Also, recipients are likely to consider the potential attributes of a PERS unit, which may include an enhanced sense of privacy, independence, self-reliance, security, peace of mind, and being less of a burden on others. It is reported that the system users felt more comfortable about living alone and more confident about continuing to live independently compared to non-users. (Sherwood and Morris, 1980) Also, according to one survey, 42% of the responses identified quick help if needed as the number one benefit, 24% identified security, and 13% identified peace of mind as the most important benefit. (Patel, 1989)

On the other hand, there is some chance for recipients to require inpatient services and some chance of experiencing difficulty returning to independent living following an emergency because of potential response delays under the PERS services. There is no data to assess the size of these potential costs. Additionally, the chances of being found helpless or dead, the quality and the speed of the assistance provided under a PERS system as opposed to the assistance provided by a supervising aide may be different and are likely to be taken into account. For example, the response time under the supervision of an aide may be shorter because the response time in cases where a PERS unit is utilized would generally include the user decision delay that takes place between the onset of emergency and the call for help, the dispatch delay that includes determining the most appropriate assistance needed and dispatching the appropriate mobile unit such as fire or emergency squad to the scene, travel time of the mobile unit to the scene, and the time required for transport and treatment. The use of PERS units may have direct effects on the time spent incapacitated as a result of waiting for treatment. This can affect the incidence of survival, the incidence of survivors requiring inpatient hospital services, and the chance of returning to independent living.

In short, the optional PERS services are likely to be adopted if the recipients perceive the units would benefit them. If the additional risks and benefits are taken into account appropriately, the recipient’s decision to use a PERS unit should indicate that the benefits to him are greater than the risks. However, there is no available data on recipient morbidity and

mortality measures in Virginia to make a conclusive statement regarding the net economic effect of the proposed change on the system users.

The effects on the caregiver have also been studied because the system has the potential to reduce caregiver responsibilities. (Montgomery, 1992) According to a survey, 20% of employees of the Travelers Insurance Corporation over age 30 spent an average of 10.2 hours per week caring for an elderly parent and 8% spent 35 hours or more per week also caring for an elderly parent. (AARP, 1987) These employees reported being less focused on their work, being distracted and less productive, spending excessive amounts of time on the phone checking on the family member, and missing work to provide care. One survey also indicates that utilization of this system may relieve the anxiety the family caregivers experience when they cannot physically be with their family members. (Montgomery, 1992) Thus, the system has the potential to benefit caregivers.

Moreover, PERS services are likely to have economic effects on the department and the health care system. The costs of the PERS system include one-time installation charges, monthly rental fees, and wages paid for nursing services to refill the medication-monitoring unit if it is included with PERS. Current reimbursement rates for PERS services are provided in the table below. PERS unit costs differ between Northern Virginia and the rest of the Commonwealth. Installation charges are one-time costs and include the removal of the unit as well. Installation charges are higher if a medication-monitoring unit is required along with the PERS unit. For example, the installation charge is $50 outside of northern Virginia while it is $75 if a medication-monitoring unit is also provided. Monthly monitoring charges are the same for all PERS units with or without the medication-monitoring unit, which is $30 per month outside of northern Virginia. A registered nurse (RN) or an LPN must refill medication-monitoring units periodically. Refilling the unit is estimated to take about half an hour of a nurse's time, which costs $12.25 for an RN and $10.25 for an LPN outside of northern Virginia.

The total cost of providing PERS services depends on the number of eligible recipients who choose to utilize PERS services in lieu of the supervision services already available, the number of recipients who use the medication monitoring services, as well as the average length of service per recipient. According to the data available from February to June 2002, about 10 recipients have elected to use the system. The current number of users may greatly

Table: Summary of PERS unit Costs

	PERS Unit		PERS with Medication Monitoring Unit		
	Installation	Monitoring	Installation	RN	LPN
N. Virginia	$59.00	$35.40/month	$88.50	$15.00/.5 hour	$13.00/.5 hour
Rest of State	$50.00	$30.00/month	$75.00	$12.25/.5 hour	$10.25/.5 hour

underestimate the long run potential of this system if many recipients do not know about the option to request a PERS unit. The data from other states with similar services offered under the waiver program may be more appropriate to provide an estimate. The department does not have any information on which other states provide PERS services in their waiver program. Also, the number of medication-monitoring units provided with these systems is not known. Finally, the turnover rate is likely to affect the total costs through one-time installation charges. The current turnover rate for the system is not known either. However, Dibner (1990) finds that the average length of system use is 10.5 months with most users terminating due to death or institutional placement, and Schantz (1992) finds that the average length of service per subscriber is approximately 12 months.

The main benefit of the PERS for the health care system and the department is the decreased need for supervision. It is reported in a study that on average the system reduced the personal care hours by 91.2 hours per client per month. (New York City Human Resources Administration, 1988) In Virginia, a PERS unit is estimated to reduce the need for home attendant services such as aide supervision by about 60 hours per client per month on average. The department reimburses $11.25 per hour for personal care provided by aides. On a monthly basis, it costs $30 to provide a PERS unit to the recipient and it costs about $675 for 60 hours of aide supervision. Thus, a PERS unit, without medication monitoring and without taking into account installation costs, represents cost savings of approximately $645 per recipient per month. The total reduction in aide supervision required and consequently the cost savings to the department depends on the number of recipients who utilize the PERS option.

Other benefits to the health care system include fewer days spent in long-term care settings, decreased hospital admissions, decreased lengths of stays in hospitals, and decreased emergency room visits. (Montgomery, 1992, Roush et al., 1995) It is reported that system users used 10 times less long-term care than non-users. (Ruchlin and Morris, 1981) Another survey

conducted by Dibner and Stafford (1984) found that 75% of PERS users spent less time in acute care hospitals and 16% reported a delay in long-term care placement. The survey participants reported that in 87% of cases the length of hospital stay was reduced by one to seven days. Similarly, Koch (1984) reports that the system lowered the hospital admissions and reduced the length of hospital stays by 26%. Moreover, a 26.4% decrease in hospital admissions, a 23.2% decrease in length of stay, and a 6.5% decrease in emergency room visits are reported in Dibner (1985). Further, Cain (1987) reports a 48.4% reduction in hospital admissions, and a 69.3% reduction in days hospitalized. For Canadian subjects, Roush et al. (1995) reports that average hospital admissions decreased by 25% per person after using the system and inpatient days decreased by 59%. Finally, the system may provide early assistance in an emergency and prevent more complicated treatment and reduce the length of stay in addition to early discharge. Most of these benefits are also acknowledged in Benson (1992).

A few studies estimate the potential cost savings from a PERS unit. It is estimated that the system produced net savings of $7.19 in terms of total reduced long-term care costs for each dollar spent on the system among users who were severely functionally disabled and not socially isolated. (Sherwood and Morris, 1980) Similarly, Ruchlin and Morris (1981) found that every dollar spent on the system produced $1.87 in terms of costs averted.

These studies indicate that the availability of PERS services is likely to benefit the health care system. However, there is no available data to determine the size of the potential benefits to Virginia. Also, the size of the benefits mentioned in these studies should be discounted by some factor to take into account the fact that PERS substitutes for aide supervision currently provided as discussed above.

The proposed permanent changes will also require the department to perform annual desk reviews to assess the E&D waiver recipients' ongoing need for Medicaid funded long-term care in the community. Annual needs assessment for each recipient is required by the Centers for Medicare and Medicaid Services for the department to continue to receive federal funding for the waiver program. Annual desk reviews are proposed to meet this federal requirement.

The E&D waiver providers will fill out a two-page review form with relevant information for each waiver recipient in their caseloads and submit it to the department. As a result, every year, approximately 20,000 pages will be filled out by about 400 providers for about 10,000

recipients and will be transported to the department for review. The costs of this requirement include the value of paper, office equipment, and time that will be devoted by providers filling out the forms, the postal costs of transporting them to the department, and the time and other resources that will be devoted by the department to review the submitted forms. Providers' costs will vary based on the number of recipients they are caring for.

The department estimates that it will take about two to three full time employees with a per person average salary of $44,700 to conduct the reviews. Although there are no plans to hire additional employees, the department plans to appoint the necessary number of employees for this purpose. Thus, the costs to the department include about $89,400 to $134,100 for the staff time, the cost of employee benefits, and the value of other resources such as the office equipment and office space that may be devoted for this purpose. The main benefit of this requirement is to meet the federal requirement and thereby continue to receive federal funding for the E&D waiver program. The annual review may also improve the long-term needs determination of recipients and consequently improve the welfare of recipients by identifying appropriate services, or provide cost savings by avoiding the services that may not be appropriate. However, there is no data available to determine if any of these benefits will be realized.

Another proposed amendment will decrease the minimum frequency of supervisory visits conducted by a registered nurse supervisor for recipients who do not have cognitive impairments from every 30 days to every 90 days. The recipient has the option to request more frequent supervisory visits for any increment between every 30 to 90 days. The purpose of the supervisor's visit is to make sure that aides continue to provide proper personal care services to recipients. The hourly reimbursement rate for the aide services to a provider includes the RN supervisory visits. A supervisory visit may take from ½ hour to 1 hour depending on the capabilities of the recipient and whether or not an aide is present at the time of the visit. This change has the potential to provide some cost savings to providers in terms of reducing the hours RNs spend conducting supervisory visits. Further, an issue may be created in that providers may have incentives to provide less frequent visits to save registered nurse time. However, this problem may be mitigated to some degree as the registered nurse must inform the recipient about his option of requesting visits for any increment between every 30 to 90 days while meeting the obligation to document the conversation with the recipient on this issue and the option chosen. Moreover, there is a "safety net" so that if the department or the department's preauthorization

contractor believes that more frequent supervision is best for the recipient, the provider must provide more frequent supervision. The option to request visits more frequent than every 90 days is likely to help ensure that the value attached to supervisory visits by the recipient is taken into account. Recipients who value their privacy and independence more than the benefits of supervisory visits will likely to use this option and request fewer visits. For example, younger people may wish to receive fewer visits than elderly people. If the recipients are aware of advantages and disadvantages of less frequent visits, this option is likely to benefit them because it takes into account their preferences. Since this is a new provision, the total number of recipients who may receive less frequent visits than every 30 days is not known.

With another amendment, the recipients are allowed to receive personal care services from recipient's family members other than the parents of minor children receiving services, the recipients' spouse, or the legal guardian. Previously, other family members such as all children, siblings, grandparents, and grandchildren were not allowed to provide personal care services to the recipient. In these cases, it must be justified in writing why there are no other providers available to provide the care in order for the department to make payments to such family providers. Additionally, for family members to qualify for this reimbursement, they must meet all of the professional licensing standards that the department requires of non-family members who seek reimbursement. This change may increase the number of aides who can provide personal care services to a recipient. The recipients and the providers in rural areas where the chance of an aide being related to a recipient is particularly high may benefit from this flexibility. The department is aware of only anecdotal evidence in which there was difficulty in finding an unrelated aide. The quality of care provided by a family member is expected to be at least as good as that provided by a non-family member professional because both must have the same minimum professional qualifications.

Finally, all other changes are clarifications of the current language and are not expected to create significant economic effects other than reducing the potential for legal uncertainty and the potential communication costs to clarify the uncertainty. For example, it is clarified that all compensated employees of personal care, respite care, and adult day health care providers must comply with the Code of Virginia regarding criminal background checks. Similarly, it is clarified that personal care recipients may continue to work and attend post-secondary school while receiving services.

Businesses and Entities Affected

The proposed changes will make the PERS services available to 9,316 personal care recipients under the E&D waiver program. Approximately 10% of these recipients receive supervision services and may elect to use a PERS unit in lieu of aide supervision. Since March 2002, only 10 recipients have elected to use a PERS unit, but this figure likely greatly underestimates the long-run potential of the system. There are 261 providers of PERS services, which include certified home health or personal care agencies, durable medical equipment providers, hospitals, or PERS manufacturers.

Localities Particularly Affected

The proposed regulations apply to all localities throughout Virginia.

Projected Impact on Employment

The proposed use of PERS services in lieu of aide services is expected to reduce the demand for aides. As the department points out, reduced demand is likely to reduce the shortage of personal care aides. Also, if there are reductions in need for long-term care, inpatient services, and emergency room visits, there is likely to be a decrease in the demand for these services and employees in these areas. Likewise, fewer supervisory visits are expected to reduce provider demand for registered nurses and reduce the shortage of nurses. On the other hand, the proposed desk reviews will increase provider demand for labor to fill out the assessment forms. The department's need for additional staff is expected to increase by two to three positions, but there are no current plans to hire additional employees at this time.

Effects on the Use and Value of Private Property

The proposed changes have the potential to affect the value of firms providing services under the E&D waiver program. However, some changes are expected to increase costs and some other changes are expected to reduce costs, or revenues. Since the net effect on profitability is not known, no conclusive statements can be made about the potential impact on the value of provider firms. Additionally, if a PERS unit improves the security of the home the recipient lives in, there is likely to be a positive effect in terms of lower likelihood of personal property losses.

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