

# Policy, Politics, & Nursing Practice

<http://ppn.sagepub.com/>

---

## **Expanded Adult Day Program as a Transition Option From Hospital to Home**

Katherine R. Jones, Susan Tullai-McGuinness, Mary Dolansky, Amany Farag, Mary Jo Krivanek and Laura Matthews

*Policy Politics Nursing Practice* published online 12 May 2011

DOI: 10.1177/1527154411409052

The online version of this article can be found at:

<http://ppn.sagepub.com/content/early/2011/05/11/1527154411409052>

---

Published by:



<http://www.sagepublications.com>

**Additional services and information for *Policy, Politics, & Nursing Practice* can be found at:**


**Email Alerts:** <http://ppn.sagepub.com/cgi/alerts>

**Subscriptions:** <http://ppn.sagepub.com/subscriptions>

**Reprints:** <http://www.sagepub.com/journalsReprints.nav>

**Permissions:** <http://www.sagepub.com/journalsPermissions.nav>

# Expanded Adult Day Program as a Transition Option From Hospital to Home

Policy, Politics, & Nursing Practice  
XX(X) 1-9  
© The Author(s) 2011  
Reprints and permission: <http://www.sagepub.com/journalsPermissions.nav>  
DOI: 10.1177/1527154411409052  
<http://ppn.sagepub.com>  


Katherine R. Jones<sup>1</sup>, Susan Tullai-McGuinness<sup>1</sup>,  
Mary Dolansky<sup>1</sup>, Amany Farag<sup>2</sup>, Mary Jo Krivanek<sup>3</sup>,  
and Laura Matthews<sup>4</sup>

## Abstract

This article describes a pilot program for provision of postacute care (PAC) in an established adult day program. Demographic, clinical, utilization, and satisfaction data were abstracted retrospectively from program records; postdischarge readmission and emergency department visit data were obtained from the electronic health record. Comparative data were obtained from the health records of patients who were offered but declined the adult day program. Between 2005 and 2008, 78 patients requiring PAC were approached by the RN coordinator; 33 selected the adult day program, and 45 selected alternative destinations. The majority of patients had a neurological diagnosis, most commonly stroke. Participants and their family caregivers were highly satisfied with the program. The 30-day readmission rate for adult day program participants was significantly lower than that for nonparticipants. An expanded adult day program may represent a viable Transitional Care Model for selected patients and a feasible alternative to skilled nursing facility and home health care for PAC.

## Keywords

care transitions, postacute care, adult day programs, readmissions

## Expanded Adult Day Program as an Option for Postacute Care (PAC)

Nursing has long been concerned with care processes that impact quality of care as the patient, especially older patients, transition from one setting to another. Older patients with chronic conditions present the greatest challenges to providers. This population often requires continuing skilled nursing care and rehabilitation after discharge from the acute care and/or acute rehabilitation setting. These services are most often delivered by skilled nursing facilities (SNF), home health care agencies (HHA), or outpatient rehabilitation facilities, which are reimbursed through Medicare. The type of PAC that is selected is usually determined by the functional status of the patient, the availability of informal caregivers, and the availability of PAC services. For example, patients who have moderate levels of functional impairment and have an available caregiver may be referred for home health care; patients with moderate to severe functional limitations and/or without an available caregiver are more likely to be referred to the SNF. The goal of PAC is to improve the underlying debilitating condition through active care (Kane, 2011). More specifically, long-term care implies ongoing support designed to respond to deficits in functioning, while PAC has a much more active rehabilitative and recuperative goal (Kane, 2011).

This article describes a proposed, PAC alternative to SNFs, HHAs, and outpatient rehabilitation clinics that involves integrating skilled nursing care and rehabilitation therapy into an existing adult day program. Adult day services (ADS) are currently a key provider of long-term care services. However, 80% have professional nursing staff, and about 50% have an available social worker and provide physical, occupational, or speech therapy (Met Life National Study of Adult Day Services, 2010). Adult day centers also provide caregiver support including respite services, educational programs, and support groups. Currently, adult day services do not qualify for Medicare reimbursement. There are more than 4,600 adult day services centers in the United States (Met Life National Study of Adult Day Services, 2010). Most are single site, stand-alone, private, nonprofit entities with no affiliation with any parent facility or organization

<sup>1</sup>Frances Payne Bolton School of Nursing, Case Western Reserve University, Cleveland, OH, USA

<sup>2</sup>Alexandria University, Smouha, Alexandria, Egypt

<sup>3</sup>Southwest General Health Center, Middleburg Heights, OH, USA

<sup>4</sup>Parma Community General Hospital, Parma, OH, USA

## Corresponding Author:

Katherine R. Jones, Frances Payne Bolton School of Nursing, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, Ohio 44106-4904  
Email: [katherine.jones@case.edu](mailto:katherine.jones@case.edu)

(Met Life National Study of Adult Day Services, 2010). They are state certified or licensed to provide services. It is our belief that these adult day programs could serve an important role as a provider of transitional care and short-term rehabilitation following hospital discharge. Such an option might result in smoother care transitions and reduced readmissions to the hospital, be more cost-effective than SNFs or home health, and might be a preferred alternative for many older persons and their families.

## Background and Significance

Transitions of care from the hospital to the home or the nursing home are often associated with rapid readmission to the acute care setting. The Medicare 30-day readmission rate for beneficiaries discharged from the hospital to a skilled nursing facility is almost 25% (Mor, Intrator, Feng, & Grabowski, 2010). The Medicare 30-day all-cause readmission rate for patients discharged to home is estimated to be 18%-20% (Jencks, Williams, & Coleman, 2009). Research has shown that one quarter to one half of adverse events leading to readmission may be preventable (Forster et al., 2004). Transitional care is a term describing care provided to patients as they move from one care site or one care level to another. Some models of transitional care for older persons have shown reductions in readmissions, medication errors, and costs, as well as increased patient satisfaction (Coleman, 2003; Coleman & Berenson, 2004; Coleman & Boulton, 2003; Coleman et al., 2004; Coleman, Smith, Raha, & Min, 2005; Naylor, 2004; Naylor et al., 2004). Evidence is building on the value of planning for the patient's transition from the hospital to the postdischarge destination. Unplanned care transitions increase the likelihood of medical errors related to inadequate care coordination (Mor et al., 2010) and generate additional health care costs.

The problem of poor care transitions leading to early readmission to the hospital has received national attention and several care transitions interventions have been developed and evaluated. These include the Transitional Care Model (TCM; <http://www.transitionalcare.org>), the Care Transitions Program (<http://www.caretransitions.org>), and the Next Step in Care campaign (<http://www.nextstepincare.org>). The Transitional Care Model (Naylor) provides the patient with care delivered and coordinated by an advanced practice nurse (APN) in the hospital and home. The APN enrolls high-risk patients while they are still in the hospital, visits the patient in the hospital within 24 hr of admission and daily until discharge, and visits the patient at home within 24 hr of discharge followed by weekly visits for the first month. The Care Transitions Program (Coleman) is a 4-week program for patients with complex care needs that utilizes specific tools (for example, a medication reconciliation tool), a transitions coach, and self-management skill development. The Next Steps Initiative (United Fund of New York) provides

tools that address the concerns of both providers and family caregivers and focuses on the role of the family caregivers in the transitions process.

None of these care transitions programs focuses specifically on the newly discharged patient who requires ongoing rehabilitation therapies in addition to continued nursing management of other chronic conditions. Moreover, the Transitional Care Model and Care Transitions Program rely on one-to-one, episodic interactions with the patient and/or caregiver, while some patients might benefit from a more structured, continuous period of observation, monitoring and reinforcement before successful self-management is possible. Additionally, these transitional care programs require a caregiver in the home to assist with the coordination activities which is not always possible.

## Alternative Care Transitions Program

Patients requiring PAC that includes skilled nursing services and rehabilitation therapies have several options. Patients and/or their family members can select admission to a SNF as a short-stay resident or arrange for home health services which include skilled nursing care and therapy services. Both of these options have specific eligibility requirements that must be met to be covered by Medicare reimbursement. Alternatively, patients and/or family members might elect to be discharged home with outpatient therapy or self-management.

To facilitate the transition from hospital to home for high-risk patients with continuing skilled nursing *and* rehabilitation needs, an alternative to home health and skilled nursing facility care was developed by the Parma Community General Hospital in Parma, Ohio. The D.A.Y. (Designed Around You) Program integrates skilled nursing and rehabilitation services (physical, occupational, and speech therapy) into an existing adult day program affiliated with the hospital. This innovative program avoids admission to a SNF for many patients, as SNF is often viewed as the only option if a caregiver is not present in the home during the day. The adult day program allows discharge to home even if a caregiver is not present, by providing supervision and monitoring throughout the day. It also allows greater time to prepare the family caregivers for eventual caregiving responsibilities once the patient completes the rehabilitation program and is able to function independently in the home.

The D.A.Y. Program is a structured, graduated, 8-week program that provides on-site rehabilitation therapies, daily nursing assessments to identify changes in clinical and functional status, supervision or administration of medications as needed, plan of care meetings between the interdisciplinary team and family caregivers at mid-point and again at discharge, development of home exercise programs by the therapists, and coordinated home safety visits conducted by county officials. The program is integrated into an ongoing adult

day program for seniors that is affiliated with the discharging hospital but located at a different site. Thus, the necessary infrastructure was already in place. The participant attends the program 5 days a week for 5 weeks, 3 days a week for 2 weeks, and 1 or 2 days in the final week. The goals of the program are to prepare individuals for independent and safe functioning in the home and community, help families plan for any new care requirements, assess the home environment for safety and suggest modifications as needed, and identify and address clinical and functional issues as they occur in the early postdischarge period. Besides the daily nursing assessments, care planning, medication supervision, and on-site physical and occupational therapy, the participant benefits from the mental and social stimulation provided by the multiple activities that are offered as part of the ongoing adult day program, including the interactions with other seniors and staff members in the setting. Meals and snacks are provided, while additional services may include wound care, dietary counseling and supervision, pain management, oxygen therapy, and symptom monitoring.

Potential enrollees are identified during the acute phase of their hospital admission, and provided information about the program and other postdischarge options by the RN coordinator. The RN functions in consultation with the medical director and is responsible for the overall nursing policy and practice in the adult day center. She oversees the day program which functions within the adult day center. Her responsibilities include identifying appropriate patients, educating patients and family members about their options, communicating with the interdisciplinary team to ensure a seamless transition to the adult day program, acting as liaison with involved physicians (both referring and primary care), facilitating the plan of care sessions and tracking outcomes, and delegating to the program LPN within her scope of practice. The LPN has responsibility for the day-to-day operation of the adult day center, including medication supervision and management, performing ordered treatments, delegating duties to the nursing assistants in accordance with the plan of care, documenting routine patient care delivery, attending plan of care meetings, overseeing delivery of meals, helping coordinate transportation, assisting with billing, and coordinating therapy sessions, all under the direction of the RN coordinator. The daily nursing assessment, completed by the RN or LPN coordinator, includes the following components: Mental status; mood/behaviors; pupils/speech/neurological function; hearing/vision; ambulation; transfers; nutrition; pain; respiratory function; skin integrity; cardiovascular function; gastrointestinal function; genitourinary function; nursing and medical treatments; and restorative measures. The care plan and care plan modifications are developed by the interdisciplinary team based on these daily assessments and scheduled plan of care meetings.

## Method

### *Evaluation of Expanded Adult Day Program (D.A.Y. Program)*

The project was approved by the Parma Community General Hospital IRB and the Case IRB. Both a contract and data-use agreement were signed by the appropriate authorities. A data abstraction tool was designed, tested, and revised for abstracting information from the program written records. The records included nursing assessment forms, therapy goals, admitting and progress notes, plan of care meeting notes, and satisfaction surveys. The electronic health record was accessed for health care utilization data (service delivery dates, physical and occupational therapy sessions, speech therapy sessions, emergency department and hospital readmission dates and diagnoses). Three of the authors (KJ, STM, and AF) abstracted the records after initial testing and revision of the data abstraction instrument. One author (KJ) also rereviewed all patient records for completeness and accuracy of the abstracted forms. A fourth author (MJK) accessed the electronic health record for utilization data. An addendum to the human participants protocol was approved that allowed the team to access relevant program notes and utilization data for those individuals who were offered enrollment in the D.A.Y. Program but elected an alternative postdischarge option. Not all data elements were available for this patient group. Data were coded and entered into an SPSS database. The analysis consisted of descriptive statistics, independent *t* tests for continuous variables and chi-square analysis for categorical variables.

## Results

### *Demographic Characteristics*

During the years 2005-2008, 78 patients requiring PAC services were approached by the RN nurse coordinator who discussed their postdischarge care needs and options. In addition to the traditional SNF and home health options, they were offered the opportunity to participate in the adult day program. Of the 78 patients approached, 33 decided to enroll in the adult day program whereas 45 declined the program and chose instead SNF (16), HH (15), or home with outpatient therapy or self-care (14). Most of the patients in both the D.A.Y. and non-D.A.Y. groups (those with a diagnosis of stroke or CVA) received care in the acute rehabilitation unit prior to their discharge. As shown in Table 1, the typical D.A.Y. Program participant was 76 years old (range 52-91), female (60.6%), White (100%), and insured by Medicare (90.9%), whereas the typical non-D.A.Y. Program participant had a similar profile (77.4 years old with a range from 52-92, 57.8% female, 97.8% White, and 88.9% Medicare). D.A.Y. Program participants were evenly distributed in terms of prehospitalization living arrangements. About one third of the participants

**Table 1.** Description of Adult Day Program Participants and Nonparticipants

Variable	D.A.Y. (N = 33)	Non-D.A.Y. (N = 45)	p value
Age (mean)	76.0	77.4	.55
Age (range)	52-91	52-92	
Male	39.4%	42.2%	.49
Female	60.6%	57.8%	
Race—White	100%	97.8%	.58
Medicare recipient	90.9%	88.9%	.69
Lives alone	30.3%	31.7%	.61
Lives with spouse	30.3%	39.0%	
Lives with adult child	36.4%	21.9%	
Lives with other	3.0%	2.4%	
Primary caregiver			
Spouse	27.3%	42.4%	.11
Son/daughter	57.6%	57.6%	
Other	15.2%	0%	
Primary diagnostic category			
Neurological	81.8%	73.3%	.36
Orthopedic	15.2%	8.9%	
Cardiac	0.0%	11.1%	
Other	6.1%	6.7%	
Total number comorbid	6.21%	7.13%	.06
Selected comorbid conditions			
Cardiac	66.7%	75.6%	.27
Heart failure	24.2%	36.7%	.51
Hypertension	72.7%	84.4%	.16
Diabetes	39.4%	37.8%	.54
Hyperlipidemia	45.5%	37.8%	.33
Pulmonary disease	21.2%	26.7%	.39
Renal	12.1%	33.3%	.03
GU system	24.2%	31.1%	.34
Cancer	24.2%	20.0%	.43
Psychiatric diagnosis	15.2%	31.1%	.09
Depression	6.1%	28.9%	.01
Alzheimer's disease	24.2%	15.6%	.25
Arthritis	45.5%	35.6%	.26
Osteoporosis	21.2%	20.0%	.56
Anemia	12.1%	46.7%	.01
Acute hospital LOS—days	5.85	5.54	.72
Acute rehabilitation stay—days	23.9	20.1	.15

lived alone, one third lived with a spouse, and one third lived with an adult child. The nonparticipants, however, were somewhat more likely to live with their spouse and less likely to live with an adult child. Similarly, the adult day program participant was less likely to have a spouse designated at the primary caregiver (27.3%) compared to the nonparticipants (42.4%). The major diagnostic category of program participants and nonparticipants was neurologic, followed at a distance by orthopedics. No approached cardiac patients elected to participate in the adult day program. The most frequent diagnosis by far was stroke (CVA; 60.6% for D.A.Y., 57.8% for non-D.A.Y.). Other participant diagnoses were total hip

or knee replacement surgery (9.1%), subdural hematoma (9.1%), Parkinson's disease (6.1%), and encephalopathy (6.1%). Nonparticipants had a much wider variety of diagnoses (21 different diagnoses in total). These additional diagnoses included cellulitis, sepsis, pericardial effusion, and brachial plexus injury. The patients requiring PAC services had a substantial disease burden as illustrated by their total number of comorbid conditions. The participants had on average 6.2 secondary diagnoses, whereas the nonparticipants had 7.1, or one more. The most frequent of these were hypertension (72.7%), cardiac disease (66.7%), arthritis (45.5%), and diabetes (39.4%). Nonparticipants most

**Table 2.** Health Care Utilization Outcomes for Participants and Nonparticipants of D.A.Y. Program

Variable	D.A.Y. (N = 33)	Non-D.A.Y (N = 45)	p value
Postdischarge readmissions—mean	0.21	0.44	.06
Postdischarge ED visits—mean	0.33	0.53	.21
90-day readmission to hospital—any	21.2%	35.6%	.13
30-day readmission	6.1%	22.2%	.05
30-60 day readmission	9.1%	8.9%	.64
60-90 day readmission	6.1%	8.9%	.50
90-day ED visit—any	27.3%	47.8%	.23
30-day ED visit	6.1%	20.0%	.08
30-60 day ED visit	12.1%	15.6%	.47
60-90 day ED visit	12.1%	11.1%	.58
Total number hospital readmissions			.16
None	78.7%	64.4%	
One	21.2%	26.7%	
Two	0.0%	8.9%	
Total number ED visits			.64
None	72.7%	62.2%	
One	21.2%	24.4%	
Two	6.1%	11.1%	
Three	0.0%	2.1%	

**Note:** ED = emergency department.

frequently had hypertension (84.4%); cardiac disease (75.6%); anemia (46.7%); renal disease (33.3%), GU problems (31.1%), and depression (28.9%). As shown in Table 1, nonparticipants were significantly more likely to have depression, chronic kidney disease, and anemia as compared to the participants. Virtually all of the program participants were at risk for falling (93.9%), and three quarters had a history of falls. All of the participants were referred for continuing physical therapy sessions, whereas 90.9% also received occupational therapy and 36.4% were referred to speech therapy. We were unable to obtain data on falls and postdischarge therapies for the nonparticipants.

### Health Service Utilization

As shown in Table 1, D.A.Y. Program participants had an average acute LOS of 5.85 days and acute rehabilitation unit stay of 23.9 days. Nonparticipants had similar stays of 5.54 acute days and 20.1 rehabilitation unit days. Unlike academic health centers, patients in this study are highly likely to be readmitted to the same hospital or use the hospital's emergency department if postdischarge problems arise. The electronic health record was reviewed for the 90-day period following discharge from the acute care setting for both readmissions to the hospital and visits to the emergency department. Table 2 shows the 30-day and 90-day readmission and ED visit rates for the program participants and nonparticipants. Adult day program participants were significantly

less likely to be readmitted within 30 days (6.1% vs. 22.5%,  $p = .05$ ) and were also less likely to visit the ED within 30 days (6.1% vs. 20.0%,  $p = .08$ ) as compared to the nonparticipants. The adult day program participants were also less likely to be readmitted or visit the ED within 90 days of discharge, but these were not statistically significant differences. The primary readmission diagnosis or E.D. visit presenting symptoms were also recorded. The 30-day readmission diagnoses for the day program participants were pacemaker insertion and heart failure exacerbation. The 30-day readmission diagnoses for the nonparticipants were anemia and thrombocytopenia, atrial fibrillation, DVT, hypotension, chest pain, pulmonary emboli, inability to ambulate, fever and heart failure, GI bleeding, and orthostatic hypotension.

### Participant Satisfaction with the Program

Satisfaction surveys were returned and available for 21 (63.6%) D.A.Y. Program participants. No patient satisfaction surveys were available for nonparticipants. All the respondents positively rated the individual aspects of the program and the program staff members. Response categories were very good, good, acceptable, and not acceptable. No item was scored at the acceptable or not-acceptable levels. The items rated most highly were skill of the caregivers (95.2% very good) and the available therapy services (90% very good). The plan of care meetings were the lowest rated item, but still

**Table 3.** Comparison of Patients Selecting Different Discharge Destinations

Variable	D.A.Y.	SNF	HH	Home
Female	60.6%	50.0%	80.0%	42.9%
Live with spouse	30.3%	33.3%	38.5%	46.2%
Live with adult child	36.4%	33.3%	23.1%	7.7%
Live alone	30.3%	26.7%	38.5%	30.8%
Child CG	57.6%	58.3%	75.0%	33.3%
Spouse CG	27.3%	41.7%	25.0%	66.7
Age (mean)	76	77	81	74
Neurological diagnosis	81.8%	93.7%	53.3%	71.4%
Ortho diagnosis	15.2%	0.0%	20.0%	7.1%
Cardiac diagnosis	0.0%	6.3%	20.0%	7.1%
Depression	6.1%	37.5%	13.3%	35.7%
Renal disease	12.1%	37.5%	53.3%	28.6%
Anemia	12.1%	43.8%	53.3	42.9
Comorbid (mean)	6.2	7.5	7.0	6.8
Acute LOS (mean)	5.85	5.19	4.47	5.50
30-day readmission	6.1%	25.0%	26.7%	14.3%

scored highly (78.6% very good). When asked if they would recommend the program to others, 100% of the respondents said they would, and several responded that they already had recommended the program to others. When asked if they would be willing to pay for the program, 85% of the respondents checked the yes box, 10% checked no, and 5% checked maybe—noting that it depended on program cost and their ability to pay.

### Comparison of D.A.Y. Program Participants With Subgroups of Nonparticipants

Of the 45 patients who declined the adult day program, 16 went to a SNF, 15 went home with a home health referral, and 14 went home with either continuing outpatient therapy or self-care. There were some interesting differences across the destinations, although the sample sizes are small. As shown in Table 3, those entering the SNF were less likely to be female and more likely to have a spouse as the primary caregiver. Those selecting home health care were more likely to be female and older, less likely to live with an adult child, but more likely to have an adult child designated as the primary caregiver. Those going home with self-care were less likely to be female or live with an adult child, and more likely to live with a spouse who was designated the primary caregiver. Those electing home health were less likely to have a neurological diagnosis as compared to the other three settings. Interestingly, patients selecting the adult day program were less likely to have depression, anemia, or chronic kidney disease. Those with a diagnosis of depression were more likely to go to a SNF or home without assistance. Finally, patients discharged to SNF or home with home health were much more likely to be readmitted to the hospital within

30 days as compared to both the adult day program and home with self-care patients.

## Discussion

The expanded adult day program represents an alternative model of postacute transitional care that we believe can effectively prepare selected individuals for eventual return to optimal functioning in the home and community. The prototype D.A.Y. Program provides many services that would contribute to successful transitions from the hospital or acute rehabilitation unit to independent home living. Notably, many of these services are already provided by the typical adult day program. For example, adult day centers provide activity programs, health monitoring, socialization, meals, transportation, and assistance with activities of daily living (Met Life National Study of Adult Day Services, 2010). They are open Monday through Friday from 6:30 a.m.-6 p.m., and have an RN or LPN available 8 hrs per day (Met Life Study, 2010). However, they would not be able to afford to provide the structured, intensive 8-week program of rehabilitation and skilled nursing care required for PAC without additional funding. Medicare reimbursement is not available for services delivered in adult day centers. Their funding comes from Medicaid waiver programs, Veterans Administration, state and local social services, and private pay sources. Donations, fundraising, and grants also help cover the costs (Met Life Study, 2010). Relevant to this, Representative Linda Sanchez (D-CA) introduced in the last session of Congress H.R. 3043, a bill that proposed an expansion of regulations governing Medicare home health care reimbursement to include services delivered at adult day programs that meet specific regulatory requirements. The bill attracted many cosponsors, but was not brought to the floor of the House for discussion. It is worthy of further consideration.

An expanded adult day program might be effective at reducing both short-term and long-term admissions to the nursing home. Such an outcome would fit well within the framework of the new health care reform law. A major focus of the health care reform law is a reimbursement system that rewards value. Currently, projects are evaluating the benefit of various bundled payment arrangements. For example, one type of bundled payment is a global DRG case rate for preacute care, hospitalization, and PAC, which will reward providers for providing high-quality care that is less costly. For health care providers to remain fiscally solvent in a bundled payment environment, they must collaborate to create services that flow across settings and provide the highest quality care at the lowest cost. This will require identifying the most effective and efficient PAC trajectory for patients with different diagnoses, considering both currently utilized settings of care (SNF, HH) and potentially available sites of care delivery such as adult day programs. Adult day

programs allow individuals to remain in the home setting, are less expensive than nursing home care, improve quality of life, and improve caregiver well-being (Met Life Study, 2010; Schmitt, Sands, Weiss, & Covinsky, 2010). Patient-centered care is another priority of the PPACA, with care revolving around the patient as the patient transitions from one care setting to another. Thus, patient and family preferences also need to be taken into account.

The proposed program has many similarities to existing comprehensive primary care models for managing older adults with complex care needs. These models feature care delivered by teams of professionals; comprehensive assessments; comprehensive care plans; implementation of the care plan over time; proactive monitoring of the patient's clinical status; coordination of all needed services; facilitation of access to community resources; and facilitation of enrollees in transitions from hospital to PAC settings (Boult & Wieland, 2010). However, these community-based programs are primarily aimed at individuals who have irreversible disabilities and multiple ADL limitations, have had high utilization of health care services, and would be eligible for admission to the nursing home for long-term care if the community-based program was not available. The goal of the expanded adult day program described in the article is much more limited—provide a cost-effective alternative to short-term, PAC services traditionally delivered in either nursing homes or home health care settings. This structured 8-week program, available after the acute care and/or acute rehabilitation hospital stay, provides more comprehensive, consistent monitoring and ongoing assessment than possible with episodic home health visits, yet does not require admission to a skilled nursing facility. The patient retains his usual primary care provider and insurance plan, and is expected to no longer require the same intensity and level of skilled nursing care and therapies after the 8 weeks are over.

An expanded adult day program appears to be an acceptable alternative for selected patients in need of PAC-skilled nursing and rehabilitation services. The program was highly rated by participants and their family caregivers. A major advantage of the adult day program is that it provides a monitored environment where participants can safely move about and their condition and functional status can be continuously observed. This is especially important for patients with diagnoses such as diabetes and heart failure, where changes in condition often lead to readmissions. Another advantage is the ability to attend to the complexity of a patient's needs, so that many therapeutic goals can be achieved at the same time, and an individualized plan of care and home exercise program developed for each participant. The 8-week transition period appears to facilitate the development of self-management skills in symptom and medication management. Nursing notes documented an increasing level of comfort in the environment after the first week, and an increasing level of confidence in achieving therapeutic goals. Such data were not

**Table 4.** Comparison of Medicare 30-Day Hospital Readmission Rates

Medicare all-cause hospital readmission	18%-20%
MedPAC Medicare all-cause hospital readmission	17.6%
State of OHIO Medicare all-cause hospital readmission	19.9%
D.A.Y. Program Medicare all-cause hospital readmission	6.7%
Nonprogram participant all-cause hospital readmission	19.4%

available for those not participating in the adult day program. Nursing notes also suggested that family members gained confidence as they participated in plan of care meetings and gained knowledge of their family member's strengths and limitations, as well as their continuing rehabilitation requirements.

Most importantly, our findings suggest that an expanded adult day program might be effective in preventing some postdischarge readmissions and emergency department visits. This was particularly notable for the 30-day readmission rate, which has been receiving the most attention by policymakers and health care providers. Adult day program Medicare participants had a significantly lower all-cause 30-day readmission rate compared to Medicare nonparticipants, as well as compared to published Medicare and Medicare-Ohio 30-day readmission rates (Jencks, Williams, Coleman, 2009; MedPAC, 2007) (Table 4). The program records documented several instances where active problem-solving by the adult day program staff may have averted a trip to the emergency department and/or a hospital readmission. For example, one severe hypoglycemic episode was treated on site. Another example was when staff members were able to clarify conflicting drug prescriptions with the primary care physician—after several telephone calls. The consistent observation and monitoring, on-site therapies with reinforcement throughout the entire day, and daily nursing assessments in the immediate postdischarge period, appear to be beneficial to patients and their family members, as well as the health care system.

However, the D.A.Y. Program might not be the preferred alternative for everyone, and some readmissions might not be preventable. More specifically, individuals with the comorbid conditions of depression, anemia, and chronic kidney disease, were more likely not to choose the day program. Depressed patients may not have the desire to engage with others in the social environment of the adult day program, and those with anemia may not have the stamina to attend such an intensive program 5 days a week. Additionally, individuals with chronic renal disease have multiple metabolic derangements that place them at higher risk of hospitalization than those without the end-stage disease.



Although the small size of this pilot program and the retrospective nature of the study prevent broad generalizations about its effectiveness, these preliminary results support further development and evaluation of an expanded adult day program as a reimbursed alternative for PAC for selected recipients.

## Limitations

This was a retrospective descriptive study of one adult day program affiliated with one community hospital, with reliance on written program records for accurate data. It is possible that errors of omission or commission occurred in the documentation. The retrospective nature of the study limited the variables that could be analyzed. Even less information was available for the nonparticipants. It is possible that some readmissions or ED visits might have taken place in other health care facilities, although the program officials felt this was highly unlikely. Other variables need to be considered, including family relationships and available community resources for seniors (such as transportation), that could help us gain a better understanding of the decision process related to PAC services. A prospective study using mixed methods should be conducted to gain a more complete understanding of the potential benefits of an expanded adult day program for PAC-skilled nursing and rehabilitation requirements. A formal cost-effectiveness analysis would also be informative, comparing the expanded adult day program with the more traditional skilled nursing facilities and home health agency sites of PAC delivery. The program's cost-effectiveness should also be compared with other transitional care programs. Such analyses would need to control for the burden of illness and readmission risk level of the individual participants. The results would be informative to providers as they consider new forms of bundled services that not only reduce readmissions but also are patient centered and meet the needs and preferences of patients and their families.

## Acknowledgments

The authors also would like to acknowledge the individual contributions of Dr. Kimberly Togliatti-Trickett, Sue Owen, Marcia Ferguson, Bonne Galicki, Gail Swiger, and Elaine Connelly, and all the staff at the Parma ElderCenter.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The authors would like to acknowledge the support of the Parma Hospital

Health Care Foundation who provided the funds to conduct this program evaluation.

## References

- Boult, C., Wieland, G. D. (2010). Comprehensive primary care for older adults with multiple chronic conditions. *Journal of the American Medical Association, 304*, 1936-1943.
- Coleman, E. A. (2003). Falling through the cracks: Challenges and opportunities for improving transitional care for persons with continuous complex care needs. *Journal of the American Geriatrics Society, 51*, 549-555.
- Coleman, E. A., & Berenson, R. A. (2004). Lost in transition: Challenges and opportunities for improving the quality of transitional care. *Annals of Internal Medicine, 141*, 533-536.
- Coleman, E. A., Boult, C., AGS Health Care Systems Committee. (2003). Improving the quality of transitional care for persons with complex care needs. *Journal of the American Geriatrics Society, 51*, 556-557.
- Coleman, E. A., Smith, J. D., Frank, J. C., Min, S. J., Parry, C., & Kramer, A. M. (2004). Preparing patients and caregivers to participate in care delivered across settings: The care transitions intervention. *Journal of the American Geriatrics Society, 52*, 1817-1825.
- Coleman, E. A., Smith, J. D., Raha, D., & Min, S. J. (2005). Post-hospital medication discrepancies: Prevalence and contributing factors. *Archives of Internal Medicine, 165*, 1842-1847.
- Forster, A. J., Clark, H. D., Menard, A., Dupuis N., Ehernish, R., Chadok, N., . . . van Walraven, N. (2004). Adverse events among medical patients after discharge from hospital. *Canadian Medical Association Journal, 170*, 345-349.
- Jencks, S. F., Williams, M. V., & Coleman, E. A. (2009). Rehospitalizations among patients in the Medicare fee-for-service program. *New England Journal of Medicine, 360*, 1418-1428.
- Kane, R. L. (2011). Finding the right level of posthospital care. *Journal of the American Medical Association, 305*, 284-293.
- Medicare Payment Advisory Commission (MedPAC). (June, 2007). Report to the Congress: Promoting Greater Efficiency in Medicare. Washington, DC: MedPAC.
- Met Life National Study of Adult Day Services. (2010). *Providing support to individuals and their family caregivers*. New York, NY: Metropolitan Life Insurance Company.
- Mor, V., Intrator, O., Feng, Z., & Grabowski, D. C. (2010). The revolving door of rehospitalization from skilled nursing facilities. *Health Affairs, 29*, 57-64.
- Naylor, M. D., (2004). Transitional care for older adults: A cost-effective model. *LDI Brief, 9*, 1-4.
- Naylor, M. D., Brooten, D. A., Campbell, R. L., Maislin, G., McCauley, K. M., & Schwartz, J. S. (2004). Transitional care of older adults hospitalized with heart failure: A randomized, controlled trial. *Journal of the American Gerontological Society, 52*, 675-684.

Schmitt, E. M., Sands, L. P., Weiss, S., Dowling, G., & Covinsky, K. (2010). Adult day health center participation and health-related quality of life. *The Gerontologist, 50*, 531-540.

### Bios

**Katherine Jones** is Sarah Cole Hirsh professor and associate dean, Evidence-Based Practice, Frances Payne Bolton School of Nursing, Case Western Reserve University, Cleveland, Ohio.

**Susan Tullai-McGuinness** is associate professor of nursing, Frances Payne Bolton School of Nursing, Case Western Reserve University, Cleveland, Ohio.

**Mary Dolansky** is assistant professor of nursing, Frances Payne Bolton School of Nursing, Case Western Reserve University, Cleveland, Ohio.

**Amany Farag** is an assistant professor of nursing, Alexandria University, Smouha, Alexandria, Egypt.

**Mary Jo Krivanek** served as research associate on the project described in this article.

**Laura Matthews** is manager of the ElderCenter at Parma Community General Hospital, Parma, Ohio.