

# Evaluations of Integrated Care Models for Dually Eligible Beneficiaries: Key Findings and Research Gaps

The federal government and states are testing a variety of models to integrate care for beneficiaries enrolled in both Medicare and Medicaid. These beneficiaries are eligible for both programs by virtue of their age or disability and low incomes. This diverse population includes people with multiple chronic conditions, physical or developmental disabilities, cognitive impairments, and some people who are relatively healthy. Dually eligible beneficiaries account for a disproportionate share of spending in both programs. In Medicaid, dually eligible beneficiaries comprise 15 percent of the population but 32 percent of spending, amounting to \$118.9 billion in 2013 (MACPAC and MedPAC 2018).

Integrated care models are designed to align the delivery, payment, and administration of Medicare and Medicaid services to improve care for dually eligible beneficiaries and reduce spending. For example, such models can improve beneficiaries' transitions from acute inpatient hospital settings (paid for by Medicare) to home- and community-based settings (paid for by Medicaid), which could help reduce hospital readmissions.

There are three primary models for integrating Medicare and Medicaid services:

- Medicare Advantage (MA) dual eligible special needs plans (D-SNPs) or fully integrated dual eligible special needs plans (FIDE-SNPs) that are aligned with Medicaid managed long-term services and supports (MLTSS) programs;
- the Financial Alignment Initiative (FAI); and,
- the Program of All-Inclusive Care for the Elderly (PACE).<sup>1</sup>

Some states are using more than one model to address the needs of different types of beneficiaries or to take into account differences between geographic regions in the state, and to offer beneficiaries choices in how they receive their care.

There is a limited but growing body of evidence examining the effects of integrated care on Medicare and Medicaid spending and outcomes for dually eligible beneficiaries. The Centers for Medicare & Medicaid Services (CMS) has funded formal evaluations of the FAI, which are being published on a rolling basis. In addition, researchers have published a variety of evaluative studies on other integrated care models that cannot be considered formal evaluations. Understanding the successes, challenges, and outcomes of integrated care models can help policymakers determine if the models have worked as intended and inform future policy.

To assess the status of research on the performance of integrated care models, MACPAC contracted with the State Health Access Data Assistance Center (SHADAC) at the University of Minnesota to compile an inventory of existing evaluations of integrated care models. SHADAC conducted a systematic review to



identify peer-reviewed studies and gray literature (i.e., government-sponsored and other non-peer reviewed reports) published between January 2004 and November 2018. Summaries of those studies, updated to July 2020 with evaluations of the FAI, are available in the *Inventory of Evaluations of Integrated Care Programs for Dually Eligible Beneficiaries* (MACPAC 2019).<sup>2</sup>

The studies generally found a decrease in hospitalizations and readmissions for enrollees in the different models relative to those not enrolled in integrated models. For other services, such as use of the emergency department (ED) and long-term services and supports (LTSS), findings were mixed. Studies also often found mixed results for service use and beneficiary experience. It was also difficult to generalize from evaluations of specific models about the effects of integrated care more broadly. For example, while hospitalizations were reduced in more than one model, evaluators could not conclude definitively that integrated care reduces hospitalizations. Several studies estimated changes in per person Medicare spending. However, due to lack of recent Medicaid data, only evaluations of the PACE program and one study on D-SNPs looked at changes in Medicaid spending (Zhang and Diana 2017).

In this issue brief we highlight findings from the studies SHADAC reviewed, as well as evaluations on the FAI released as of August 2020, grouped by model type and effects on spending, enrollment, use of services, and care coordination. We also note knowledge gaps that remain.<sup>3</sup> For example, SHADAC did not find any studies that compared integrated care models to each other, which would have been useful in determining which models were the most effective at integrating care and reducing spending.

## Dual Eligible Special Needs Plans

D-SNPs are MA plans that limit enrollment to dually eligible beneficiaries. As of June 2020, D-SNPs enrolled about 2.6 million individuals, nearly 20 percent of all dually eligible beneficiaries (CMS 2020, CMS 2018a). D-SNPs must sign a contract with the state Medicaid program in order to operate in that state, but state contracts vary in the extent they require D-SNPs to coordinate a beneficiary's Medicaid benefits.

Some states have chosen to align D-SNPs with their MLTSS programs. For example, states may require that managed care organizations (MCOs) offering a D-SNP in their state have an existing MLTSS contract. Beneficiaries in the MLTSS plan can then enroll into the MCO's companion D-SNP (or, in certain cases, the state may enroll the beneficiary into the plan through via passive enrollment). This approach creates an integrated care product with one MCO responsible for each participant's Medicare and Medicaid benefits.<sup>4</sup>

As of June 2020, both D-SNPs and MLTSS plans were available in 23 states. However, both types of plans may not be offered in all areas of a state, and the degree to which states align these plans varies widely (CMS 2019a, Lewis et al. 2018, NASUAD 2019). Aligned D-SNP and MLTSS plans were available in 12 states as of June 2020 (MACPAC 2020). Some D-SNPs meet CMS criteria that allow them to be designated as FIDE-SNPs. These plans provide beneficiaries with a single integrated plan that typically includes LTSS, behavioral health, and other Medicaid benefits.

Approximately 143,000 dually eligible beneficiaries were enrolled in aligned D-SNP and MLTSS plans as of March 2018 (Chelminsky and Verdier 2018). As of February 2020, there were 280,000 individuals enrolled in FIDE-SNPs, with about 75 percent of all enrollees residing in three states: Massachusetts, Minnesota, and New Jersey (CMS 2020, MedPAC 2018).



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## Evaluation results

SHADAC identified nine evaluations for the D-SNP model, six of which analyzed care coordination or service use. Others looked at the effects of D-SNP enrollment on Medicare spending per person but did not include information on Medicaid spending.

**Care coordination.** Several evaluations examined the effect of care coordination on outcomes for beneficiaries enrolled in D-SNPs. Two studies for the U.S. Department of Health and Human Services Assistant Secretary for Planning and Evaluation reviewed whether the manner in which an intervention is implemented affects beneficiary outcomes (Zurovac et al. 2014a, 2014b). Another evaluation focused on the nurse care management model implemented in a community setting (Wenger et al. 2011).

Evaluations of care management components in D-SNPs tested whether routine care (such as depression screenings and care management transitions) or enhanced care (more intensive versions of those services) would lead to better health outcomes for beneficiaries. One evaluation of two D-SNPs in Wisconsin and another study of a D-SNP targeting beneficiaries with severe mental illness concluded that care coordination activities were not associated with statistically different outcomes (Zurovac et al. 2014a, 2014b). These studies found no impact on hospitalizations and mixed effects on ED visits and readmissions.

An evaluation of a Florida health plan sought to determine whether a nurse care management model improved quality of care (Wenger et al. 2011). The study found that nurses were able to fill gaps in physician-provided care for geriatric conditions, with the largest changes between physician-only and nurse-plus-physician care occurring in end-of-life care, falls, prevention, and urinary incontinence. In addition, the study found that receipt of recommended care improved from 53 percent when only physician care was considered to 69 percent when nurse care was included.

**Use.** SHADAC identified several evaluations of integrated care available under a D-SNP that focused on use of services. Integrated care models are expected to reduce unnecessary ED visits, hospital admissions and readmissions by improving care coordination for beneficiaries. The studies SHADAC examined supported this notion, finding evidence of reductions in hospitalizations, readmissions, and nursing facility entries. For example:

- An evaluation of Massachusetts Senior Care Options (SCO) reviewed whether enrollment affected nursing facility use, finding that SCO enrollees had reduced mortality compared to non-enrollees and that nursing facility entries for long-term stays and end-of-life care were both significantly reduced for SCO enrollees compared to others. Post-acute, short-stay nursing facility use, however, was not statistically different for SCO enrollees compared to others (JEN Associates, Inc. 2013).
- An evaluation of the Visiting Nurse Service of New York's Choice health plans, which used continuous care management for dually eligible beneficiaries, measured hospital admissions, readmissions, and emergency visits over 24 months (Birlh Johnson and McCarthy 2013). Hospitalizations decreased by 54 percent, readmissions within 30 days dropped by 24 percent, and ED visits decreased by 27 percent. Among all dually eligible beneficiaries enrolled, there was a 21 percent relative reduction in the trend for the 30-day all-cause readmission rate between 2009 and 2011.
- An evaluation of hospitalizations and readmissions among the dually eligible population enrolled in California's SCAN Health Plan compared the plan's performance on certain quality measures with those for enrollees receiving service under Medicare fee for service (FFS) to evaluate the impact of enrollment in a D-SNP on hospitalizations, readmissions, and spending (Avalere Health LLC 2012). The study



found that preventable hospitalization rates for SCAN enrollees were 14 percent lower and risk-adjusted hospital readmission rates were 25 percent lower than in Medicare FFS.

**Effects on spending.** In addition to improving outcomes, policymakers are looking to integrated care to reduce federal and state spending. So far, the evidence is limited on whether the D-SNP model is achieving savings. The two following evaluations reviewed effects on per person spending in Medicare, but most did not look at effects on Medicaid spending due to the limited availability of Medicaid data.

- An evaluation of Arizona’s Integrated Care Management Pilot, launched in 2010 to link member benefits with home and community-based services (HCBS), examined lessons learned from the design, implementation, and early results of the pilot program (Meiners et al. 2014). The evaluation compared the health plan’s average per-member-per-month costs for those receiving a comprehensive in-home assessment with those who did not receive such an assessment. The assessment included a review of financial need, activities of daily living, hospital and ED use, and other factors. Results showed a statistically significant drop in monthly costs for members who were enrolled in the pilot program and who had received an assessment. Among members who received HCBS, the drop was greater.
- In another study looking at the effects of D-SNPs on spending, researchers found that D-SNP penetration (the share of dually eligible beneficiaries enrolled in D-SNPs) was associated with reduced Medicare spending per person but found no association with Medicaid or total spending (Zhang and Diana 2017). A 1 percent increase in D-SNP penetration was associated with a 0.2 percent reduction in Medicare spending per person.

## Financial Alignment Initiative

Under the FAI, states are testing three integrated care models: (1) the capitated model in which CMS, a state, and health plans (known as Medicare-Medicaid plans) enter into a three-way contract agreeing to a blended capitated rate for all Medicaid and Medicare benefits; (2) the managed FFS model, in which states provide the up-front investment in care coordination and are then eligible for a retrospective performance payment if they meet the established quality thresholds and if Medicare achieves a target level of savings; and (3) an alternative model testing the integration of administrative functions without financial alignment.

The capitated model is the most common of the three approaches. As of April 2020, about 389,000 dually eligible beneficiaries in nine states were enrolled in this model (ICRC 2020a).

CMS contracted with RTI International to monitor implementation of the demonstrations and to evaluate changes in beneficiary experience, quality, use of services, and spending. RTI has begun publishing state-specific annual reports and aggregate evaluation reports. To date, evaluations have been published for 11 states: California, Colorado, Illinois, Massachusetts, Michigan, Minnesota, New York, Ohio, South Carolina, Texas and Washington.<sup>5</sup> Evaluations are planned for all participating states, including multiple evaluations for each state to analyze the ability of the demonstration to improve quality and reduce spending. In addition to the state-specific reports, several aggregate evaluation reports have been published focusing on topics such as beneficiary experience, care coordination, special populations, and implementation (Anderson et al. 2017, Ptaszek et al. 2017, Wiener et al. 2017, Chepaitis et al. 2015).

## Evaluation results

The integrated care models inventory captures findings from 28 evaluations of the FAI, with 25 evaluations focused on a single state. Most of the evaluations examined plan enrollment and retention, since the FAI



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represented the first effort to passively enroll a large number of dually eligible beneficiaries into managed care.<sup>6</sup> After the initial enrollment, many states experienced declines in enrollment and fell short of expectations for participation (Grabowski et al. 2017).

While there are few analyses of service use and spending, early findings suggest that the FAI is associated with decreased ED use and hospitalizations, but has had mixed effects on other services, such as nursing facility admissions. Beneficiaries reported varying experiences with care coordinators and their usefulness. In some cases, beneficiaries had not been actively connected to a care coordinator and were not aware that they had one. Initial analyses estimated savings to Medicare in states such as Washington, but they did not capture Medicaid spending.

**Enrollment.** In 2017, only about 29 percent of individuals eligible to participate in FAI capitated models were enrolled in them. Participation varied by state, from a high of about 67 percent in Ohio to a low of about 4 percent in New York (Lipson et al. 2018). Studies presented a range of findings associated with enrollment:

- Studies examining beneficiary experience with enrollment in the capitated models found that beneficiaries found it challenging to communicate with plans and had a limited understanding of benefits, rights, and protections (Graham et al. 2018, McBride et al. 2017, Ptaszek et al. 2017). Individuals reported that the information they received about the integrated care plan was confusing, irrelevant, or dense (Graham et al. 2018, Ptaszek et al. 2017).
- Research on opt-out rates and disenrollment in Cal MediConnect, California’s FAI demonstration, found differences in participation by demographic group. The study focused on Los Angeles County, which had the lowest enrollment in the state, at 19 percent of eligible individuals (McBride et al. 2017). Almost 58 percent of eligible beneficiaries opted out, and 8 percent of participants disenrolled. The study found variations in opt-out rates based on language and racial and ethnic differences (McBride et al. 2017).
- In Washington, about 6 percent of participants disenrolled, on average, over the six calendar quarters studied (Walsh et al. 2016). Disenrollment was highest in the last quarter of calendar year 2014 when 8 percent of participants disenrolled.

**Effects on spending.** Early analyses in Washington, Colorado, and Ohio found mixed results when considering how the FAI has affected spending. In all instances, data was limited to Medicare claims data and did not include Medicaid spending. Evaluators promised that they would share the effects on Medicaid spending when data is available.

- In Washington, studies found Medicare savings during the first four years (July 2013–December 2017) of the demonstration (Justice et al. 2017, Sandler et al. 2019a).<sup>7</sup>
- In Ohio, such savings occurred during the first demonstration year (May 2014–December 2015), but there were no significant changes in spending when looking at the first 32 months of the demonstration (Bayer et al. 2018).
- In Colorado, where the demonstration ended in December 2017, evaluators found that Medicare spending per member per month increased in demonstration period 1 (September 1, 2014–December 31, 2015) and decreased in demonstration period 2 (January 1, 2016–December 31, 2016) returning to slightly above or below baseline spending levels (Sandler et al. 2019b, Wilkin et al. 2017a).

**Use.** Findings on the effects of the FAI on use of health care services are available for several states and focused on hospitalizations and ED use. For example:



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- Minnesota Senior Health Options was associated with lower use of hospital, ED, and assisted living services, as well as increased HCBS use (Anderson et al. 2016).<sup>8</sup>
- Michigan Health Link beneficiaries had fewer preventable ED visits and lower probability of inpatient admission, but a higher probability of long-stay nursing facility use (Holladay et al. 2019).
- In Massachusetts, beneficiaries enrolled in integrated care plans under the FAI had a lower probability of long-stay nursing facility admissions, but a higher probability of monthly inpatient admissions (Gattine et al. 2019a, 2019b, and 2016).<sup>9</sup>

**Care Coordination.** Beneficiary experience with care coordinators was analyzed primarily by using focus groups. The findings were mixed, as some beneficiaries reported positive encounters with their care coordinators and found goal setting helpful as part of this service, while others could not identify their care coordinator (Ptaszek et al. 2017). For example:

- In California, many beneficiaries were unaware that their integrated care plan provided care coordination (Graham et al. 2018). However, those with care coordinators were more likely to have disruptions in health care resolved and increased access to HCBS, home modifications, and counseling (Ptaszek et al. 2017, Graham et al. 2016).
- In South Carolina, beneficiaries appreciated their care managers' regular check-ins and assistance in accessing needed services, and felt they were part of their care planning team (Ormond et al. 2019).
- In Texas, beneficiaries' awareness of care coordinators seemed to increase over time. In 2016 focus groups, most beneficiaries did not think they had a care coordinator, but in 2017, most focus group participants reported that they had been contacted by their care coordinators (Bayer et al. 2019).

## Program of All-Inclusive Care for the Elderly

PACE provides participants with an interdisciplinary care team that delivers comprehensive medical and social services at a day center, and other LTSS, such as personal care services. Most PACE participants are dually eligible, and the program is limited to beneficiaries age 55 and older who need a nursing facility level of care but can live safely in the community. PACE providers receive capitated payments from both Medicare and Medicaid. The Medicare portion of the capitated payment is derived from a formula that reflects the high frailty level of PACE beneficiaries, while the Medicaid payment is negotiated between the PACE provider and the state Medicaid agency (CMS 2019b).

As of July 2020, 31 states had PACE programs with over 49,000 individuals participating, most of whom were dually eligible (ICRC 2020b). Enrollment in PACE is voluntary, and PACE is optional for states.

### Evaluation results

We identified 12 studies that focused on PACE program outcomes in at least 17 states. These studies looked at a variety of outcomes including hospital and nursing facility use, effects on spending, and mortality. In general, the literature provided evidence associating PACE with reduced risk of hospitalization, but findings for other outcomes were mixed.

**Hospital use.** Four studies on PACE found that these programs were associated with lower inpatient hospital use (Segelman et al. 2017, Jones et al. 2013, Meret-Hanke 2011, Beauchamp et al. 2008). One found that PACE participants experienced reduced hospitalization rates over a two-year period compared to a matched comparison group, despite having higher levels of hospitalization six months before the baseline



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period (Meret-Hanke 2011). In addition, the study found that when PACE participants were hospitalized, their length of stay was shorter, with an average reduction of 0.6 hospital days per month alive.

A fifth study found that providing mental health services was associated with a reduction in psychiatric inpatient use that was sustained for two years (Ginsburg and Eng 2009).

**Nursing facility use.** Findings on the effect of PACE on nursing facility use were mixed:

- Two studies found that PACE participants had more nursing facility use when compared to other beneficiaries enrolled in HCBS waivers (Ghosh et al. 2015, Beauchamp et al. 2008). One study also found that when the comparison group included both HCBS waiver participants and nursing facility residents, PACE participants had lower nursing facility use than the comparison group (Ghosh et al. 2015).
- Another study found that PACE participants had a 31 percent lower risk of long-term (greater than 90 days) nursing facility admission compared to HCBS waiver enrollees, even though upon nursing facility admission, PACE participants had greater levels of cognitive impairment (Segelman et al. 2017).

**Effects on spending.** Studies found mixed results about the effects of PACE on Medicaid spending. While two studies found PACE was associated with increased Medicaid spending, one found it was associated with substantial savings (Ghosh et al. 2015, Wieland et al. 2013, Foster et al. 2007). These differences may reflect the particular comparison group. Given the comprehensiveness of the PACE benefit and the level of impairment among participants, savings may be dependent on whether PACE participants are compared to HCBS waiver enrollees or nursing facility residents. For example:

- One study found that among a cohort of dually eligible beneficiaries in North Carolina, the PACE capitation rate was 28 percent below estimates for beneficiaries receiving other LTSS (Wieland et al. 2013).
- Another study found that capitated expenditures for PACE participants in most states were higher than what would have been predicted had they been in Medicaid fee for service, although Medicare expenditures were similar to what was predicted. However, these findings varied significantly across states. In New York, PACE spending was significantly lower than what was expected under fee for service (Ghosh et al. 2015).

**Mortality rates.** Four studies examined the effects of PACE on mortality rates (Ghosh et al. 2015, Wieland et al. 2010, Foster et al. 2007, Mukamel et al. 2007).

- One study found that PACE programs were associated with lower mortality when they had more professionals (i.e., physicians, nurses, and social workers rather than aides) and where most or all participants received the same types of services (Mukamel et al. 2007). A second study found lower mortality for PACE participants compared to HCBS waiver enrollees and people entering nursing facilities, but said the findings should be interpreted with caution given that the health and functional status of these groups may differ (Ghosh et al. 2015). Another study did not find any difference between PACE participants and HCBS waiver enrollees (Foster et al. 2007).
- The final study followed PACE participants, HCBS waiver enrollees, and nursing facility residents in a two-county region of South Carolina for five years or until death found that PACE participants were older, more cognitively impaired, and had more dependency in activities of daily living. Their mortality risk was similar to nursing facility residents and greater than HCBS waiver participants. PACE enrollees survived longer than either HCBS waiver enrollees or nursing facility residents (Wieland et al. 2010).



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**Preventive care.** Two of the three studies examining PACE and preventive care found PACE participants received more preventive care or routine mental health care (Ginsburg and Eng 2009, Beauchamp et al. 2008). Interviews with individuals enrolled in PACE for at least a year and a group of beneficiaries enrolled in Section 1915(c) HCBS waiver programs found that PACE participants were more likely to have had hearing screening (73 percent versus 44 percent), vision screening (85 percent versus 72 percent), and a flu shot (83 percent versus 63 percent) in the past year (Beauchamp et al. 2008).

The third study focused on comparing for-profit PACE programs with non-profit programs, finding that participants in for-profit programs received less preventive care (Jones et al. 2013).

**Other outcomes.** Other studies examined care coordination, access, patient satisfaction, health outcomes, and enrollment, and generally found favorable results for PACE.

- For example, one study found improvements in mood among PACE participants at one site in St. Louis. While 27 percent of the 182 patients who had continuous care in the community for at least nine months met the definition of depression when they were newly enrolled, after nine months, 80 percent of those patients no longer met the criteria for depression (Vouri et al. 2015).

## Gaps in Research on Integrated Care Models

It is difficult to draw definitive conclusions about the effectiveness of integrated care models given that there are relatively few studies for each model type. State-specific evaluations of the FAI demonstrations have not been published for all 11 states, and little has been written about D-SNPs aligned with MLTSS programs. Findings sometimes conflict across studies, perhaps reflecting differences in study methodology or patient populations. For example, two studies examining the effect of PACE programs on mortality rates found lower rates for PACE participants compared to HCBS waiver enrollees and another study found no difference (Ghosh et al. 2015, Wieland et al. 2010, Foster et al. 2007).

To inform policy, more research is needed to evaluate outcomes for particular populations, for example, dually eligible individuals over age 65 and under age 65, as well as individuals with different types of chronic conditions such as diabetes or Alzheimer's disease. Research is also needed to look at outcomes beyond hospitalizations, visits, and nursing facility use. Although dually eligible beneficiaries are frequent users of HCBS, few studies focused on HCBS-related outcomes. Future research could look at outcomes for subpopulations of dually eligible beneficiaries such as HCBS users.

More research is particularly needed on the effects of integrated care models on Medicaid spending. Data from the forthcoming Transformed Medicaid Statistical Information System (T-MSIS) should be useful in looking at Medicaid spending and service use in integrated care models.

Research on integrated care models could also be strengthened by paying greater attention to the effect of state design decisions on outcomes. For example, the FAI demonstrations vary with respect to population, geographic reach, state requirements, and other factors, which make it difficult to understand how these factors contribute to or impede the success of integrated care.





Finally, it would be useful to have studies that compare the effects of different models. Such work could provide insight into whether policymakers should support development of additional integrated care models or refine existing ones.

## Endnotes

<sup>1</sup> Originally, 13 states participated in the Financial Alignment Initiative, with 10 states implementing capitated models, 2 states implementing fee-for-service models, and 1 state implementing an alternative model. Demonstrations in two states, Virginia and Colorado, ended in 2017.

<sup>2</sup> MACPAC plans to update this inventory periodically as more studies of integrated care models become available. The inventory has most recently been updated in July 2019 to include formal evaluations on the FAI.

<sup>3</sup> Topics for each model type do not appear if SHADAC did not identify any relevant evaluations.

<sup>4</sup> However, the beneficiary is technically receiving services through two different plans.

<sup>5</sup> Although Virginia's capitated model demonstration ended in December 2017, as of this issue brief's publication, an official state-specific evaluation from CMS was not available.

<sup>6</sup> Passive enrollment has been used frequently in Medicaid to automatically assign enrollees to a health plan if they have not chosen one but it is new to Medicare (MedPAC 2016). Passive enrollment was discontinued in some states amid opposition from some stakeholders concerned about maintaining beneficiary choice in plan selection (MACPAC 2018).

<sup>7</sup> The demonstration in Washington was associated with \$34.9 million in savings for Medicare during the first year of the demonstration (July 2013–December 2014), and \$30.2 million in savings in the second demonstration year (January 2015–December 2015). The demonstration was associated with \$46.5 million in savings for Medicare during the third demonstration year (January 2016–December 2016), and \$55.2 million in preliminary savings for Medicare in the fourth demonstration year (January 2017–December 2017).

<sup>8</sup> The Minnesota Demonstration to Align Administrative Functions for Improvements in Beneficiary Experience is focused on administrative alignment (Justice et al. 2016). It is designed to strengthen integration of the existing plans in the state's longstanding integrated care program, Minnesota Senior Health Options.

<sup>9</sup> In all three states, the data were largely limited to Medicare claims data and did not include Medicaid claims except for nursing facility use in Massachusetts.

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