Can Administrative Changes Improve Child-Care Subsidy Stability?

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ABSTRACT This study assesses administrative changes in Massachusetts that shifted the responsibility for child-care subsidy-eligibility reassessments from regional Child Care Resource and Referral agencies to locally contracted child-care providers. The study applies a mixed-methods approach, using (1) state administrative data to examine the association between the administrative changes and children's stability of subsidy receipt and (2) qualitative methods to illustrate the potential explanatory factors generating observed associations. We find a positive relationship between the administrative changes and subsidy stability overall but also substantial regional variation, which can be explained in part by policy- and organization-level variation identified in our qualitative research. Findings of the study highlight the importance of considering multilevel factors when designing, implementing, and evaluating changes in social service delivery practices and point to the need for a mixed-methods approach to evaluate such changes.

The child-care subsidy program, primarily funded by the Child Care and Development Fund (CCDF), aims to support work among low-income families by offsetting high costs of nonparental child care and improve low-income parents' access to high-quality care that supports positive child development. Evidence shows that use of child-care subsidies is positively associated with employment outcomes (Blau and Tekin 2007; Tekin 2007; Ha and Miller 2015) and use of formal and center-based care (Magnuson,

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Meyers, and Waldfogel 2007; Ryan et al. 2011). The CCDF child-care subsidy program, however, is administratively burdensome for many low-income working families, as it involves consistent eligibility reassessments, reporting of work and family changes that require preparation of documentation and agency visits, and finding and maintaining providers that can accept subsidies. These administrative hassles lead to recipient churning or to families exiting the program altogether. Evidence shows that only a small fraction of subsidy-eligible families actually receive subsidies (Chien 2015), and even among families receiving subsidies, many receive subsidies for short spells and cycle on and off the program (Meyers et al. 2002; Ha 2009; Ha, Magnuson, and Ybarra 2012; Davis et al. 2015). Instability in subsidy receipt has been linked to instability in care (Ha et al. 2012). This instability in care, especially when changes in care arrangements are involuntary, unplanned, and do not lead to higher-quality care, can significantly affect children, as stability in care can help promote positive child development (Howes 1988; NICHD Early Child Care Research Network 1998; Loeb, Fuller, and Kagan 2004). It can also advance social adjustment (Bratsch-Hines et al. 2015) and reduce child behavioral problems (Pilarz and Hill 2014). A number of multilevel factors, including family, policy, and child-care providers, affect stability in subsidy receipt (Ha 2009; Adams and Matthews 2013; Davis et al. 2015; Davis, Krafft, and Forry 2017*b*; Henly et al. 2017). To address policy-related barriers to stability in subsidy receipt, states have been implementing policy changes for the past 2 decades. These changes include expanding income eligibility rules, decreasing the frequency of reassessments, targeting vulnerable populations that may experience more instability (e.g., children experiencing homelessness, children in the child welfare system), and increasing providers' reimbursement rates (Witte and Queralt 2005; Weber, Grobe, and Davis 2014; Davis et al. 2017*b*). The effects of those policy changes on the program have been positive but small and, thus, the overall pattern of short spells and frequent churning still remains.

To address the persistent instability of subsidy receipt, policy makers focus on improving program administration practices. Concurrently, the emphasis on evidence-based policy making also incentivizes the development of low-cost and innovative administrative solutions to promote positive changes for program operations and participant outcomes (e.g., the Evidence-Based Policymaking Commission Act of 2016). Lacking, however, is evidence as to whether administrative changes in the child-care subsidy system effectively improve service delivery and the outcomes of the program—for example, improved stability of benefit receipt and parental employment.

Information is also limited on how and the extent to which the local implementation of the child-care subsidy program is a mechanism that contributes to subsidy stability and any observed variation in subsidy stability across service delivery regions. If local service delivery practices vary widely, a key question is whether, and in which regions, the implementation of new administrative changes can be effective (Davis, Krafft, and Forry 2017*a*).

Our mixed-methods longitudinal research study was conducted from 2013 to 2017 to examine how the 2012 administrative changes in the eligibility-reassessment process of the Massachusetts child-care subsidy system were associated with stability in subsidy receipt. Because the administrative changes affected only a group of subsidy-receiving children in the state, we compared patterns of subsidy receipt between a group of children who were affected by the changes and a group of children who were not during the same study period. We used the state's administrative data from 2012 to 2015 to estimate the length of subsidy receipt. We drew on qualitative data from a multilevel implementation study to document the implementation process and to identify potential explanations for an observed association between the administrative changes and subsidy stability. We used integrated quantitative and qualitative methods concurrently, including the sampling and data collection strategy, interview and observation protocols, and quantitative measures. This article reports the results of the research.

The article is timely because the Child Care and Development Block Grant (CCDBG) Act of 2014 reauthorized the CCDF program for the first time in the last 18 years. This law requires states to make substantive policy improvements in their subsidy programs, with the aims of promoting stability in subsidy receipt, enhancing program quality, and making the administrative system more user friendly for parents and providers. (For more details, see the CCDBG Act of 2014.) Since the CCDBG reauthorization, states have made ongoing efforts to design and implement policy or administrative changes required by the law. Our findings provide timely empirical evidence on the key factors affecting the success of administrative changes, program implementation barriers, and local variation points in agency practices across a statewide service delivery system.

BACKGROUND

ADMINISTRATION OF THE CHILD-CARE SUBSIDY PROGRAM

Established under the 1996 Personal Responsibility and Work Opportunity Reconciliation Act and reauthorized under the CCDBG Act of 2014, the

child-care subsidy program offers states significant flexibility in designing policies and administrative systems. Thus, there is considerable state variation in the program structure. State-by-state variables include income and work requirements set for eligibility, whether subsidies are disbursed through vouchers (parents choose providers that accept vouchers and have openings) or contracted slots (children are assigned to specific providers), and types of agencies (e.g., state, local, nongovernmental) with which families interact (Story, Kaphingst, and French 2006; National Child Care Information and Technical Assistance Center 2011; Tran et al. 2015; US Department of Health and Human Services 2016).

Furthermore, the federal guidelines only provide minimum requirements for program administration (US Department of Health and Human Services 2016). Thus, subsidy enrollment and eligibility reassessment processes vary significantly by state (Adams and Matthews 2013; Adams and Katz 2015; Minton, Stevens, and Blatt 2016). This includes variation in required paperwork and types of documents accepted (e.g., documents to prove financial eligibility), application accessibility, modes of application and renewal (e.g., in-person, phone, electronic), supports for families (e.g., language support), and levels of coordination with other benefit programs such as Temporary Assistance for Needy Families (TANF). These variations in the program structure and administration practices can lead to families experiencing different degrees of administrative burden in different states. In fact, a growing body of research suggests that within states local administrative practices vary widely, and this scholarship points to significant administrative burdens imposed on families (Sandstrom and Huerta 2013; Davis et al. 2017*b*; Henly et al. 2017). In response to these concerns, the federal government provides suggestions to ease administrative burden, such as broadening options for documents acceptable for determining and redetermining eligibility and extending document submission methods and hours. These system changes, however, are not mandatory and lack incentives for take-up (US Office of Child Care 2016).[1]

1. These suggestions included offering multiple methods for families to submit documentation (e.g., remote methods such as fax and email), offering documentation-submission time frames outside of traditional work hours, information sharing across public-benefit programs to streamline subsidy application and documentation collection and processing, and partnering with providers to administer subsidies (e.g., allowing providers to collect eligibility materials). More recent rules encourage, but also do not mandate, agencies to use automated systems for verification and electronic records to reduce paperwork (US Office of Child Care 2016).

ADMINISTRATIVE SYSTEM CHANGES TO THE SUBSIDY REASSESSMENT PROCESS IN MASSACHUSETTS

Consistently ranked as one of the most expensive states for child care (Child Care Aware of America 2017), Massachusetts faces a high demand for subsidies among working parents. Low-income parents working full-time and year round in Massachusetts were estimated to spend 30 percent of their income on child care if they paid market prices to send their children ages 13 and under to center-based care (diversitydatakids.org, n.d.). This figure greatly exceeded the federal benchmark of 7 percent (US Department of Health and Human Services 2016). In 2018, approximately 17,708 children were on the child-care subsidy waiting list (Massachusetts Department of Early Education and Care 2019).

The state disburses subsidies through either child-care vouchers or contracted child-care slots.[2] For income-eligible families (i.e., children of low-income parents who are working or participating in education or training programs), which are the focus of our study, the assignment of vouchers or contracted slots is based on available options at the time parents are called off the subsidy waiting list.[3] Income-eligible families could turn down

2. The state contracts with child-care providers for a prescribed number of subsidized slots every 3–5 years through a competitive procurement process. The contract providers serve children referred from the state child-welfare system, children of teen parents, homeless children, and income-eligible children who accept a contract slot. They are responsible for determining eligibility and making reassessments of children in their contracted slots and must participate in the state's Quality Rating Improvement System. The state provides additional fees for supportive services (e.g., for teen parents and other target groups). Otherwise, reimbursement rates for contracted slots are the same as those for vouchers. The majority of contract providers also serve children with vouchers, and in 2012, they were also tasked with conducting eligibility reassessments for income-eligible voucher children whom they serve. Contract providers are more likely to be part of larger, multicenter organizations or family child-care systems than providers serving only voucher children (Giapponi 2017).

3. The Massachusetts subsidy system targets four populations: (1) income-eligible children whose parents are working, are participating in education or training, are job searching, have transitioned off of TANF but are income eligible, have special needs, and others (e.g., parents in the military, grandparents referred by the state's child-welfare services, or children with special needs); (2) children in the child-welfare system; (3) children of parents receiving or transitioning off of TANF; and (4) homeless children and children of teen parents. Child-welfare and TANF cases (i.e., [2] and [3]) receive automatic access to subsidies and have different systems of subsidy disbursement. Children of TANF-receiving families receive subsidies

a slot or voucher based on their preferences up to three times. However, the long waiting list and high cost of child care in the state create an incentive to accept the assigned voucher or slot. Income-eligible families that accept a contracted slot must enroll with the assigned contract provider with the available slot. Income-eligible families that are assigned a voucher can use the voucher with a provider that accepts vouchers (hereafter, "voucher provider") or a contract provider that has contracted slots but also accepts vouchers (hereafter, "contract provider"). Finally, all income-eligible families, regardless of the type of provider they use, are required to reassess their eligibility at minimum every 12 months.[4]

Before 2012, the state contracted with Child Care Resource and Referral (CCR&R) regional agencies to manage all voucher-related activities, including eligibility reassessment, regardless of whether income-eligible families with vouchers used a voucher provider or a contract provider. The management of contracted slots, including eligibility reassessment, was handled directly by contract providers. Thus, income-eligible families that received vouchers but used contract providers reassessed their eligibility with CCR&R agencies. In January 2012, Massachusetts changed the responsibility of eligibility reassessment for income-eligible families with vouchers that use contract providers from CCR&R agencies to their contract providers. Under this change, income-eligible families with vouchers using a contract provider are reassessed by their child-care provider rather than their local CCR&R agency.[5] These administrative changes were initiated in part by a study that suggested that families had difficulty navigating the voucher system and obtaining appointments at CCR&R agencies (Washington et al. 2006). The changes were also initiated by a $3.4 million decrease in fiscal year 2010 state

only through vouchers, and children in the child-welfare system receive subsidies through contracted slots and vouchers. In 2012, 49 percent of subsidized children were income eligible; 14 percent were children involved in the child-welfare system; 35 percent were children of TANF-receiving parents; and 3 percent were children of parents who were homeless or teen parents.

4. Prior to CCDBG reauthorization, some income-eligible families had to reassess at shorter intervals than 12 months. For example, single mothers on maternity leave had a reassessment period of 12 weeks, and parents engaged in job search activities had a reassessment period of 8 weeks. In addition, changes in employment and significant changes in income (20 percent change or more) would trigger a reassessment during the middle of a family's authorization period.

5. To reduce administrative burden for families, families with siblings attending different providers still reassess their vouchers at CCR&R agencies.

appropriations for CCR&R services. From the state-agency perspective, the dual goals of the administrative changes were to (1) make the voucher reassessment process more user friendly for families to reduce benefit instability and (2) create a more efficient and cost-effective subsidy-reassessment procedure in the context of a lower state budget. At the organizational level, shifting voucher reassessment tasks from CCR&R agencies, which operated with less funding, to contract child-care providers required an increase in the level of coordination between CCR&R agencies and providers to transfer their clients' reassessment paperwork. For parents, changing the reassessment location to their child-care providers potentially decreased travel time, exposed them to different agency reassessment practices, and changed the subsidy caseworkers with whom they interacted.

CONCEPTUAL FRAMEWORK TO ASSESS CHANGES IN ADMINISTRATIVE BURDEN

Two key conceptual frameworks guide our study of the association between administrative processes and policy outcomes. First, the conceptual framing of administrative burden and related costs (Moynihan, Herd, and Harvey 2015; Heinrich 2016) informs our understanding of the mechanisms that create administrative burden and related costs when individuals participate in public assistance programs. Second, the strategic action field (SAF) framework guides our understanding of (1) the implementation of administrative-process changes and (2) the sources of variation that occur in local practices in a multilevel system across multiple actors, providing insight into the differential levels of burden and costs that individuals experience in the multilevel systems. According to Heinrich (2016), administrative burden between individuals and government associated with public assistance programs takes the form of bureaucratic encounters. There are three dimensions of bureaucratic encounters relevant to this study that can impose burdens on individuals who seek public services or benefits that affect stable participation: (1) bureaucratic encounters with agencies (e.g., caseworker discretion, paperwork, and rules that individuals are required to meet), (2) bureaucratic encounters between agencies (e.g., coordination of benefits, red tape), and (3) bureaucratic encounters with actors external to the service system (e.g., employers' verification of work status). The level of administrative burden caused by these bureaucratic encounters is affected by the number and the complexity of program rules and regulations, which, in turn, affects variation in program access, take-up, and outcomes (Kleven

and Kopczuk 2011; Heinrich 2018). More specifically, administrative burden imposes client-level costs. These learning and psychological costs are associated with program application, such as identifying programs that are relevant to meet family needs; intrusiveness or stigma associated with (or experienced in) the application process; and compliance costs associated with program enrollment and reassessment, such as meeting requirements to access and maintain benefits (Moynihan et al. 2015). Although high compliance costs and participants' proclivities to navigate administrative systems both likely play a role in program exits (Heinrich and Brill 2015), implicit in the administrative-burden model is the likelihood that more bureaucratic interactions will elevate the risk of churning or exiting the program completely (Rosenbaum et al. 2015).

Implementation scholars have critiqued policy analysts and program evaluators for ignoring or oversimplifying the processes of implementing change often necessary to improve target group outcomes (Moulton and Sandfort 2017). The SAF framework provides a conceptual understanding of how policy- and administrative-process changes are implemented and why they evolve over time in multilevel service systems (Sandfort and Moulton 2015). The SAF framework asserts that changes to public service interventions are shaped by decisions made at three levels of strategic action: (1) the policy field (i.e., policy context experienced by the various organizations with authority, expertise, or interests in the policy area), (2) the organization (i.e., agencies that administer the program), and (3) the frontline levels (i.e., caseworkers). Individuals within these action fields, such as state-agency staff, community-agency executive directors and staff, and caseworkers, can acquire social skills, actively understand and interpret formal and informal policy goals and program tasks that come from different lines of authority, and develop relationships within and between fields that constrain or lead to effective collective action across the service system to implement changes. Under this framework, whether administrative changes reduce burden and compliance costs at the client level to increase benefit stability depends on whether the changes to the administrative process improve operations (i.e., quality of service delivery and integration of changes into daily practices) and the target group's engagement and satisfaction with the service delivery system.[6] Importantly, the framework recognizes that different levels of knowledge, resources, power, or skills

6. Although our 4-year study collected information on the target group's satisfaction with the service delivery system and the changes in reassessment by interviewing families

across the fields can produce variation in the adoption and implementation of changes at the organizational and frontline levels. This fact points to the importance of evaluating the effectiveness of changes at both state and local service regions (Moulton and Sandfort 2017). The SAF framework also implies that in a devolved social service system it is critical to understand the influence of both individual caseworkers operating as street-level bureaucrats (Lipsky 1980) and agencies operating as street-level organizations with their own administrative structures and interpretations of state policy, thereby shaping the practices of their caseworkers (Brodkin 2016).

Guided by the theoretical framework of administrative burden and the SAF framework, our study examines whether exposure to reassessment at the local-provider level compared with a regional-level agency is associated with the cost of administrative burden, measured by the stability in subsidy receipt (i.e., the outcome of the exposure) across service regions. The study then considers how local policy factors and practices used in different agencies differentiate the influence on subsidy stability by altering the compliance costs associated with reassessment. Our mixed-methods study includes a full SAF analysis and collects data across all three levels, including client perspectives. Nevertheless, our analysis is confined to service-region-specific policy and organizational data. This approach aims to help explain any identified variation in the effects of local versus regional reassessment agencies on subsidy exits.

LITERATURE REVIEW

SUBSIDY INSTABILITY ASSOCIATED WITH ADMINISTRATIVE BURDEN IN THE CHILD-CARE SUBSIDY SYSTEM

Despite the positive effects of subsidies on parental employment and access to high-quality care, prior studies documented that the child-care subsidy program has been challenged by high levels of instability in subsidy receipt (Press, Fagan, and Laughlin 2006; Ha 2009; Davis et al. 2015), with a median subsidy-spell length of 6 months, ranging from 4 to 12 months across states (Swenson and Burgess 2018). A number of studies explored factors that might affect the patterns of subsidy receipt among families receiving subsidies, and these studies found that policy-related factors (e.g.,

receiving child-care subsidies, this article does not present the findings from the family interviews. Instead, our analysis focuses on the sources of variation at the system level.

frequent reassessment of subsidy eligibility, policy practices), family factors (e.g., age of the child, employment changes or loss), and provider-related factors (e.g., whether a provider was regulated or not) were associated with the instability of subsidy receipt (Grobe, Weber, and Davis 2008; Weber et al. 2014; Davis et al. 2017*b*).

More recent studies found that the administrative processes involved with the child-care subsidy policies might also affect the stability of subsidy receipt (Adams and Rohacek 2010; Henly et al. 2017). Subsidy eligibility in many states is strictly tied to parental work status, is tightly monitored, and requires extensive documentation for eligibility and reassessment. A change in family circumstances, especially an unpredictable change (e.g., job loss, move, or provider change), that requires reporting and reassessment of eligibility can lead to an abrupt end of subsidy receipt (Adams and Rohacek 2010). Several qualitative studies found that parents experienced administrative burden resulting from subsidy-eligibility assessment and renewal-documentation requirements, appointment availability and scheduling, transportation issues, interactions with multiple agencies (e.g., TANF and child-care subsidy providers), and the potential stress or stigma associated with close and repeated interactions with bureaucracies (Adams et al. 2006; Adams and Rohacek 2010; Henly et al. 2017; Barnes and Henly 2018). For example, a study conducted in urban and rural areas in Illinois and New York illustrated that subsidy users often experienced miscommunication between agencies and clients, loss of paperwork, or challenges keeping up with reporting requirements related to changes in family circumstances. These administrative hassles led them to experience churning or leaving the program permanently (Henly et al. 2017). These findings suggest that administrative burden is one reason for subsidy churning or exits, particularly when parents experience changes that require administrative interactions (e.g., a change that requires making an appointment with the subsidy agency).

Similarly, several quantitative studies using state administrative data found that families were more likely to leave subsidies immediately after their eligibility period ended (Grobe et al. 2008; Ha, Cancian, and Meyer 2010; Weber et al. 2014). Although administrative data systems generally do not collect information on why families leave the subsidy system, findings from both qualitative and quantitative studies suggest that administrative procedures can create burden for many families and thus lead to program exit. In fact, one study linking subsidy program administrative data

with parent surveys found that administrative burden, such as parents' higher ratings of difficulties with subsidy applications, was associated with a higher probability of exiting subsidies (Henly et al. 2017).

VARIATION IN ADMINISTRATIVE BURDEN IN THE SUBSIDY SYSTEM

Administrative burden in the child-care subsidy system leading to subsidy instability arises and interacts at the policy, organizational, and caseworker levels. Studies of diverse service systems documented differences in the administrative practices and policies by state and local agencies that could result in different experiences among clients and different program outcomes (Sandfort 2000; Heinrich 2018). Little evidence exists on the direct link between administrative burden and subsidy stability, yet two recent studies highlight the significant variation in subsidy delivery systems and potential linkages to program outcomes. Davis et al. (2017*a*) examined variation in voucher eligibility periods and voucher lengths using administrative data from Maryland and found that the eligibility authorization periods and the actual assigned voucher lengths were substantially different at the county level. This county variation could not be explained by controlling for family characteristics. The study concluded that local policies or local office practices (e.g., caseworker discretion), funding availability, or differences in the local implementation process might have resulted in variation in the eligibility period and voucher lengths. Another study examined clients' experiences with and perception of administrative burden in four different sites from two states (Illinois and New York) that implemented different subsidy eligibility rules, administration, and staffing models (Barnes and Henly 2018). The study found variation by site in clients' perception of caseworkers being positive (i.e., being responsive, friendly, fast), constrained (i.e., lacking of power and resources), autonomous (i.e., having significant control over service delivery), and hostile (i.e., intentionally discouraging claims). The findings suggest that clients may experience a different level of administrative burden depending on service locations and caseworkers, which might result in different program outcomes.

Administrative burden that individuals experience in the child-care subsidy program can also vary by the degree of coordination among the agencies involved in administering benefits and external entities encountering the subsidy system. Qualitative studies across different states point to a number of burdensome encounters with bureaucracy external to the subsidy

system: outside verifications of jobs by employers; verification of disability by health providers; verification of job searches, education, and training activities by schools and community-based organizations; and scrutiny of child absences by providers. Any of these processes could lead to a high level of administrative burden and were problematic for stable subsidy participation (Adams and Katz 2015; Mayer et al. 2015). Highlighting the administrative burden across the TANF and child-care subsidy systems, a study of welfare caseworkers in Florida found substantial discretion in the distribution and withdrawal of child-care subsidies for TANF clients based on caseworkers' own interpretations of TANF goals and priorities (Houser et al. 2014). Taken together, these qualitative studies suggest that administrative burden as it relates to compliance contributes to subsidy exits and churning, particularly when parents experience unpredictable changes (e.g., residential moves, provider changes, and job loss). Such changes require additional interactions with actors inside and outside the subsidy system.

ADMINISTRATIVE IMPROVEMENTS AND SUBSIDY STABILITY

Burgeoning research using experimental designs finds that changing administrative practices addressing application barriers or improving client communications that decrease compliance costs positively influenced the take-up of social programs. Programs highlighted by these studies include the Supplemental Nutrition Assistance Program (Hanratty 2006; Finkelstein et al. 2018), the earned-income tax credit (Bhargava and Manoli 2015), and Medicaid (Wright et al. 2017). There has been limited research using experimental designs, however, about effective practices to address churning of social program participants once they are enrolled (Mills, Compton, and Golden 2011).

Given the variation in subsidy stability across local service regions, studies have begun to address whether and how statewide and local changes in reassessment practices benefit subsidy stability and reduce variation in the duration of subsidy receipt. Two recent randomized control studies of interventions can serve as examples. One emphasizes (1) earlier and more explicit communication of renewal deadlines to parents and (2) prompting providers to remind and help parents renew subsidies in Oklahoma. The other focuses on the provision to parents of simplified checklists and personalized reminders in Marion County, Indiana. These studies were designed to address specific child-care subsidy reassessment bottlenecks identified by program-implementation research (Mayer et al. 2015; Dechausay and

Anzelone 2016; Richburg-Hayes et al. 2017). They found positive effects on subsidy reassessment measures such as scheduling a first appointment and on-time renewal. In addition, the positive intervention results in the Indiana study varied by the size of the client caseload that each office served. When the intervention focused on communicating reassessment deadlines more clearly and with urgency, the intervention had a larger positive effect on parents in the treatment group who were served by the office with the largest number of clients (Dechausay and Anzelone 2016). These results suggest that positive effects of interventions designed to increase subsidy stability can vary by existing circumstances of agencies. The findings also point to the need for more information about agency practices to help explain agency-level variation.

To summarize our view of the current literature, prior studies documented that subsidy users experienced a substantial amount of administrative burden, which led to the churning of subsidy receipt or to participants leaving the subsidy program permanently. Evidence from prior studies suggests that improving subsidy policy (such as increasing the subsidy-eligibility authorization period) and program reassessment practices, which are user friendly and thus reduce costs related to administrative burden, could improve subsidy stability. Studies using experimental designs provide preliminary evidence on small but targeted changes to reassessment practices through behavioral interventions that can improve program outcomes. Our study adds to the research literature by evaluating a new reassessment approach: a change in the agency conducting reassessment. This approach exposes clients to different reassessment practices, staff, and locations. It also provides evidence about the influence of statewide implementation of this new reassessment approach, which was designed and implemented by a state agency in a nonexperimental context. This study is the first to comprehensively examine whether local variation in service delivery systems is associated with differences in program outcomes of the implementation of changes across service areas.

CURRENT STUDY

To expand the evidence base to include a broader set of administrative practices, our study uses an integrated, mixed-methods approach (Burch and Heinrich 2016). Specifically, this study examines three research questions: (1) What is the relationship between a child's reassessment agency

(i.e., the location and the agency and staff conducting reassessment) and the child's stability of subsidy receipt? (2) Is there variation in the relationship between the administrative changes and subsidy stability by service region? (3) What local policy- and program-implementation factors related to administrative burden and reassessment help explain the quantitative findings, especially variation in the association with subsidy stability by region?

Guided by our two conceptual frameworks, our longitudinal, mixed-methods study integrates two elements: (1) the estimation of the relationship between administrative changes and subsidy stability using state administrative data and event history modeling and (2) an in-depth qualitative examination of the multiple levels of the subsidy service delivery system, including policy contextual factors and organizational approaches (i.e., policy- and organization-level factors, following the SAF framework). To fully evaluate how administrative changes relate to the stability of benefit receipt, the study comprehensively documents, using qualitative methods, how the actors in the subsidy system reacted to and incorporated the required changes into their existing service delivery approaches. The study design intentionally integrates the quantitative and qualitative methods in all research phases, including the sampling and data collection strategy, interview protocols, and quantitative measures. For example, based on the preliminary findings from administrative data analysis highlighting wide variation in the spell of subsidy receipt across all service regions, we expanded the qualitative study's child-care provider sampling frame from half of the service regions to all service regions across the state. Furthermore, based on qualitative findings that showed several reassessment locations in addition to the main location of the reassessment agency, the team created and tested several alternative measures for travel time to a reassessment agency in the quantitative models. After estimating the association between the administrative changes and the stability of subsidy receipt and the variation by region, we used qualitative data to illustrate dimensions of local subsidy-program implementation and reassessment practice, which helped explain the stability of subsidy receipt and local variation.

QUALITATIVE RESEARCH METHODS AND ANALYSIS

The qualitative study is guided by two propositions gleaned from our conceptual frameworks. First, we expected that administrative processes and practices associated with each of the different types of reassessment agency,

which could create different degrees of burden and compliance costs, could positively or negatively affect participants' stability of subsidy receipt. Second, we expected that some of the variation in subsidy receipt outcomes across service regions within the state were driven by local, contextual policy factors and local differences in agency practice. Thus, our qualitative data collection and analysis was designed to identify local policy and organizational factors across all subsidy service regions to help explain any observed variation by service region in the association between participants' subsidy receipt and their reassessment agency. We used a comparative case design to understand how local policy factors and reassessment practices in CCR&R agencies and contract child-care providers varied within and across service regions (Goodrick 2014; Yin 2017). The case study results for each service area are analyzed concurrently with the results from the quantitative estimation models to develop empirically grounded explanations of local differences in the association between participants' reassessment agency and their subsidy stability (Honig 2019).

SAMPLE, RECRUITMENT, AND DATA COLLECTION

Our study used multiple sources of data, including internal and online policy documents, semistructured interviews, agency websites, and local census data to construct case descriptions of subsidy service delivery in each service region. Data collection took place first at the policy level and then at the organizational level beginning in late 2013 (after the implementation of the changes in reassessment agencies in 2012) and ending in 2015. Table 1 summarizes our approach to qualitative data collection by SAF domain. We conducted semistructured interviews with a total of 116 stakeholders: 17 key informant interviews at the policy level and semistructured interviews with 99 stakeholders at the organizational level across all service regions. Specifically, we interviewed 99 senior staff and subsidy administrators at all CCR&R agencies and 53 child-care providers (including 32 contract providers and 21 voucher-only providers). All qualitative study materials, including interview protocols, recruitment emails, and consent documents, were approved by the institutional review boards of the authors' affiliated universities.

At the policy level, key informant interviews were conducted from January to February 2014. To ensure representation of all stakeholders involved, the key informants were selected based on their knowledge of the

TABLE 1. Qualitative Data Collection, 2013–15

Strategic Action Field Domain	Data Source	Subjects	Number of Participants
Policy	Key informant interviews	· State agency staff across three departments · State agency board members · State agency advisory committee members (including CCR&R and provider representatives)	17
Organization	CCR&R interviews · All regional agencies · Across all service regions	· Senior staff · Subsidy administrators	19
Organization	Subsidized provider interviews · Fifty-three local child-care providers and family child-care systems · Across all service regions	· Senior staff · Subsidy administrators	80

Note.—CCR&R = Child Care Resource and Referral.

child-care subsidy program and the impetus and implementation of the system changes. Participants included state-agency staff (across policy, information technology, and program administration departments), members of the state's Early Education and Care Board (some of whom had themselves played multiple roles in subsidy administration), and child-care providers and CCR&R senior staff who attended state-level policy advisory meetings. Interview questions focused on the child-care policy context, the how and why behind the design and implementation of administrative changes, and the process of voucher reassessment, including perceptions of varying agency reassessment practices. The interviews lasted 30–60 minutes.

The second stage of data collection, conducted in 2014 and 2015, included semistructured interviews at both types of reassessment agencies, regional CCR&R agencies and local contract providers. To obtain additional data on CCR&R reassessment practices, we also interviewed voucher child-care providers that did not conduct reassessment but served subsidized families that interacted with CCR&R agencies for voucher intake and reassessment. We began data collection at the regional level by first attending a monthly group meeting of CCR&R agencies, followed by in-person visits and interviews with 19 staff from all CCR&R agencies across the state. We conducted in-person interviews at four CCR&R agencies and one CCR&R satellite office, and we conducted individual and group phone interviews with staff members from the other three CCR&R agencies. Interviews ranged from

a half hour to 5 hours in length, depending on whether the interview was with an individual or a group. Before each interview, we gathered data from organizations' websites about specific practices (e.g., hours of operation, online scheduling of appointments) and the multiple locations that could affect subsidy stability. The organizational data were written up as a report before the interviews and then discussed during the interviews. Interview topics included organizational resources and capacity; the details of reassessment processes, including knowledge of varying reassessment practices at CCR&R agencies in other regions and among contract providers in their service region; and the implementation and perceived effects of the change in the reassessment location on organizational practices and family subsidy receipt.

To collect data about local subsidy-reassessment practices at the provider level in each region, we used child-care-provider licensing data from Massachusetts to generate a list of subsidized providers in each service region. In contrast to CCR&R agencies, where we conducted in-depth interviews with all agencies in each service region to gather the perspectives of local subsidized child-care providers, we developed a purposive sampling plan to select a subset of providers across all service regions. Initially, we planned to select contract providers and voucher providers stratified only by region. However, we learned from the key informant and CCR&R interviews that families reassessing with their provider might be directed to go to a reassessment location other than their child-care provider site, which could affect parents' compliance costs. Specifically, contract providers that are part of larger, multicenter organizations (e.g., the YMCA) could require that parents reassess at the central program office, which might be an unfamiliar location to them, rather than at their child-care provider site. Similarly, some parents with children who attend family child care have to reassess at family child-care systems, which may not be in the same location as the child-care site.[7] To consider such variation in reassessment practices,

7. In Massachusetts, individual family child-care providers cannot reassess vouchers. However, a family child-care system, which is a network of family child-care providers, can conduct voucher reassessments for families. Specifically, any income-eligible family with a voucher that uses child care from a family child-care provider that is a member of a contract family child-care system (having contracted slots with the state) reassesses with the contract family child-care system. Families with a voucher that use child care from an independent family child-care provider (i.e., one not affiliated with a contract family child-care system) reassess with the CCR&R agency.

we used additional stratifying criteria: whether either a contract provider or voucher provider was a single center or part of multicenter organization. In addition, we sampled contract family child-care systems rather than individual family child-care providers in each service region, given that the system conducts the reassessment. Appendix A shows the sample stratification and a detailed breakdown of the number of providers interviewed. We interviewed a total of 32 contract providers and family child-care systems that conduct voucher reassessment and 21 voucher providers that do not conduct reassessment. Providers were recruited by email or phone. We conducted 3 in-person pilot interviews and 50 interviews over the phone. Semistructured interviews covered the same topics as the CCR&R guide, with additional questions about providers' subsidy-participation decisions and specific locations of reassessment. Interviews varied 1–3 hours in length, depending on whether they were individual or group interviews. Overall, this provider-sampling approach has the benefit of collecting detailed information about reassessment models, particularly about a key component of parents' compliance costs: that is, whether families had to travel to reassessment locations other than CCR&R or provider sites for an extended number of cases across the state. A downside to this approach is that the provider sample has limited depth about within-region variation in practices because, due to resource constraints, we were unable to conduct enough interviews to reach qualitative saturation about local providers' reassessment practices in each region (Goodrick 2014).

All semistructured interviews in this study were conducted by a two-person team. One team member took near-verbatim notes, and the interviewer took abbreviated field notes. Team members cross-checked each other's notes for accuracy and resolved any discrepancies shortly after each interview.

ANALYTIC APPROACH

We used multiple phases of data analysis and coding to construct case studies documenting the complexity of the interaction between policy and local organizational factors within each service region (Saldaña 2015; Yin 2017). We analyzed these cases alongside results from quantitative models to help explain local variation in the association between participants' reassessment agency and their subsidy stability. All interview data, including field notes and CCR&R agency reports, were entered into NVivo software

for analysis of emergent themes that could be explored further during each phase of data collection. For this article, coding and analysis occurred in two phases. First, we assigned theoretically derived codes and attribute codes (e.g., service region, agency type) to answer questions about program implementation in each service region. We asked, for example, whether the reassessment change was implemented, by whom, and at which location. The second phase analyzed interviews using an inductive approach yielding initial coding of categories around the study's main themes, policy factors that shape service delivery, and agency reassessment processes and practices that shape parents' receipt of subsidies. The initial codes were reanalyzed, systematically applied, further refined, and then explored to identify interdependent themes. We also analyzed the policy and organizational categories and subcategories (e.g., requiring in-person submission of forms) by attribute codes, in particular, by service region to document local variation and by data source to triangulate emerging categories across agencies. For specific policy categories, when possible, we used census and program data to translate categories into service-region-specific quantitative policy indicators (e.g., high caseloads). The final step was creating a summary matrix of the service-region cases, which included results from the quantitative models alongside the potential policy and organization-level explanatory factors (Miles and Huberman 1994).

QUANTITATIVE RESEARCH METHODS AND ANALYSIS

DATA AND SAMPLE

To examine the association between the administrative changes and stability of subsidy receipt, we used Massachusetts CCDF administrative data from January 2012 to June 2015, merged with data from the child-care-provider licensing database for the same time period. The state CCDF data include information on the monthly receipt of child-care subsidies, subsidy type (voucher or contract), information related to eligibility assessment and reassessment (e.g., family income), types of care used, and the demographic characteristics of children and families receiving child-care subsidies during the observation period. The state licensing database contains information on child-care providers, such as their licensing history and capacity. The administrative data set was then merged with American Community Survey data from the US Census Bureau to obtain contextual information

on the neighborhoods (e.g., percentage of female-headed households) where children and families resided during the study period.

The analysis focused on a cohort of income-eligible children who received subsidies as a voucher, the population affected by the 2012 administrative change, and those who had a new spell of subsidy receipt in 2012 or 2013. This cohort included both (1) children who had prior receipt of subsidies before 2012 but began a new subsidy receipt spell in 2012–13 and (2) children who first received subsidies during the time period covered by our study. By structuring our sample in this way, we avoided the issue of left-censoring (i.e., we cannot observe when the spells started) while still allowing ourselves to calculate the duration of subsidy receipt for each child. We then excluded children for whom information on whether they used a contract provider or voucher provider was missing, thus making it impossible to identify where they were reassessed ($n = 140$). We also excluded children from one region, the smallest region with voucher caseloads in Massachusetts, due to data issues ($n = 387$). The final sample of 7,398 children was included in the analysis. All children were followed until the observation period ended in June 2015, giving us at least 18 months for the follow-up period. Because our sample includes only children whose families were income eligible, their pattern of subsidy use is expected to be more stable than the entire population of subsidy recipients, which includes children of TANF-receiving families and children with active cases in the state's child-welfare system. About 41 percent of the children in the sample were reassessed by their contract provider, and 59 percent were reassessed by their CCR&R agency.

MEASURES

Dependent Variable

The primary research question in the quantitative study was whether children who were reassessed by contract providers were likely to have more stable receipt of subsidies than children who were reassessed by CCR&R agencies. Subsidy stability was measured as the time (in months) during which a child continuously received subsidies until the child exited from the subsidy program (i.e., the length of subsidy-receipt spells). Subsidy exit was defined as the moment when children had at least 1 month of nonreceipt of subsidies following subsidy receipt. The subsidy-receipt spells that

continued beyond the observation period were included but coded as "not exited" (i.e., right-censored).

Independent Variables

The change in the reassessment agency can affect subsidy stability by reducing administrative burden associated with reassessment paperwork (e.g., helping clients fill out complex forms or obtain verification of employment), agency practices (e.g., offering alternative locations for reassessment or flexible office hours), and interaction with agency staff. Thus, administrative burden was measured by a proxy representing which agency families visited for their reassessment: a contract provider or a CCR&R agency. To examine whether the association between the administrative burden related to reassessment and the probability of subsidy exit significantly differs by reassessment agency, we included an interaction term between the reassessment agency and the month after the reassessment month. This interaction term estimates whether the probability of subsidy exit the month after participants' required reassessment month differs by the reassessment agency. With the interaction term, we also included the reassessment agency and reassessment timing to control for their main effects on subsidy exit.

Control Variables

The analysis included several sets of control variables found to be associated with subsidy exit in prior literature. First, we included child and family characteristics that affect families' child-care arrangements, such as the age of child, the number of children in care, whether the father is present in the household, and whether a nonparental adult is present in the household. Second, characteristics related to child care and subsidy receipt that could potentially affect the length of subsidy receipt were included, such as the types of care used (center-based care vs. family child care), reasons for subsidy receipt (i.e., employment, post-TANF transition, enrollment in job search, education, or training programs), and the CCR&R region where the family resides. We also included characteristics related to providers that might affect families' stability in using subsidies. Included are years in business, the total licensed capacity, and the percentage of subsidized children served. In addition, the analysis contained three local-level variables that reflect neighborhood characteristics, including the percentage of

female-headed households, unemployment rate, and urban-rural status. These factors may result in variation in the supply of child-care providers.

Prior research demonstrates that close proximity to mental health agencies and Head Start centers increased the probability of low-income parents' service usage (Allard, Tolman, and Rosen 2003; Neidell and Waldfogel 2009). Therefore, we controlled for the travel time (in minutes) between the family's residence and assigned reassessment agency, using travel time calculations based on road networks between points.[8] Through qualitative interviews, we found that some CCR&R agencies offered alternative reassessment locations, such as schools, community centers, or TANF offices, and remote reassessment options (which translate to no travel time). Similarly, some contract providers that are a part of a large umbrella organization or a family child-care system have families travel to the organizations' or systems' main office for their reassessment. Considering the potential for multiple reassessment locations, we georeferenced family residence locations and several different reassessment locations and conducted a series of sensitivity tests.[9] The final travel time variable used in this analysis assumes that families reassessing with the CCR&R agency travel between their residence and their assigned CCR&R office.[10] Families reassessing with their provider reassess at the provider site location, which assumes no travel time given this is the location where parents bring their child. We use the no-travel-time assumption for families reassessing with their provider to show the largest potential difference in travel time between families reassessing with providers compared with CCR&R offices.

8. We used ArcGIS/ArcMap and Open Source Routing Machine for all distance and duration computations.

9. Sensitivity tests included using different assumptions for child-care provider reassessment locations: (1) All families travel from their home to the provider site for reassessment (assumes no travel because this is the location where the families bring their child); (2) families travel from their homes to the umbrella or system office site (for families reassessing at providers that are members of umbrella agencies and systems), with no travel otherwise; (3) the reassessment location is unknown (here we use the average of the first two assumptions); and (4) families travel to the location that is closest to their homes (either the umbrella or system office or provider site location).

10. Note that two CCR&R agencies operate satellite offices in addition to their main office. Region 5 operates two satellite offices, and region 6 operates one satellite office. Durations were calculated using the main or satellite office location assigned to families.

ANALYTICAL APPROACH

We first compared the length of subsidy-receipt spells between children reassessing with contract providers and children reassessing with CCR&R offices. Specifically, we used the Kaplan-Meier estimator to estimate the length of subsidy-receipt spells. The Kaplan-Meier estimator is one of the most widely used methods for estimating a survival function that considers censored spells due to the limited observation period (Allison 1995). It is widely used in the child-care literature focused on subsidy stability. In this study, the survival function is the probability that a group of children continues to receive subsidies until some specific month during the study period.

The descriptive analysis includes all subsidy-receipt spells that children underwent during our study's time period. Then the multivariate analysis focuses on the first spells during the time period and uses discrete-time event-history regression models to examine the effect of the administrative changes on subsidy exit. The event-history regression model takes into account time-varying covariates and censored spells that end due to limited follow-up or children aging out rather than the variable of interest. Therefore, this model provides more precise estimates than conventional regression models in examining factors related to subsidy spells. We used the maximum-likelihood method for discrete-time event-history regression models to estimate the odds of subsidy exit. Unlike the partial-likelihood method, commonly known as the Cox-proportional hazard model, in which the baseline hazard is left unspecified, the maximum-likelihood method provides an estimate of the baseline hazard (i.e., the hazard function when all covariates have values of zero) as constant (Allison 1995). The maximum-likelihood method also better accommodates time-lagged variables (e.g., the month after the reassessment month in our study) without losing observations, and it takes significantly less time to run the models compared with the partial-likelihood method (Allison 1995).

We then examined whether the association between the administrative change and the likelihood of subsidy stability differs by local service region. We began by visually inspecting the survival curve of each region and the descriptive differences in the sample by region. We then estimated a fully interacted model using a three-way interaction term (i.e., reassessment agency $\times$ the month after reassessment month $\times$ region). We also used the Chow tests to see whether estimates from each region were statistically different from one other, including all covariates used in the main model. We

found that in general the coefficients of the interaction terms in the fully interacted model were statistically significant, and the Chow tests also show that the coefficients of each model by region were statistically significantly different from one another. Therefore, in this study we report the results from separate models by region for simplicity and ease of interpretation.

Finally, we conducted a post hoc estimation of predicted probability of subsidy exit the month after the reassessment month using the coefficients from each model by region. The predicted probability represents the probability that each group of children, those who were reassessed by a contract provider and those reassessed by the CCR&R agency, exits the month after the reassessment month when holding all covariates in their mean. We used SAS version 9.4 to conduct all analyses.

RESULTS

QUANTITATIVE FINDINGS

Table 2 shows the characteristics of the sample. Overall, children reassessed by contract providers were more likely to be older, more likely to have Hispanic or foreign-born mothers, less likely to have fathers in the household, and more likely to have a nonparental adult in the household compared with children reassessed by the CCR&R agency. In addition, children reassessed by their contract provider received lower-value subsidies and were more likely to be in regions 1, 2, and 4 (largely in urban areas) than children reassessed by their CCR&R agency. Children reassessed by their contract provider attended providers that were in business longer, had higher licensed capacity, and served a higher percentage of subsidized children than those reassessed by their CCR&R agency. Children reassessed by their contract provider also lived in neighborhoods with a higher percentage of female-headed households, higher unemployment rates, and more urbanization than children reassessed by their CCR&R agency.

Table 3 depicts the median length of subsidy spells. Overall, half of the subsidy spells end at 10 months. This outcome is the same for children reassessed by their contract provider and for those reassessed by their CCR&R agency. There is variation in the median spell length across the CCR&R regions, as well as across reassessment agencies (i.e., CCR&R agency or contract provider) within each region. The median spell length ranged from 9 months in region 4 and region 5 to 11 months in region 1. Although

TABLE 2. Sample Characteristics

	All Sample ($n = 7,398$)	Children Reassessed by Contract Provider ($n = 3,016$)	Children Reassessed by CCR&R Agency ($n = 4,382$)	Significance Test
Reassessment agency:				
CCR&R agency	59.2			
Contract provider	40.8			
Child and family characteristics:				
Age of child:				
0–2	27.6	22.3	31.2	
3–4	13.7	12.2	14.8	
5+	58.7	65.5	54.0	100.24**
Number of children in care at entry (mean)	1.9	1.8	1.9	3.36**
Race of mother:				
White	20.2	17.7	22.0	
Black	14.1	13.7	14.4	
Hispanic	23.6	27.2	21.1	
Asian	2.3	1.8	2.6	
Missing	39.9	39.7	40.0	49.76**
Nativity of mother:				
US born	40.7	39.7	41.4	
Foreign born	23.2	25.7	21.6	
Missing	36.1	34.7	37.0	16.99**
Father present in the household	14.2	11.6	16.0	28.82**
Any nonparental adult in the household	4.1	4.6	3.7	3.35
Family monthly income (mean; $)	1,984	1,954	2,004	1.83
Characteristics of subsidy and child care:				
Program type:				
Family child care	20.4	19.5	21.0	
Center-based care	79.6	80.5	79.0	2.40
Reasons of subsidy receipt:				
Employment	63.4	64.5	62.6	
Posttransitional	18.3	18.4	18.1	
Job search, education, and training	10.8	10.0	11.4	
Special need	4.6	4.2	4.9	
Other	3.0	2.9	3.0	6.23
Monthly subsidy value (mean; $)	292	289	294	.82
CCR&R region:				
Region 1	32.1	34.9	30.1	
Region 2	21.5	27.9	17.1	
Region 3	4.8	1.9	6.9	
Region 4	11.2	14.4	9.0	
Region 5	16.3	10.3	20.3	
Region 6	14.2	10.5	16.7	405.49**
Travel time to reassessment agency (minutes)	15	10	18	23.33**
Exit month (%):				
January	1.6	2.1	1.3	
February	2.7	3.0	2.5	
March	1.3	1.3	1.3	
April	6.6	5.7	7.3	85.11**

TABLE 2 (*Continued*)

	All Sample (n = 7,398)	Children Reassessed by Contract Provider (n = 3,016)	Children Reassessed by CCR&R Agency (n = 4,382)	Significance Test
May	6.0	5.9	6.1	
June	8.5	8.4	8.6	
July	7.6	8.4	7.1	
August	10.3	11.2	9.7	
September	14.6	17.4	12.7	
October	18.7	17.8	19.3	
November	14.0	11.0	16.0	
December	8.1	7.9	8.3	
No exit				
Provider characteristics:				
Years in business	13.6	14.3	13.1	1.1**
Licensed capacity	84	97	76	1.59**
Subsidized children (%)	49.8	57.8	44.3	1.14**
Local characteristics:				
Female-headed household (%)	38.3	40.2	37.0	1.04
Unemployment rate	11.4	11.7	11.2	1.10**
Urban area (vs. suburban)	.4	.4	.4	1.15**

Note.—Chi-square tests and t-tests are used for the significance test. CCR&R = Child Care Resource and Referral.

** $p < .01$.

regions 1, 3, and 4 show the same median spell lengths for children reassessed by their contract provider and children reassessed by their CCR&R agency, regions 2, 5, and 6 show differences in reassessment agencies' median spell length. Figure 1 (available online) shows the survival curves of each region over the study period. The results of the log-rank tests show the overall survival distribution of two groups of children in region 1, region 2, and region 6 were statistically significantly different, with $p < .01$.

TABLE 3. Median Length of Subsidy-Receipt Spell, All Spells (n = 11,550)

	N	All Sample	Children Reassessed by Contract Provider	Children Reassessed by CCR&R Agency
All spells (months)	11,550	10	10	10
CCR&R region:				
Region 1	3,694	11	11	11
Region 2	2,483	10	9	10
Region 3	536	10	10	10
Region 4	1,247	9	9	9
Region 5	1,921	10	9	10
Region 6	1,669	9	7	11

Note.—Median spell lengths were estimated using the Kaplan-Meier method. CCR&R = Child Care Resource and Referral.

Table 4 presents the results of the multivariate regression models using the discrete-time event-history regression models. In the models, the association between the administrative change and subsidy stability was examined by the interaction term between the reassessment agency and 1-month-lagged reassessment month. Both being reassessed by a contract provider and being in the month after the reassessment month ("the main effect") were likely to increase the odds of participants leaving subsidies. However, the odds of leaving subsidies the month after the reassessment month ("the interaction effect") were lower by 26 percent for children reassessed by their contract provider than for children reassessed by their CCR&R agency. This means that although children who used contract providers were more likely to leave subsidies at any point in time, the odds of exit from the subsidy program related to reassessment were lower than for children who used voucher providers.

Table 4 also shows other characteristics that were statistically significantly related to the odds of subsidy exit. Similar to prior studies, families having older children, two-parent families, participating in other work activities rather than being employed, and summer months were positively related to higher odds of leaving subsidies compared with their counterparts. We also found that using center-based care compared with family child care and using child-care providers that stayed in business longer were related to increases in the odds of subsidy exit (i.e., greater instability). However, Hispanic children, children of families with more children in care, families receiving higher average monthly amount of subsidies, and families using child-care providers serving a higher proportion of subsidy-receiving children in their care were related to lower odds of leaving subsidies (i.e., greater stability).

The SAF framework suggests that the level of administrative burden and compliance costs at the client level may differ depending on how local agencies adopt the administrative changes into their operations and daily practices. To examine the variation in the association between the administrative changes and subsidy stability by region, we conducted the same discrete-time event-history analysis separately by each region. The key coefficients of the models are shown in appendix C. We then used coefficients from the multivariate regression results to estimate the predicted probabilities of subsidy exit for the two groups of children in each region. Table 5 shows the predicted probability of subsidy exit for children reassessed by their contract provider and for children reassessed by their CCR&R agency

TABLE 4. Results of Discrete-Time Event-History Analysis Predicting Subsidy Exit, First Spells Only ($n = 7{,}398$)

	Odds (Confidence Interval)
Reassessment agency (vs. CCR&R):	
Contract provider	1.098* (1.021, 1.181)
1-month lagged reassessment month	12.450** (11.088, 13.978)
Reassessment agency × 1-month lagged reassessment month	.737** (.613, .885)
Child and family characteristics:	
Age of child at entry	1.186** (1.174, 1.198)
Number of children in care at entry	.918** (.884, .953)
Race of mother (vs. white):	
Black	.864* (.766, .975)
Hispanic	.828** (.741, .924)
Asian	.972 (.781, 1.210)
Missing	.963 (.860, 1.078)
Nativity of mother (vs. US born):	
Foreign born	1.019 (.930, 1.118)
Missing	1.013 (.919, 1.116)
Father present in the household	1.143** (1.038, 1.258)
Any nonparental adult in the household	1.021 (.874, 1.193)
Family monthly income	1.000 (1.000, 1.000)
Characteristics of subsidy and child care:	
Center care (vs. family care)	1.294** (1.159, 1.445)
Reason of subsidy receipt (vs. employment):	
TANF posttransitional	1.231** (1.135, 1.335)
Job search, education, and training	1.467** (1.301, 1.655)
Special needs	1.106 (.954, 1.283)
Others	1.045 (.878, 1.244)
Average monthly amount of subsidy	.999** (.999, .999)
CCR&R region (vs. region 1):	
Region 2	1.326** (1.200, 1.467)
Region 3	1.014 (.869, 1.184)
Region 4	.897 (.794, 1.014)
Region 5	1.055 (.953, 1.169)
Region 6	1.015 (.914, 1.127)
Travel time to reassessment agency (minutes)	1.001 (.999, 1.004)
Exit month:	
June	.886 (.774, 1.013)
July	9.060** (8.338, 9.845)
August	1.250** (1.081, 1.444)
September	3.828** (3.513, 4.172)
Provider characteristics:	
Years in business	1.005* (1.001, 1.009)
Licensed capacity	1.000 (.999, 1.000)
Subsidized children (%)	.997** (.996, .998)
Local-level variables (census tract):	
Female-headed household (%)	1.003* (1.001, 1.006)
Unemployment rate	1.001 (.992, 1.010)
Urban area (vs. suburban)	1.010 (.925, 1.103)
Constant	.009** (.007, .011)

Note.—CCR&R = Child Care Resource and Referral; TANF = Temporary Assistance for Needy Families.

* $p < .05$.

** $p < .01$.

TABLE 5. Predicted Probability of Subsidy Exit the Month after Reassessment Month by Reassessment Agency

	A. Children Reassessed by Contract Provider (%)	B. Children Reassessed by CCR&R Agency (%)	Difference (A − B)
All	57.70	64.56	−6.86
CCR&R region:			
Region 1	68.81	89.03	−20.22
Region 2	78.06	78.48	−.42
Region 3	76.08	68.91	7.16
Region 4	52.87	38.70	14.17
Region 5	23.83	68.01	−44.18
Region 6	71.93	52.76	19.17

Note.—Predicted probabilities were calculated based on the coefficients from the discrete-time event-history modeling by regions. All covariates included in the main analysis, shown table 3, were included in this analysis. All the predicted probabilities shown in the table were statistically significant at $p < .01$. CCR&R = Child Care Resource and Referral.

in each region. Overall, children reassessed by their contract provider had a 7 percentage point lower predicted probability of subsidy exit in the month after reassessment compared with children reassessed by their CCR&R agency (57.7 percent vs. 64.6 percent). However, the association between reassessment agency and the predicted probability of subsidy exit the month after reassessment varies considerably by service region. In three of the six CCR&R regions, the predicted probability of subsidy exit the month after reassessment was lower for children reassessed by contract providers (i.e., we observed positive effects of the administrative change). In the remaining CCR&R regions, the predicted probability of exit was higher for children reassessed by contract providers (i.e., we did not observe positive effects of the administrative change). Specifically, in region 1, region 2, and region 5, the predicted probabilities that children reassessed by contract providers were likely to leave subsidies the month after reassessment were lower by 20, 0.4, and 44 percentage points, respectively, than those reassessed by CCR&R agencies. Children reassessed by contract providers in region 6, region 4, and region 3 were associated with higher predicted probability of leaving subsidies the month after reassessment than children reassessed by CCR&R agencies (19, 14, and 7 percentage points higher, respectively). The three regions experiencing positive effects are large service regions (the three largest service regions for income-eligible voucher children), which together comprised two-thirds of the statewide income-eligible voucher caseload.

QUALITATIVE FINDINGS

In this section, we provide a detailed discussion of how the qualitative findings from studying the implementation of the administrative change explain the findings related to our three main research questions. We start by describing the policy and organizational factors we identified through the implementation research as possible state- and local-level implementation factors that explain our main outcome findings. We then discuss how policy and organizational factors interact within regions to explain our overall finding of small, positive statewide effects and observed differential effects by region.

Policy-Level Variation: Doing More with Less in Larger Service Areas

Qualitative data illuminate the policy and organizational-level factors that help explain the overall small but positive effects of reassessment with contract providers on subsidy exits statewide and the wide local variation that included both positive and negative effects.

Key informants emphasized two primary drivers of the changes in reassessment agencies that explain how statewide and local policy contexts shifted in ways that affected the association between the administrative changes and subsidy stability. These drivers included state funding cuts and the state agency's goal of implementing a federally recommended family-friendly practice, allowing child-care providers to help with collecting subsidy documentation. More than 55 percent of CCR&R funding was reduced from 2009 to 2010 (Commonwealth of Massachusetts 2009, 2010). The cuts, instituted by the state legislature, reduced the CCR&R agencies' capacity to conduct voucher reassessments and raised the state agency's concerns that parents would face administrative barriers to reassessment. As one key informant suggested, "CCR&Rs were overwhelmed due to the [budget] cut. They didn't have enough staff to manage their caseloads, and so families weren't having phone calls confirmed."[11] To address this reduction in capacity, the state instituted the administrative change requiring that contract providers use their existing infrastructure to reassess their voucher clients to alleviate CCR&R caseload pressure and

11. Given the small number of interviewees across the different groups of key informants including the state agency, state agency board, CCR&R agencies, and contract providers, to protect confidentiality we do not identify the group that each key informant represents.

to provide parents with a more convenient location for reassessment. Another key informant summarized the state agency's perspective: "The primary goal of the change was to create a more streamlined process for families. It made sense that contracted providers already spent so much time with families . . . and were very familiar with subsidy reassessment. This would be an appropriate change to make, a change in the best interest of families."

Reductions in state funding also cut the number of CCR&R agencies from 14 to 7 over a 3-year period (2010–13), which increased each remaining CCR&R agency's service delivery area, caseload, and eligible population. In particular, the new service-region boundaries created some regions that were substantially more geographically dispersed than others. Table 6 highlights the wide differences in key service-region characteristics. Whereas the smallest service region was only 88 square miles, the largest was nearly 3,000 square miles. Three CCR&R agencies (regions 1, 2, and 5) not only faced the highest concentrations of the state's income-eligible voucher caseload and demand for subsidies but also had the regions with the largest number and density of contract providers that could conduct voucher reassessment.

The challenge for effective statewide implementation of the reassessment changes was that there were fewer resources in the service system, requiring both CCR&R agencies and contract providers to do more with less. The reassessment changes decreased CCR&R agencies' caseloads, but staffing cuts meant that workloads increased. As one CCR&R agency staff member commented, "[The administrative changes] alleviated a bit of the burden of having a huge caseload and significant funding cuts, but the R&R still has a huge caseload today." Another CCR&R agency staff member pointed out that the staff member's caseload was still twice what it should be for the CCR&R agency's staffing size. Voucher providers verified that high CCR&R caseload volume had implications for the stability of subsidy benefits. Four-fifths of these providers noted that parents could not easily contact the CCR&R agencies to schedule reassessment appointments. A voucher provider explained, "It's very frustrating for parents. The parents will make phone call after phone call. No one at the CCR&R will answer the phone. The CCR&Rs are so understaffed. They're doing the best they can."

In terms of providers' capacity to conduct reassessments, two-thirds of contract providers noted that the lack of state funding to offset additional

TABLE 6. Potential Explanatory Factors of Local Variation in Quantitative Results by Policy and Organizational (CCR&R) Fields

	Model Results	Policy				Organizational (CCR&R)						
Service Region	Contract Provider Conducts Reassessment*	Demand for Subsidies†	Voucher Caseload‡	Region Size (Square Miles)§	Supply of Contract Providers to Conduct Reassessment‖	Full Implementation of Reassessment Change	Can Submit Copies of Signed Forms	Does Not Require In-Person Form Submission	Additional Appointment Reminder Notifications Sent	Online Appointment Scheduling Available	Walk-In Appointments Accepted	Outpost Locations Offered
Region 1	+	38,405	4,371	923	448	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region 2	+	36,314	2,674	88	351	Yes	Yes	Yes	No	No	No	Yes
Region 3	—	4,790	593	147	18	No	No	Yes	No	No	No	No
Region 4	—	28,191	2,101	1,136	140	Yes	No	No	Yes	No	No	Yes
Region 5	+	33,300	2,728	2,955	192	Yes	No	Yes	Yes	No	No	Yes
Region 6	—	26,438	1,644	2,107	173	Yes	No	No	Yes	Yes	Yes	Yes

Note.—CCR&R = Child Care Resource and Referral.

* Estimates from table 5.

† Potentially income-eligible children for child-care subsidies. Estimated as children under age 12 living with single parent and with family income below 200% of the federal poverty line (American Community Survey, 2008–12).

‡ Income-eligible voucher child caseload in 2012 calculated using Massachusetts Child Care and Development Fund administrative data.

§ Area estimates based on authors' calculations based on CCR&R regional boundaries, constructed using US Census Bureau Topologically Integrated Geographic Encoding and Referencing Files, Vintage 2012.

‖ Total contract providers that also serve children with vouchers as of January 2012 calculated using Massachusetts child-care provider licensing data.

responsibilities led to staffing issues, though these issues decreased over time for some providers. A multicenter provider suggested that "[we] cannot take on the voucher management function without taking work away from the classroom." Another multicenter provider stated, "Without knowing this was going to happen . . . we tried to do [the additional reassessment work] without hiring anyone. We just increased the workload of one or two staff, which is not fair. . . . So it's been an issue." Another multicenter provider noted the decline in administrative burden over time: "[We] managed the increase in workload through routinization. As people understand how to do [voucher] reassessment, it becomes less burdensome." One-third of contract providers did not find that the additional reassessment responsibilities increased their workload because of the small number of vouchers they accepted. As a single-center provider explained, "It is easier and quicker for program staff to do the reassessment than to negotiate with the CCR&R. We only have a couple of vouchers, [so the additional responsibilities] didn't increase [our] workload."

To summarize, at a statewide policy level, improvements in subsidy stability may not have been fully realized across the board due to implementation barriers for many contract providers because of system-wide resource constraints. At the same time, statewide resource constraints also shifted local policy contexts in ways that may have affected the implementation of the administrative changes differentially depending on the region's caseloads, geographic dispersion, and the supply of local contract providers. These shifts in local policy contexts help explain the regional variation observed in the associations between administrative change and stability.

Organization Level: Varying CCR&R Program Implementation and Practices

By design, states allow local agencies broad flexibility to design and implement their own administrative processes within set, statewide policy and documentation requirements. It is not surprising that CCR&R agencies vary in their approaches to implementing user-friendly administrative practices. Over half of key informants said that they were familiar with varying practices across CCR&R agencies. As one key informant noted, "Oh, this R&R does it this way, but others do it that way."

The federal law reauthorizing the child-care subsidy program recognizes the high administrative burden associated with the program, and

the ensuing policy guidance recommends implementing user-friendly reassessment practices across each stage of the process. Table 6 highlights that there is wide variation in the implementation of practices across CCR&R agencies that makes reassessment less burdensome. Each CCR&R agency implemented at least one out of six user-friendly practices, and one agency implemented all six. Three agencies located in service regions with the highest income-eligible voucher caseloads allowed parents to submit all paperwork in person, and they offered outpost locations such as schools, community centers, nonprofit service organizations, and TANF offices. Only two out of the six agencies helped reduce administrative burden by both allowing for online appointment scheduling and sending multiple appointment reminders. User-friendly options provided parents with more locational choices, increased convenience, and decreased travel time, which could reduce subsidy exits for families reassessing with CCR&R agencies.

If CCR&R agencies are offering user-friendly reassessment experiences (i.e., reducing administrative burden for families accessing the subsidy system), this could reduce or negate the effects of the proposed family-friendly administrative change of switching reassessment to contract providers. Moreover, if some CCR&R agencies are able to offer more family-friendly experiences than others, then families could benefit less by reassessing at contract providers in regions where CCR&R reassessment practices are more family friendly.

Observed differences in agency practices were driven by both organizational and policy factors. At the organizational level, CCR&R agencies' staff across service regions described diverse service approaches based on the mission of the parent organization (such as a community action agency) or perceived best practices for serving families (such as personal interactions). A CCR&R agency staff member explained why the agency does not offer online scheduling: "Parents cannot schedule appointments online. . . . [We] do not think online scheduling is good because it assumes that parents know what they need to bring into an appointment. . . . Everyone's case is different." Another CCR&R agency staff member explained that "R&R practices are different depending on the demographics or resources tied to that agency." We observed varying CCR&R agency practices tailored to the needs of local families in each region. All CCR&R agencies had at least one bilingual staff member fluent in the predominant language of the local client population. In contrast, differences in practices driven by policy-level factors, such as limited policy guidance and resource constraints, can lead to

higher levels of subsidy instability. A CCR&R agency staff member said, "[We do] not send any text messages. It's too expensive."

Organization Level: Little Regional Variation in Implementation of Reassessment Changes

In terms of implementing the new reassessment approach, all but one key informant with familiarity of the changes agreed that the implementation of changing parents' reassessment agencies was extremely challenging and uneven at first. Implementation stabilized within the first year as the state agency improved policy guidance and communication channels, updated technology, and clarified agency roles. Interviews with CCR&R agency staff and providers verified that families required to be reassessed by contract providers under the administrative changes were in almost all cases reassessed by that entity and not by CCR&R agencies. There was little regional variation in the full implementation of the changes. Only one CCR&R agency, which had the smallest income-eligible-voucher caseload, reassessed families that did not feel comfortable reassessing with their provider primarily due to concerns over sharing financial information. Thus, the limited local variation in the implementation of reassessment changes suggests that the likely driver of local variation in subsidy exits is the local, regional system differences in agency reassessment practices and policy-contextual differences in service regions that affect parents' reassessment burden.

Organization-Level Variation: Contract Providers' Multiple Reassessment Models

Key informants and CCR&R agency staff expressed some concern that large contract providers with multiple center locations and family child-care systems required families to travel to central office locations to submit paperwork instead of visiting their child-care centers. Sending parents to an unfamiliar office could increase administrative burden and lead to unintended negative consequences on subsidy stability. One key informant familiar with contract-provider practices stated, "Some providers do reassessment centrally. However, a lot of providers do reassessment in the centers themselves." Another key informant referred to providers having on-site "mini-R&R units." Noting that some parents' paperwork is processed at central offices, a key informant clarified that center staff transferred paperwork to the central office rather than having parents traveling to the

central office. She stated, "[Some] providers have a central process that is a hybrid, where a parent's paperwork is collected at local program and sent to [a] central site. [The] parent never needs to travel to [the] central office."

Contract providers' reassessment models ranged in complexity from parents reassessing directly at provider sites to parents traveling to the central program-administration office, to parents submitting forms to provider staff (including center directors, teachers, bus drivers, and billing coordinators), who transferred documents and approved vouchers back and forth from the main administrative office to parents. Out of the 32 contract providers interviewed, only four multicenter providers and one family child-care system did not offer families any option to reassess at the child-care provider site, with provider staff, or remotely (by phone, email, fax, or mail). Under this model, parents were required to travel to an office other than the child-care provider site, adding to parents' administrative burden. A family child-care system staff member indicated that "family child-care providers do not collect documents themselves, although [they] will sometimes help remind parents to send them to [the central office]." This model may have avoided placing administrative burden on smaller providers that are part of a larger umbrella organization, but it can add to parents' administrative costs by requiring them to reassess with an unfamiliar agency they have never visited.

Most contract providers did not require parents to travel to central agencies and offered options that can make voucher reassessment easier. Staff members from seven individual centers indicated that families reassessed on-site with the center staff, where care is provided. For the remaining 20 contract multicenter organizations or family child-care systems, agencies offered parents options to reassess remotely, at the program site or with program staff, even if a central office processed their paperwork. One multicenter contract provider explained, "Each of the seven centers does its own reassessment. At one center parents can give documents to anyone at the center. . . . When [reassessment] is complete . . . [staff] will put a copy of the voucher into a sealed envelope and leave it in the classroom with a note." Another contract provider described the process: "Parents can drop off documents in-person with me at the toddler [or] preschool program or with the school age director. . . . Or some parents fax the documents. Then vouchers can be signed in-person with me or the school age director." Contract providers' reassessment models can have differential effects on families' administrative burden and, thus, on

subsidy exits, depending on the ease with which families are able to navigate the models. Although some families are required to travel to an additional agency, which could increase their burden, most providers made the process easier by reducing paperwork hassles and not requiring appointments. Note that although we observed variation in reassessment approaches by the type of child-care providers and their administrative capacity, given the small sample size of providers, we were not able to test for any systematic differences in contract providers' approaches across service regions.

Interaction Between Policy and Organizational Factors Explaining Local Variation

Explaining the association between administrative change and lower predicted probability of subsidy exit in three regions. Table 5 shows that reassessment at contract providers compared with CCR&R agencies reduced the predicted probability of subsidy exit the month following reassessment in regions 1, 2 and 5, with the largest reduction in regions 1 and 5. Table 6 highlights that caseloads in regions 1, 2, and 5 combined comprise two-thirds of the statewide income-eligible voucher caseload. These regions are high demand and high caseload and include the largest number of contract providers, which could absorb a sizable proportion of the reassessment caseloads from the CCR&R agencies. Within each high-volume region, additional factors related to policy-level factors, such as the geography of the service region, transportation infrastructure, and organizational factors, such as philosophies and reassessment practices, further explain the positive effects of exposure to contract-provider reassessment.

The extremely high caseloads concentrated in the three service regions presented capacity challenges for CCR&R agencies. As a region 1 CCR&R agency staff member explained, "The caseload is astronomical right now. Families are also changing their circumstances multiple times each year," requiring more interactions with staff. Funding cuts also led to CCR&R agency closings and expanded service boundaries. In particular, with the closure of one large CCR&R agency, region 1 substantially increased in size and absorbed several new towns that were much further away from their central location, including areas that did not offer efficient public transit routes to the CCR&R agency. To address the new volume of cases, the

CCR&R agency added a full menu of reassessment options to reduce parents' travel and compliance costs. This measure also decreased the number of in-person meetings for staff. The CCR&R agency in region 1 was also unique in its use of technology that strengthened collaboration with providers. A staff member at a voucher provider in region 1 explained, "The CCR&R has a great online system, where you can look up and pull down vouchers and print out attendance and reimbursement forms. This works really well." Therefore, although the region 1 CCR&R agency responded to the increase in caseload by using family-friendly options and technological innovations, the increased convenience of reassessing at contract providers in the context of limited transportation options likely contributed to the positive effects on reducing families' subsidy exits.

In contrast to region 1, region 5 is the largest service region in square miles, and it is mostly rural, with limited public transportation in some areas and none in others. Outside of one urban area, families in this region are more dispersed geographically and faced greater challenges traveling to CCR&R reassessment locations compared with smaller regions with more public transit options. To address geographic dispersion of families, the CCR&R system offered multiple alternative locations for reassessment, including satellite offices and community organizations, and did not require in-person submission of paperwork for families that lived on the outskirts of the region. However, the majority of families still had to be reassessed in person. Given that families did not have online and walk-in scheduling options to make appointments, interviewees commented that families had trouble making an appointment for in-person reassessment. As one voucher provider explained, "Voucher families aren't able to get in touch with their voucher counselor [at the CCR&R] to make an appointment. Phone calls are never returned." These geographic and CCR&R practice limitations contributed to the largest positive association between reassessment at contract providers and the lower predicted probability of leaving subsidies, compared with CCR&R agencies in region 5.

In region 2, where there was a negligible (although positive in direction) association between reassessment at contract providers and subsidy exits, there were high caseloads but a smaller service area with a well-developed public transportation system as well as a high number of contract providers to conduct reassessments concentrated in this small region. Interviewees discussed how CCR&R agency and contract provider

locations were equally convenient, particularly because the CCR&R agency had multiple outpost locations. Thus there was little, but significant, difference in the association between reassessment agency and subsidy exits.

Explaining the association between administrative change and higher predicted probability of subsidy exit in three regions. Families that were reassessed at CCR&R agencies in regions 3, 4, and 6 had a lower predicted probability of subsidy exit the month following the reassessment month than families reassessed by contract providers. This is likely due to the lower caseloads and subsidy demand in these regions and different organizational approaches. Regions 4 and 6 had midsized service volume, comprising about one-third of the state's income-eligible voucher caseload. Although region 6 is geographically large, staff interviews in this region highlighted the CCR&R agency's emphasis on one-on-one interactions with parents and the requirement of in-person submission of forms with original signatures. A CCR&R agency staff member in region 6 emphasized that "it's best practice to have parents have an in-person appointment, especially if they haven't had one in a while." Agency staff also highlighted several client-based practices, such as enhanced referrals for children with special needs, multiple reassessment appointment reminders, and strong collaborations with contract providers in the region. These personalized interactions and practices in the context of lower caseload volume and fewer contract providers to take on reassessment activities likely increased the potential for successful reassessment and lowered the predicted probability of subsidy exit at CCR&R agencies.

Similarly to region 6, CCR&R agency staff in region 4 wanted families to reassess in person and did not offer options for electronic document submission or copies of paperwork. This CCR&R agency was part of a larger social services agency and, therefore, subsidy caseworkers wanted to discuss additional resources and referrals (related to child care or other needs) with parents. A staff member indicated that she was told by families that had moved from other service regions to region 4 that the CCR&R agency was "more hands on." She said that because the region's caseload is smaller than other service regions, it "allows us more time to work with families." Staff explained that the distance that families travel to the CCR&R agency is negligible, compared with the distance to their child-care provider, especially considering that there are five additional locations for reassessment

outside of their main office. The combination of (1) a medium-volume caseload and (2) a lower number of contract providers and organizational factors requiring in-person reassessments helped the positive association between the CCR&R agency and lower risk of subsidy instability.

Region 3 was one of the smallest regions of the state in terms of geographic size, caseload, demand for subsidies, and supply of contract providers to conduct reassessment. Therefore, although the CCR&R agency did not offer many of the user-friendly organizational practices identified in table 5, due to the region's small size, staff felt that they offered a more tailored experience for families. As one staff member explained, "Because we're so small, we're very attached to our staff team. We are overly involved with our clients and our providers. We see repeat families all of the time. We have great customer service and people skills. We try to do everything in our power to try not to have anyone lose their voucher. We know our neighborhoods, and we know our communities, and we can tailor our services accordingly."

Region 3 was also unique in that staff we interviewed indicated that they frequently reassessed voucher families that were supposed to reassess with their provider. One CCR&R agency staff member suggested that families preferred CCR&R agency reassessment because they were uneasy having their providers know of their financial information: "It's a comfort level thing." Not fully implementing the administrative changes in this region, coupled with the CCR&R agency's personalized approach to service delivery, likely lowered the odds of subsidy exits for families reassessing with the CCR&R agency.

DISCUSSION

Consistent with findings from a few recent studies with experimental designs (Mayer et al. 2015; Dechausay and Anzelone 2016; Richburg-Hayes et al. 2017), the current study found an overall positive and statistically significant association between administrative changes to the eligibility reassessment process and the stability of child-care subsidy receipt. Those experimental design studies found a 2.4–2.7 percentage point increase in on-time renewal of subsidy eligibility (Dechausay and Anzelone 2016; Richburg-Hayes et al. 2017). By contrast, our study found that the predicted probability of subsidy exit the month after the reassessment month was 7 percentage points lower for families that reassess eligibility

directly with their child-care provider than for families that reassessed their eligibility with CCR&R agencies. Although different study designs and different administrative tools used in these studies do not lend themselves to direct comparison to our own study, our finding adds to the evidence that reducing family administrative burden at a time when families face increased vulnerability to disruptions in service receipt can have a positive effect on subsidy stability. Moreover, considering that the odds of subsidy exit for children with contract providers were in general higher than those for children with voucher providers, it is noteworthy that the odds of subsidy exit related to reassessment were lower for children with contract providers than for children with voucher providers. Efforts and resources directed to families at times when they are more vulnerable to disruptions in service receipt may be a key ingredient to increasing subsidy stability. This finding offers new information about the potential for family-friendly practices in the delivery of human services to positively affect policy outcomes.

The second key finding of the study is that the association between administrative change and subsidy stability was not uniform across different service regions in the state and that state and local policy and organizational factors (examined in depth through the implementation study) helped explain these findings. The regional analysis revealed a bifurcation in the results with positive associations found in three regions and negative associations found in the other three regions. The implementation of transitioning reassessment responsibilities to contract providers was found to be similar across regions. We therefore found that this change did not drive regional differences. Instead, differences in the organizational contexts of CCR&R agencies seemed most likely to drive the different effects. In the three regions where positive effects were found, families faced increased administrative burden for a number of reasons. Their CCR&R offices were facing extremely high caseload volumes (saturation), the offices and reassessment sites were geographically inaccessible compared with other regions, and in some cases CCR&R practices were not as user friendly as in other regions. In these three regions, families benefited more from reassessing with contract providers. In the other three regions, where the change was not positively related to stability in subsidy receipt (i.e., children reassessing with CCR&R offices had more stable subsidy receipt), CCR&R agencies had lower caseloads and more resources, allowing them to personalize and tailor services to meet the needs of families in their regions.

This second set of findings reveals not only how the implementation factors for this specific change influenced subsidy stability but also gleans broader insights into the policy and organizational mechanisms at work in subsidy administrative processes that shape policy outcomes. We found that statewide, contextual policy factors, including a substantial reduction in overall financial resources paired with changing federal requirements, resulted in local policy shifts that affected family administrative burden differentially in different regions. For example, in some regions, resource constraints led the CCR&R agencies to reach a saturation point, making some of the CCR&R agencies virtually inaccessible to some families in their regions. At the organizational level, although some organizational practices (e.g., reassessment practices of contract providers) were found not to vary systematically by region, other administrative practices (e.g., remote reassessments) did vary systematically. An important, two-pronged contribution of this study is (1) the conceptualization of these policy and organizational factors, at multiple levels within the system, and (2) scientific approaches with which to study the linkages between these factors and policy outcomes using mixed-methods research.

Our study findings have several implications for the implementation and evaluation of administrative changes to improve eligibility assessment and social service delivery processes. First, they highlight the importance of considering multiple levels of the system (e.g., policy, organizational) when designing, implementing, or evaluating changes to eligibility reassessment and social service delivery practices. Understanding the existing system resources and the strengths and challenges of existing policies and practices is key to effective implementation of new changes. In addition, our findings highlight the value of studying the system-wide implementation and effects of changes to social service delivery systems. Past studies using experimental methods indicate the potential for administrative changes to produce positive effects (Mayer et al. 2015; Dechausay and Anzelone 2016; Richburg-Hayes et al. 2017). They do not show, however, how changes are integrated into existing statewide service delivery systems that are complex and nonuniform across the multiple dimensions that will ultimately determine whether a change's "potential for positive effect" gets realized in practice. Finally, although the findings of our quantitative study offer new insights about the relationship between administrative practices and subsidy stability, it is the integration of findings across the quantitative and qualitative components of the study that offers relevant

lessons for policy design and implementation, service delivery, and program and policy evaluation. By presenting the overall complexity of the policy implementation processes and variation that occurred at multiple levels within the system, the qualitative findings shed light on why we observed differential results of the change by region and what the key ingredients of success were. This approach complements our quantitative modeling to help us understand how administrative policies and practices influenced subsidy stability. And it highlights the crucial importance of including these perspectives into any assessment of the user-friendliness of a set of policies or practices.

Our findings are timely, as states are now implementing new family-friendly policies, rules, and practices to align with the recently reauthorized CCDBG program. This study suggests that increases in family-friendly administrative practices can have a positive association with subsidy stability, particularly administrative policies related to eligibility reassessment. It also provides insights for state administrators and evaluators: A system-wide change, although meant to be uniform throughout the system, may be interpreted, implemented, and experienced differently across the diverse agencies, organizations, localities, and families that comprise complex, statewide subsidy systems. The findings can help states anticipate sources of variation at multiple levels to inform their design and implementation strategies for system-wide changes. Furthermore, because key policy and organizational factors that shape how families experience administrative processes are not uniform at baseline, the benefits of administrative changes can accrue differentially throughout the system. This fact points to the importance of considering variation in baseline implementation capacity and family administrative burden (as a function of local variation in policy and organizational factors) throughout the system before implementation of a change. Such planning can help ensure that benefits accrue evenly. Finally, this study points to the value of mixed-methods research, which can inform subsidy policy and service delivery in Massachusetts and beyond. This approach can also inform states' approaches to CCDBG implementation and can inform federal policy makers' understanding of state-level implementation issues under CCDBG.

This study is not without limitations. Although many of the findings are relevant for states other than Massachusetts, the study examines the relationship between administrative changes and subsidy stability in only one state. Because CCDBG is a block grant program, states have a high level of control

and autonomy under the program and, therefore, subsidy systems are not uniform across states. Massachusetts's subsidy system is different from others by virtue of a number of family-friendly administrative practices implemented prior to federal mandates under the recently reauthorized CCDBG program. The findings of the present study, therefore, may not be applicable to the effect of a similar reassessment change in a state where family-friendly administrative processes and the capacity to support implementation of these processes are not in place when they implement the changes.

Nevertheless, focusing on one state allows us to reveal variation at the policy and organizational levels that would be difficult to study if we examined multiple states. In addition, despite its uniqueness in some respects, Massachusetts shares several salient features with other states, such as regional variation in population demographics, size of subsidy caseloads, CCR&R administrative practices, long waiting lists for subsidy, and high child-care costs. Finally, the reauthorized CCDBG law encourages states to experiment with greater use of contracts. Massachusetts, therefore, can provide a useful case study, as contracted care has historically been central to its subsidized child-care system and may provide an example for other states considering expansion of contracted care (or mixed voucher-and-contract approaches). Moreover, key components associated with the required changes of CCDBG reauthorization (2014) had not changed during the study period (2012–15). For example, Massachusetts already complied with most of the required CCDBG policy changes that have been demonstrated to affect subsidy stability, such as 12-month authorizations and 12-week job search vouchers. In other states, therefore, effects of administrative changes could be buried in larger federal policy shifts in the child-care subsidy program.

A second limitation is that because of our use of observational data, the assignment of families into two groups was not random. The study group comprised families using contract providers that accepted vouchers, whereas the comparison group used voucher providers. We do not expect that families choose a child-care provider based on knowledge of the provider's eligibility reassessment capacity and select either a voucher provider or a contract provider that accepts vouchers. Nevertheless, there might be unobserved factors that affect families' preference for one type of provider over the other. Child-care decision-making is a complex process that can be affected by many factors, such as parent and child characteristics; parental employment characteristics; parents' personal values

as they relate to child care; and the accessibility, availability, and quality of child care in their communities (Chaudry, Henly, and Meyers 2010; Weber 2011). No prior research, however, suggests that parents select child-care providers based on whether the provider is part of a larger agency conducting voucher reassessment. Nevertheless, based on the evidence that families with more economic resources are more likely to use formal, center-based care than their counterparts (Blau 2001; Michalopoulos and Robins 2002; Chaudry 2004; Kimmel 2006), it may be that some families choose child-care centers and providers with higher licensed capacity. To consider this possible effect on our results, we controlled for key characteristics of child-care providers in the analysis.

In addition, this study did not consider the entire subsidy caseload, as the administrative changes in Massachusetts applied only to income-eligible families. The study excludes families eligible for subsidies based on other criteria (e.g., TANF-eligible families and families eligible through the child-welfare system). The implementation of the change could differently affect families of different eligibility types. Assessment procedures for families eligible based on criteria other than income could differ from those of income-eligible families. This disparity could lead to different effects in the magnitude and direction of the effects of administrative changes on subsidy exits.

The final limitation to note is that this study does not compare the benefits of family-friendly administrative changes with the benefits of other types of changes under CCDBG that could improve stability of subsidy receipt (e.g., increasing the generosity of eligibility policies). The findings suggest that family-friendly administrative changes can be done at a reasonably low cost and produce positive effects on stability. They provide limited guidance, however, on the benefits and costs of improving administrative service delivery systems at a time when states are making other changes to subsidy policies, such as increasing the duration of subsidy authorizations.

Despite these limitations, our study addresses an important gap in knowledge relevant to the implementation of family-friendly administrative practices, as recommended in CCDBG regulations, on subsidy stability and the importance of considering variation in related policy and organizational factors that influence the implementation of CCDBG changes. Our study also advances research evaluation of the implementation of changes in subsidy policy and practices by integrating quantitative and qualitative

methodologies. With more than 1.4 million children relying on the child-care subsidy system to access otherwise unaffordable care each month in the United States (US Office of Child Care 2016), it is critical to the integrity of the CCDBG program for states to implement family-friendly policies and practices that promote stable access to subsidies. Administrative changes that have demonstrated a positive effect on subsidy stability like those implemented in Massachusetts have the potential to advance the core goals of CCDBG: supporting stable parental employment and healthy child development through continuous access to quality care.

NOTE

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APPENDIX A

TABLE A1. Qualitative Sampling Criteria within Each Service Region: Subsidized Child-Care Providers by Administrative Structure and Type of Subsidy Participation

	Contract Provider	Voucher-Only Provider
Single centers	X	X
Multicenters	X	X
Family child-care systems	X	. . .

Appendix A outlines the five types of agencies included in the provider sample: (1) contract providers that were single centers, (2) contract providers that were part of multicenter organizations, (3) family child-care systems that conducted reassessment, (4) voucher providers that were single centers, and (5) voucher providers that were part of multicenter organizations. Selecting the sample in each service region involved generating a list of randomly selected providers based on these criteria. Two of the largest service regions are broken down into smaller service areas; therefore, we also sampled providers in these subregions. With the exception of the smallest service region, we interviewed at least four providers (from each contract voucher and single center–multicenter combination) and one family-child care system in each region.

APPENDIX B

TABLE B1. Sample Characteristics by Region ($N = 7,398$)

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Significance Test
N	2,372	1,589	358	828	1,203	1,048	
Reassessment agency:							
CCR&R agency	55.7	47.0	83.8	47.5	74.1	69.8	
Contract provider	44.4	53.0	16.2	52.5	25.9	30.3	405.49**
Child and family characteristics:							
Age of child:							
0–2	29.1	29.0	22.1	24.3	26.2	28.1	
3–4	12.4	12.6	19.6	15.9	12.2	16.6	
5+	58.5	58.4	58.4	59.8	61.6	55.3	40.22**
Number of children in care at entry (mean)	1.9	1.9	1.8	1.9	1.8	1.9	.92
Race of mother:							
White	19.3	3.3	21.2	27.5	35.7	24.0	
Black	7.6	23.7	19.3	21.9	10.1	10.8	
Hispanic	38.0	18.3	7.5	8.0	23.1	17.1	
Asian	2.2	1.6	15.6	1.8	1.6	.2	
Missing	32.8	53.1	36.3	40.8	29.6	48.0	1,462.22**

TABLE B1 (*Continued*)

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Significance Test
Nativity of mother:							
US born	33.4	30.7	32.4	46.5	62.0	46.1	
Foreign born	31.6	25.4	28.2	20.4	6.8	20.5	
Missing	35.0	44.0	39.4	33.1	31.2	33.4	490.21**
Father present in the household	10.8	10.2	28.8	16.6	16.1	19.3	27.64**
Any nonparental adult in the household	3.2	4.4	5.9	3.7	5.7	3.2	3.72**
Family monthly income (mean; $)	1,958	2,016	2,243	1,920	1,853	2,105	9.99**
Characteristics of subsidy and child care:							
Program type:							
Family child care	27.3	22.2	11.2	7.6	19.0	16.7	
Center-based care	72.7	77.8	88.8	92.4	81.0	83.3	184.91**
Reasons for subsidy receipt:							
Employment	64.5	60.4	71.8	67.2	58.4	65.0	
Posttransitional	18.2	20.3	13.1	15.0	21.3	16.1	
Job search, education, and training	8.7	12.5	9.2	10.4	13.0	11.5	
Special need	5.1	4.5	2.2	4.4	6.1	3.2	
Other	3.5	2.3	3.6	3.1	1.3	4.3	95.41**
Monthly subsidy value (mean; $)	296	328	323	273	262	266	16.93**
Travel time to reassessment agency (minutes)	15	9	12	20	17	20	92.54**
Exit month (%):							
January	1.6	1.7	1.1	2.4	.7	1.9	
February	2.2	2.2	1.1	3.1	2.6	5.1	
March	1.1	1.2	1.1	1.7	1.9	.9	
April	7.0	6.2	5.3	6.8	8.6	4.6	
May	6.3	4.5	6.4	4.7	6.2	8.1	
June	8.2	7.6	12.0	10.6	7.1	9.4	
July	5.4	12.6	10.1	9.7	4.5	6.0	
August	11.8	7.6	4.5	7.0	10.6	15.2	
September	16.7	18.3	18.2	10.6	15.2	5.5	
October	30.8	10.6	10.3	20.3	12.8	12.1	
November	4.5	16.2	19.6	14.4	21.4	21.4	
December	4.5	11.4	10.3	8.7	8.3	9.9	996.48**
No exit							
Provider characteristics:							
Years in business	11.7	13.7	15.5	16.1	14.2	14.3	47.04**
Licensed capacity	86	59	83	109	90	92	62.59**
% subsidized children	49.1	58.7	36.5	53.5	51.5	37.8	82.28**
Local characteristics:							
Female-headed household (%)	37.1	46.4	28.1	37.4	40.7	30.3	163.86**
Unemployment rate	10.6	12.5	10.7	12.5	12.6	9.7	90.15**
Urban area (vs. suburban)	.1	.7	.4	.3	.5	.4	442.56**

Note.—Chi-square tests and analysis of variance tests were conducted for the significance test by region. CCR&R = Child Care Resource and Referral.

** $p < .01$.

APPENDIX C

TABLE C1. Results of Discrete-Time Event-History Analysis Predicting Subsidy Exit by Region, First Spells Only

	Region 1	Region 2	Region 3
Reassessment agency (vs. CCR&R): Contract provider	.982 (.768, 1.107)	1.107** (1.195, 1.601)	1.165 (.759, 1.787)
1-month lagged reassessment month	14.108** (.000, 17.913)	17.913** (11.204, 19.468)	17.904** (11.259, 28.473)
Reassessment agency × 1-month lagged reassessment month	.831 (.304, 1.182)	1.182* (.420, .910)	.630 (.234, 1.697)
	Region 4	**Region 5**	**Region 6**
Reassessment agency (vs. CCR&R): Contract provider	1.042 (.799, 1.427)	.893 (.732, 1.089)	1.217 (.985, 1.503)
1-month lagged reassessment month	8.441** (.000, 12.117)	10.837** (8.410, 13.965)	13.020** (10.050, 16.869)
Reassessment agency × 1-month lagged reassessment month	1.055 (.837, 1.757)	.550* (.319, .950)	.695 (.436, 1.108)

Note.—Numbers in the parentheses indicate standard deviations. CCR&R = Child Care Resource and Referral.

* $p < .05$.

** $p < .01$.

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