MEDICAID 1115 DEMONSTRATIONS

Attribution in DSRIP Demonstration Programs: A Spotlight on New Jersey and New York

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Introduction

Delivery System Reform Incentive Payment (DSRIP) demonstrations, Medicaid programs authorized under Section 1115 of the Social Security Act, are an important part of state and federal government efforts to transform and improve the care delivery system. DSRIP demonstrations seek to drive reforms by providing incentive payments to safety-net providers, such as hospitals, community providers, and practitioners, when they lower costs while improving quality and increasing access to care for Medicaid beneficiaries and the uninsured.

Providers participating in the DSRIP demonstrations (hereafter referred to as DSRIP providers) implement projects[1] intended to improve and transform care delivery, and they receive funds if they meet established goals tied to project and program performance. The incentive payments provided under DSRIP demonstrations are in addition to service payments that providers receive through either the Medicaid fee-for-service system or through the Medicaid managed care plans with which they contract.

Attribution, which is the process for assigning patients to providers and networks accountable for their care, is an integral part of assessing the progress of DSRIP providers and networks. However, attribution provides only one piece of the puzzle needed to determine accountability. Accurate measures

of outcomes are also needed to verify what was accomplished through DSRIP (Baller et al. 2017) and performance measures are needed to assess the quality of care.

The attribution process becomes more important—and the accuracy of its methodology more crucial—when payment is tied to performance, as it is in some DSRIP demonstrations. If state Medicaid programs continue on the path to value-based purchasing, the role of attribution in establishing provider accountability will be a foundational piece of population-based payment models. This brief examines attribution in DSRIP demonstrations, focusing on demonstrations approved by November 2016 including California[2], Massachusetts[3], New Hampshire, New Jersey, New York, and Texas.

The brief has three objectives: (1) to describe how DSRIP demonstrations handle attribution and to discuss the differences and commonalities in their methods, (2) to report on New Jersey's and New York's experiences developing and implementing an attribution method, and (3) to provide insights on factors that promote or hinder success for future DSRIP demonstrations—or other programs focused on delivery system redesign—and forthcoming DSRIP evaluations. We chose New Jersey and New York for case studies because these demonstrations have operated long enough for administrators and providers to offer insight on attribution methods, including challenges to and facilitators of implementation. The

THE MEDICAID CONTEXT

Medicaid is a health insurance program that serves low-income children, adults, individuals with disabilities, and seniors. Medicaid is administered by states and is jointly funded by states and the federal government. Within a framework established by federal statutes, regulations and guidance, states can choose how to design aspects of their Medicaid programs, such as benefit packages and provider reimbursement. Although federal guidelines may impose some uniformity across states, federal law also specifically authorizes experimentation by state Medicaid programs through section 1115 of the Social Security Act. Under section 1115 provisions, states may apply for federal permission to implement and test new approaches to administering Medicaid programs that depart from existing federal rules yet are consistent with the overall goals of the program and are budget neutral to the federal government.

Some states have used section 1115 waiver authority to implement delivery system reform incentive payment (DSRIP) demonstrations. Since the first program was approved in 2010, the breadth and purposes of these demonstrations have evolved, but they broadly aim to advance delivery system transformation among safety net hospitals and other Medicaid providers and to prepare safety net providers for the reduced availability of Medicaid supplemental funding, which has historically helped offset any shortfalls between Medicaid service payments and the costs of delivering services to Medicaid and/or the uninsured. More recent DSRIP demonstrations have also emphasized increasing provider participation in alternative payment models, intended to reward improved outcomes over volume.

demonstrations also explicitly include the uninsured population, which will shed light on important considerations for this population in terms of attribution, performance measurement, and payment.

Goals and design of DSRIP demonstration attribution methods

States have evolved in their use and design of attribution methodologies for DSRIP demonstrations. Appendix A describes the attribution methods used by six DSRIP states—California, Massachusetts, New Hampshire, New Jersey, New York, and Texas. State DSRIP demonstrations differ in their use of attribution and aspects of their methods (including prospective and retrospective attribution and the unit of attribution used (see *Attribution Terms* box)).

Since the inception of DSRIP demonstrations in 2010, more states have included attribution in their program designs, and a growing number are running their demonstrations via networks of providers that resemble accountable care organizations (ACOs), which have become the units of attribution. Although early programs such as the first demonstrations in California and Massachusetts did not use attribution, more recent demonstrations (including New Hampshire and program renewals in California and Massachusetts) have incorporated formal attribution methods. Currently, only one of the six states we reviewed, Texas, does not describe a formal attribution method in its special terms and conditions. These trends may reflect a growing understanding of the importance of attribution in performance measurement and payment and the need for coordinated or integrated delivery systems to improve care delivery. The trends may also signal movement toward state support for value-based purchasing (Medicaid Redesign Team 2015a).

States' approaches to attribution in their DSRIP demonstrations vary along several dimensions, including the following:

Use of attribution. Attribution serves two primary purposes in DSRIP demonstrations. First, some states use attribution along with other factors[4] for valuation. Valuation determines the maximum potential funding a DSRIP provider can receive for each project and sometimes performance metric. Second, some states use attribution in measuring a provider's performance and calculating the payment owed. Like other health care demonstrations, DSRIP demonstrations use attribution to determine which patient populations to look at when measuring the performance of a given provider (Pope 2011). These populations are often refined further based on project goals and metric specifications.

Attribution based on enrollment or service use. States have attributed patients to providers based on managed care enrollment, patterns of service use, or both. Most states with formal attribution methods use historical claims or encounter data for attribution. However, the renewed programs in California and

ATTRIBUTION TERMS

Prospective attribution: Use of historical claims, encounter data, or enrollment data to assign beneficiaries to participating providers *before* a performance period.

Retrospective attribution: Use of historical claims or encounter data to assign beneficiaries to participating providers at the *end* of a performance period.

Unit of attribution: The provider entity to which beneficiaries are attributed.

Hierarchy of provider types or settings for attributions: The order of precedence for providers or settings in determining attribution.

Attribution for project valuation: Attribution in which the population assigned to a provider affects a project's maximum potential funding.

Attribution for performance measurement: Attribution in which beneficiaries assigned to a provider form the basis of metric denominators used in performance measurement.

Massachusetts use managed care enrollment for attribution, with the latter combining it with historical claims or encounter data.

Prospective and retrospective attribution. Prospective and retrospective attribution methods identify which beneficiaries DSRIP providers are responsible for, but they differ in the timing in which assignment is made and for what purpose (Pope 2011; Yalowich et al. 2014; Lewis et al. 2013). In prospective attribution, the state provides a list of beneficiaries at the beginning of the performance period, enabling providers to reach out to beneficiaries and proactively address individual, project, and program improvement goals (Yalowich et al. 2014; Lewis et al. 2013). In retrospective attribution, the state assigns patients at the end of the performance period, which ensures that performance measurement for providers only includes patients actually served during the performance period (Yalowich et al. 2014; Lewis et al. 2013).

Attribution methods can be prospective, retrospective, or a combination of both. For example, New Jersey uses retrospective attribution alone.[5] In contrast, New York uses prospective attribution to identify an initial panel of beneficiaries, which helps with provider and patient engagement and outreach, along with retrospective attribution to determine the final beneficiary assignment for performance measurement.

Hierarchy of provider types or settings for attributions. States that rely on service use data to assign beneficiaries to providers have developed a hierarchy of provider types or settings to assign patients to the entities most responsible for their care. The hierarchy determines the order

of precedence for providers or settings in attributing patients. States such as New Hampshire and New York appear to be moving toward a model that places specialty providers or settings above primary care providers (PCPs) for their Medicaid populations. This model reflects an understanding that high-need Medicaid beneficiaries with complex conditions rely more heavily on specialists (for example, behavioral health providers) or specialty settings (for example, community mental health centers) and that specialists may play a significant role in care coordination and health improvement.

Unit of attribution. The unit of attribution signals which DSRIP providers (for example, hospitals or ACOs) are responsible for primary care, care coordination, and health care improvement for attributed beneficiaries (Health Care Payment Learning and Action Network 2016). Program designers use the unit of attribution to indicate which entities have substantial influence on and responsibility for reforming care delivery for Medicaid and uninsured populations. DSRIP demonstrations typically emphasize either hospitals or larger delivery networks. New Hampshire, for instance, uses an array of providers, including hospitals, substance abuse providers, and primary care practitioners within integrated delivery networks (IDNs), whereas New Jersey focuses on hospitals only.

Comparing federal ACO and DSRIP demonstration attribution

Some DSRIP states used the attribution methods developed for federal ACO programs like Pioneer and the Medicare Shared Savings Program (MSSP) as a starting point for their demonstration attribution methods. However, while the attribution methods of the DSRIP demonstrations share some features with the approaches used by federal ACOs, they differ as well. For example, federal ACOs use a two-step process to attribute beneficiaries (42 CFR 425.402). In the first step, ACOs use a plurality (i.e., greatest proportion) of primary care services to assign beneficiaries. If no assignment is made through this first step, then specialty services are considered. But overall, federal ACOs rely on primary care encounters as the nexus of patient and provider relationships among Medicare beneficiaries. In contrast, DSRIP demonstrations may focus on additional services such as those provided by emergency departments (EDs) or long-term care providers. New Jersey includes ED services as a usual point of contact between the safety-net population and the health care system. New York first considers behavioral health and long-term care providers before primary care for populations who use those services.

Underlying the differences between attribution methods used by federal ACOs and DSRIP demonstrations are the populations served. Federal ACOs are limited to Medicare beneficiaries, whereas DSRIP demonstrations serve Medicaid beneficiaries and, in some cases, uninsured people. Medicare and safety-net populations differ in their health care needs and their use of services. Understandably, these differences affect the design of attribution methods, reflecting the health care issues that disproportionately affect safety-net populations, such as behavioral health conditions and PCP shortages.

New Jersey Case Study

Development of an attribution method

New Jersey's attribution method was designed to align with the broader DSRIP demonstration goals: improving care for patients, enhancing the health of populations, and reducing costs. Although DSRIP projects in New Jersey focus on improving care for people who have a particular chronic condition, CMS encouraged the development of an attribution method that reflected the goals of improving population health. For example, a hospital might select a project focused on care transitions for patients with congestive heart failure, but for the purposes of performance measurement, the hospital would be accountable for all eligible patients attributed to the hospital, regardless of whether they have congestive heart failure.

To develop the method, CMS worked with state staff and a consultant, Myers and Stauffer. They developed a Quality Measures Committee, which included representatives from hospitals and the New Jersey Public Hospital Association, to provide subject matter expertise during development. Despite this involvement, hospital representatives said that they did not provide substantive input to the attribution method. They were only asked to provide feedback on limited aspects of the method (for example, the frequency of attribution calculations). One hospital representative said, "I don't think hospitals were involved, and considering they carry out the tool, it's important for the organizations preparing these methods to get feedback from them to identify gaps." The lack of hospital involvement likely contributed to the confusion about the DSRIP demonstration's focus on population health.

Although not the first state to design a DSRIP demonstration, New Jersey was the first state to develop a formal attribution method to promote accountability for population health improvement.[6] Because the state did not have other DSRIP demonstrations to draw from, it used the MSSP as a starting point. However, the Medicaid and uninsured populations served by DSRIP demonstrations differ in important ways from the Medicare beneficiaries served by MSSP. The low-income beneficiaries attributed to DSRIP demonstrations have frequent changes in insurance coverage as income levels fluctuate; they have certain social factors that affect their health needs (such as unstable housing and

employment), which hinders tracking and engagement in care; and they have complex conditions such as comorbid behavioral and physical health disorders, which make care coordination essential but more complicated. Ideally, attribution methods would account for these population differences. In New Jersey, the state and the DSRIP consultant recommended including the ED as a setting within the hierarchical process, contending that the ED is often used by Medicaid beneficiaries and uninsured people who need, but are not, connected to a health care provider and would benefit from improvements in the delivery system.

Implementation of an attribution method

Interviewees from New Jersey discussed several facilitators of and barriers to implementing their attribution method.

Facilitators. Hospital representatives noted that the state DSRIP learning collaborative (LC) run by Myers and Stauffer was helpful during implementation. It provided a valuable forum for educating providers on DSRIP processes (including attribution), supporting provider discussion, and enabling provider-to-provider learning. The LC fostered "an enthusiastic hospital base trying to make their projects a success," said one representative. These hospitals have shared their innovation and learning, which has inspired other demonstration providers. In a survey of hospitals conducted as part of a midpoint evaluation of the New Jersey DSRIP, hospitals rated the LC as "very helpful" (Chakravarty 2015).

An additional—though unexpected—facilitator came out of synergies between the DSRIP demonstration and a Medicaid ACO pilot. Several DSRIP hospitals also participating in New Jersey's Medicaid ACO pilot were able to collaborate on information sharing and care coordination. According to one hospital representative, "Because the same people sit in both areas [DSRIP demonstration and Medicaid ACO pilot] …they looked at their projects and worked to merge them into one." For example, the ACO needed to select health IT software to support improvements in population health and care coordination, so the hospitals are working together to select the same health information exchange vendor and align ACO quality metrics with DSRIP metrics. Two hospitals in DSRIP and the ACO pilot also recently signed a memorandum of understanding to allow information about shared patients to be exchanged in order to improve care coordination.

Challenges. Although the DSRIP demonstration was approved in October 2012, the attribution method was not finalized until 2014—the second year of the demonstration—after hospitals had selected their DSRIP projects. According to several interviewees, this delay contributed to hospitals' confusion about the DSRIP demonstration's focus on population health and the effects of the attribution methods on their payments. This confusion in turn led to some missed opportunities in project design that could have improved population health. For example, one hospital that developed a health home for people with severe mental illness (SMI) might have broadened its project to include more of the hospital's assigned patients. The hospital could have included people with substance use disorders (SUD), for instance, and

expanded SUD services. According to a hospital representative, only 3 or 4 percent of the 10,000 to 12,000 people attributed to the hospital qualify for its health home project. "We missed part of the boat on population health," said another hospital representative. The narrow scope of some DSRIP projects ultimately cost hospitals some funding because they were less likely to meet their population health performance goals with these limited target populations.

Almost all respondents reported general difficulties with the quality of data used for attribution. The process of patient matching, in which hospitals take attribution lists and match them with hospital records, was hampered by incomplete or unreliable data. The data used for attribution included Medicaid claims data and charity care utilization data. According to one respondent, the latter in particular was "either poor, unaudited, or us[ed] default Social Security numbers [that] we don't have enough data to consider a patient uniquely identified…[and] we can have multiple people being reported as one person." Presumably, this challenge would have significant implications for hospitals that have many uninsured patients, potentially affecting the payments they receive.

Another potential barrier is the lack of clarity regarding protections for patient-level data, which could hinder information sharing and, in turn, care coordination. Without clear federal guidance on the type of information that can be shared within DSRIP demonstrations, people chose the most restrictive interpretation of the law. For the New Jersey DSRIP demonstration, this led to the creation of separate attribution lists for hospitals and their reporting partners. Hospitals then had to retrieve lists from reporting partners to piece together full attribution lists.

The lack of clarity on data security also impeded care coordination. DSRIP hospitals received patient-level reports that masked data on the services patients received outside of the attributed hospital (for example, inpatient admissions and readmissions at another facility) as well as the names of the facilities that provided the services. One hospital respondent said that simply providing information on other facilities that touch a given hospital's patients would have helped them to reduce duplication of services and improve care coordination.

Yet another barrier is the design feature that limits a reporting partner's connection to only one DSRIP hospital. This feature belies how the health care delivery system for Medicaid and uninsured populations works; in reality, community partners often share patients with more than one hospital. However, under the New Jersey DSRIP demonstration, if Hospital A has an attributed patient who receives care from a community health center that is the reporting partner of Hospital B, Hospital A will not have access to information on the services the patient

NJ HOSPITAL TRANSITION OF CARE FOR SMI

One hospital changed its transition-of-care (TOC) team and processes to address social factors that affect health needs, to decrease hospital readmissions, and to inform the hospital's general model for TOC.

Changes included:

- Adding a nurse practitioner to the TOC team to fill a role previously filled by a social worker
- Including an assessment of social determinants of health that identifies, for example, transportation and housing needs

Benefits included:

- Decreases in the hospital's rate of re-hospitalization within 30 days
- A more informed TOC model for the hospital's general patient population, which goes beyond patients with SMI.

received from the center. If the DSRIP demonstration's goal is to improve population health, the program should allow flexibility to partner and share information with all entities involved in the care of the population (as in an ACO-like model).

How the attribution method has influenced DSRIP achievements

The attribution method—and hospitals' awareness of the method—has led to increases in hospital self-monitoring and measurement. One respondent said that some hospitals are monitoring their data in real time and creating alerts to identify patients for DSRIP projects. The self-monitoring has informed changes in the delivery system within hospital demonstration projects and the local delivery system.

As hospitals examined data for attributed patients in their projects, they identified gaps in care and made changes to the delivery system to address them. For example, a representative from a public hospital association said that some hospitals realized that patients were having difficulty finding PCPs who accepted Medicaid and who were willing to follow them after hospitalizations. The hospitals set up hospital-based clinics staffed by physician assistants and nurses to provide follow-up and medication management to prevent readmissions (see the *NJ Hospital Transition of Care* box for another example).

A greater understanding of the complex needs of low-income people—and the necessity of collaboration among providers that share patients—has prompted partnerships between hospitals. Hospital representatives said that as they examined their data to understand the barriers to reducing ED visits and hospital admissions for patients, they realized that their patients'

complex needs—including physical, mental, and social needs—posed barriers to care. And because Medicaid and uninsured patients tend to seek care from multiple facilities, including hospital and community-based providers, a full picture of a patient's needs and the services he or she received could not be formed unless providers worked together. Five hospitals in the southern region of the state are therefore partnering to develop better communications and common care plans for patients with behavioral health conditions. Another hospital representative shared that her hospital recently established a memorandum of understanding with a local hospital to improve information exchange and care coordination for shared patients.

However, although DSRIP has promoted a greater understanding of the need for these partnerships, for some hospitals it has been a lesson learned without the resources to support action. One representative said, "That [understanding] was absolutely a positive outcome, but we still don't have the resources to figure that piece out, and in the meantime, we are failing [our] metrics, and we have a lot of money on the line."

Development of an attribution method

The New York DSRIP demonstration's purpose is to fundamentally restructure the broad delivery system for Medicaid beneficiaries and the uninsured, particularly for those who are hard to reach. With this goal in mind, the state developed its attribution method to encourage collaboration among a wide base of providers, many of whom had previously been competitors. According to a state official, New York first wanted to connect a person with a broad network of providers, not just to his or her PCP, while "giving currency" in network development to specialty providers. The state used attribution to push for fewer PPSs with more extensive networks.

According to a state administrator, New York recognized quickly that there was no attribution model that would meet its needs, and it would need to create its own that would be consistent with the state's focus on hard-to-reach populations. One official said that staff kept one of the state's goals—reduce avoidable hospitalizations by 25 percent over five years—top of mind and believed that "this will only be achieved through the development of new patterns of care for hard-to-reach populations who overutilize emergency services, such as those with behavioral health conditions." He noted that 7 out of 10 measures in the state's high-performance pool—a fund made up of 3 percent of the valuation of each PPS—reflected aspects of behavioral health care, and payments from this pool were heavily weighted toward improving care for patients with mental illness (New York State Department of

Health 2015). The high degree of care coordination required for hard-to-reach populations was a rationale for incentivizing extensive network development and elevating specialists in the method.

To develop its attribution method, the state brought together several key stakeholders, including the Office of Mental Health, the Office of Alcohol and Substance Abuse Services, and managed care plans. The state representatives acknowledged, however, that it would have been better to include a broader stakeholder community. They felt as though the development of the attribution method was a "sprint to the finish," even though the method went through an iterative development and revision process. Several PPS representatives confirmed that they were not involved in developing the method. More than one reference was made by interviewees to the "black box" of attribution.

The stakeholders who were engaged played different roles in the development process. The state agencies assisted with technical implementation, including help figuring out rate and procedure codes and how to construct the proper weighting in algorithms. Essentially, state agencies responsible for major constituencies served as a proxy for the actual engagement of those providers (state officials acknowledged that it would have been better to put the proposed methods out for public and stakeholder comment). Managed care plans played, and continue to play, an important role in submitting and validating primary care assignments for Medicaid members. The plan assigned PCP is a heavily weighted factor in the method for individuals without special care needs, and plans have a vested interest to be engaged in this alignment. Even though the ultimate relationship between PPSs and managed care plans is not clearly defined by the demonstration, New York has committed to making 80 percent of payments to managed care providers through value-based arrangements by 2020. Because the method is coded into a production system, if a local health plan reports a change in an individual's PCP assignment, the new doctor will be responsible in the performance logic in the first month he or she is assigned.

During the application process, the public and CMS expressed support for greater inclusion of the uninsured in New York's DSRIP demonstration. Accordingly, the state paid particular attention to promoting provider accountability for the uninsured and low- or non-utilizing Medicaid beneficiaries when developing the attribution method. New York's Medicaid program had 5.3 million beneficiaries in 2013 (New York State Department of Health 2014a), which grew to nearly 6 million in 2015 as DSRIP was being implemented. According to state officials who outlined an updated attribution method in August 2014, about 1.1 million Medicaid beneficiaries do not use services, and another 750,000 are low-utilizing members, defined as having three or fewer interactions with the health

NEW YORK'S ATTRIBUTION METHOD

Four distinct populations are included in New York's attribution process. <u>Active Medicaid beneficiaries</u> are those who have received more than three services in the last year or who have a relationship with a PCP. <u>Low-utilizing (LU) Medicaid beneficiaries</u> are those who have received three or fewer services in the last year and who have no relationship with a PCP. <u>Non-utilizing (NU) Medicaid beneficiaries</u> have no claims activity in the past year but are enrolled in Medicaid. <u>The uninsured (UI)</u> are the people recognized as uninsured in census data (the numbers of UI are calculated at the county level).

New York's attribution method was initially used to assign Medicaid beneficiaries and the UI to Performing Provider Systems (PPSs) for project valuation, which determines the maximum amount of funding the PPS can receive. Valuation was calculated once and will remain static for the five years of the demonstration. However, New York uses attribution continually to assign Medicaid beneficiaries to providers for performance measurement.

Geography, patient visit information, and PCP assignment are used to attribute a person to a PPS. When there is a single PPS in a region, all Medicaid beneficiaries are attributed to that PPS. However, when there is more than one PPS in a region, attribution of active Medicaid beneficiaries is determined based on a loyalty logic across four population based "swim lanes" through which beneficiaries may have strong relationships with providers, in the following order:

1. Developmental disabilities
2. Long Term Care (nursing homes)
3. Behavioral health
4. Other providers including primary care

The state built the method to examine a Medicaid beneficiary for evidence of developmental disabilities first, residing in a nursing home second, receiving services from the behavioral health system third, and finally, receiving services from other sectors of the health care system. This cascade places an individual in a population subcategory, also called a "swim lane." Within each swim lane, the state further cascades through a hierarchy of providers that serve people within the population subcategory. The swim lanes and the hierarchical loyalty pattern ensure that a person with, say, a developmental disability is attributed to the PPS that includes a plurality of providers that likely serve his or her support needs, in a relative order of importance, such as a residential provider, then a vocational services provider, then a care management provider, and so on.

When determining project valuation, the state attributes active Medicaid beneficiaries as described above. If a PPS in a multi-PPS region is conducting an 11th project (on top of the 10 base projects) designed to create connections to care, the UI, NU, and LU individuals are attributed to the PPS in the same proportion as the active Medicaid beneficiaries. For example, if a PPS gets 33 percent of the active Medicaid beneficiaries, that PPS is also given 33 percent of the NU, LU, and UI individuals. A person can only be attributed to one PPS. If a PPS is the only PPS in a region, it is assigned all the Medicaid beneficiaries, and it will also be assigned all the UI individuals if it carries out the 11th project.

PPSs that are led by a public hospital receive priority in multi-PPS regions. For example, if a PPS led by a public hospital elects to implement the 11th project, it will be assigned all of the NU, LU, and UI individuals. The health systems the state has defined as public hospitals for DSRIP are the Health and Hospitals Corporation of New York City, State University of New York Medical Centers, Nassau University Medical Center, Westchester County Medical Center, and Erie County Medical Center.

When measuring performance, the state only includes active Medicaid beneficiaries and does not include UI, NU, and LU individuals.

Data examined for attribution: The state uses Medicaid administrative claims and encounter data as well as census data by county for its attribution calculations. Attribution is run on one year of claims data.

Prospective or retrospective attribution: The state uses prospective attribution to identify an initial panel of beneficiaries and retrospective attribution to determine final assignment for performance measurement.

Frequency of attribution calculation: Attribution for valuation was frozen in December 2014, Demonstration Year 0. Attribution for performance is officially calculated quarterly, but the system updates every month; these calculations enable DSRIP providers to know which beneficiaries will count in their performance in close to real time.

care system in the last year and no solid relationship with a PCP (New York State Department of Health 2014b). In most instances, both the low-utilizing and non-utilizing are grouped with the uninsured (determined from census data by county) when conducting attribution for project valuation.

New York also encouraged the inclusion of the uninsured, low-utilizing, and non-utilizing populations by creating an optional project that targets greater inclusion and care coordination for people with tenuous connections to health care. This project, "Patient & Community Activation for the Uninsured, Non-utilizing, and Low-utilizing Populations," is often called the 11th project because it is in addition to the required 10 projects. Unless a PPS is the only one in a region, it is only through conducting the 11th project that a PPS can have a portion, if not all, of the uninsured and low utilizers attributed to its network for project valuation purposes. The effect is that the PPSs that conduct the 11th project, which connects people who are not using health care to care networks, end up with higher valuation and potentially higher awards.

The state established distinct rules for the 11th project. Public hospitals are given the right of first refusal. If the public hospital refuses (or if there is no public hospital), other PPSs can participate. In regions with multiple PPSs, the uninsured and low utilizers are attributed to PPSs according to the same percentages used to attribute active Medicaid beneficiaries. So if a PPS conducting the 11th project was assigned 33 percent of active beneficiaries in a county, it would also be assigned 33 percent of the uninsured in the county.

The 11th project was added late in the development of the attribution process. It serves several purposes, including solidifying the commitment of the DSRIP demonstration to people who are uninsured or have few connections to the health care system, and it also provides a way for New York to deal with the federal rule that prohibits differential payments to different provider types. New York struggled with CMS's payment policy because CMS wanted a single benchmark for per-member per-month (PMPM) payments to hospitals, regardless if they were public, safety net, or private. This policy resulted in what a state official called "gerrymandering in attribution." In other words, a public hospital had to receive the same PMPM value in the valuation calculation as a private hospital, but the state wanted the potential incentive payments to public hospitals to be proportionately higher.

The design of the 11th project and the rules for participation have the effect of increasing valuation for these public providers who play a significant role in creating the health care safety net. Representatives we interviewed from a multi-PPS region that could not conduct the 11th project said it is fair for the state to provide incentives to public providers via this project given that public hospitals have a long history of aiding the underserved in New York.

> "Valuation would have been less complicated if we could have paid a different amount to the public and safety-net hospitals to recognize the structure of the IGT [intergovernmental transfers] process."
>
> — New York interviewee

Implementation of an attribution method

In New York, attribution was rolled out in stages with a number of revisions, but the roll-out was completed relatively early in the overall implementation of the DSRIP demonstration. New York has significant statewide targets for reducing avoidable hospital readmission rates, perhaps elevating the importance of getting an attribution method on the ground.

Facilitators. Multiple interviewees in New York commented on the data and information technology (IT) infrastructure the state had in place before the DSRIP demonstration. State officials, by their own report, had great access to patient-level claims and encounter data and have been able to work with managed care plans in an ongoing way to confirm the accurate assignment of PCPs. Easy access to data facilitated the development of algorithms that were used to determine where there was a plurality of visits to a network, an important factor in the attribution method.

Easy data access also enabled hospitals and other providers to use the Medicaid Analytics Performance Portal (MAPP). Health homes and managed care plans use this portal to look up and verify assignment, and other providers use it to track beneficiary-related analytics. The MAPP is linked to a data warehouse that can be used to assess service patterns in the DSRIP demonstration, particularly services an attributed population may seek outside the network. In our interviews, a state administrator and some PPS leads identified this infrastructure as essential to operating the DSRIP demonstration, including implementing the attribution method.

Furthermore, the PPSs that we interviewed all discussed the impact of attribution on the networks. All PPS representatives said attribution was important for network formation, and one representative said that attribution has been a significant facilitator in discussions with partners, especially around making sure partners were fully engaged. Because the method considers populations separately, using the swim lanes, networks had to be broad enough to accommodate individuals getting most of their services in the behavioral health system, the system serving those with developmental disabilities, or the long-term care system.

Finally, after its attribution method was developed, New York used extensive web-based trainings to promote understanding and knowledge transfer. These trainings are available in an

online reference library. Interviewees recommended these seminars and said that they helped facilitate understanding and addressed ongoing needs for staff training.

Challenges. New York's attribution method is fairly complicated. The state had explicit goals, like preferring a single PPS network in each region, but those goals were not always backed up by requirements. Therefore, the method had to account for non-preferred options as well, like multiple PPSs in a region. The state expressed a desire to have a couple more months to see if its method could be simplified and noted this as a lesson learned for future DSRIP demonstrations.

Scale was another challenge, as reported by a PPS. Although many providers had experience with attribution in smaller medical home programs, the DSRIP demonstration was so much larger. The medical home was limited to primary care and had fewer participating counties. The DSRIP demonstration incorporated more counties and larger provider networks with broader representation among providers, including hospitals, primary care, and specialty providers as well as community-based organizations. For example, in one region, there were under 100,000 individuals attributed to medical homes but roughly 80,000 Medicaid beneficiaries and 60,000 uninsured people attributed to the PPS.

Interviews for this brief were conducted in two rounds. In earlier interviews, PPS representatives expressed some skepticism about how attribution to providers within a PPS would work. One PPS acknowledged that they were "not 100 percent confident that the state's attribution is going to translate 100 percent to the attribution they're going to do within the PPS." Another representative said, "The state's attribution is done to drive payment to the PPS. As they put together their projects, the participation of any given provider might be greater or less than what may be inferred from the state's attribution. A provider that's big in an area may not be driving the success of a particular project, as they may not be bringing the particular skills or interventions that are driving performance improvement on a particular set of metrics. . . . The PPS needs to set up payment systems that reward the activities most critical to achieving the metrics."

Later interviews did not reflect this level of concern; rather, respondents described attribution as potentially irrelevant. One PPS representative said that attribution is just a "made-up thing to divide up patients sensibly, and it doesn't seem important to the goals of DSRIP, which require us to worry about all patients." One representative described how collaboration has improved since the attribution methodology has been firmed up and PPS networks are set. He commented, "There was a time where attribution caused arguing over provider inclusion, and it wouldn't have helped to have PPSs at the table at that stage." New York is just moving into the pay-for-performance stage of its program,

which ramps up considerably in Year 3 of the demonstration. It will be interesting to see whether providers become more keenly attuned to attribution during the next phase.

Finally, data on the uninsured is a barrier for all states that are including the uninsured in DSRIP demonstrations. To obtain information on the uninsured for valuation purposes, New York chose to use census data by county. But like other states, New York has no data source from which to draw information on the uninsured when assessing performance measures.

How the attribution method affected DSRIP demonstration achievements

New York developed an attribution method with the intent to shape the structure of the PPSs that form the backbone of the DSRIP demonstration. These are networks of providers working together under a governance structure to improve the health outcomes of a population. Operationally, they carry out DSRIP projects and share in the accountability for DSRIP outcomes.

The state encouraged the formation of a single PPS in each region to streamline accountability. In areas where there is a single PPS, all Medicaid beneficiaries, and the uninsured in certain circumstances, are attributed to the PPS. However, multiple PPS networks were permitted, with and without public entities. In these instances, the PPSs competed for providers because more providers often resulted in higher valuation. This led some PPSs to require exclusivity among their provider members, although most chose to allow providers to enroll in multiple PPSs. Although the state set up incentives for large networks, in the end some providers were concerned that the PPS scramble to sign them up was just to drive up valuation, rather than to have a purposefully constructed system connecting primary care and specialists to better serve the Medicaid and uninsured populations.

However, there is no doubt that attribution was a key part of PPS valuation. The attributed population is a multiplier in the formula to set the maximum project values (Maximum project value for project i = [Project PMPM] x [Number of attributed Medicaid beneficiaries] x [Plan application score] x [DSRIP project duration]) (CMS and New York State Department of Health 2014). Each project valuation is summed together to get the maximum PPS value. A PPS may have between 5 and 11 projects; the more Medicaid beneficiaries and the more projects, the greater the potential valuation and funding.

At the time of this analysis, which occurred at the end of Year 2 of New York's demonstration, it was too early to determine the impact of attribution on performance. According to the draft midpoint assessment for Year 1, the PPSs earned over 99 percent of the available funding, but note that Year 1 payments were heavily weighted to project progress milestones. As the

demonstration progresses, the networks will be more robustly evaluated for their performance in clinical improvement, system transformation, and enhancement of health outcomes.

However, the draft assessment gives some early clues that the push to develop large networks of providers for valuation purposes has not translated to provider engagement, which is not a promising indicator. According to the assessment, "a majority of the PPS[s] are behind on their partner engagement goals at this point in DSRIP" (Public Consulting Group 2016). The report recommends that PPSs focus more on engaging and funding network partners, without which some crucial DSRIP projects, such as the integration of primary and behavioral health care and the integration of palliative care in medical homes, may not succeed.

Perceptions of the importance and implications of attribution may depend on where one sits. The PPS networks definitely felt that attribution required an early push to consolidate and extend themselves, but providers and individual practices may not have shared this concern. From the New York midpoint assessment: "Because Medicaid patients do not restrict themselves to receiving care from only [one PPS's] providers, we have not restricted our analysis to our DSRIP-attributed Medicaid patients in modeling provider-specific targets and funding. While we understand that we will be evaluated on our performance against our attributed-patient panel, we want to create a consistently high level of care at each of our participants, regardless of patient attribution." A similar sentiment was expressed by some PPS representatives who said that they had no position on the attribution method. To them, it did not seem important to the goals of the DSRIP demonstration, and they wanted providers to boost whole practices and not worry about who is attributed to the PPS.

But one state official had a much different opinion about the importance of attribution to individual providers. He agreed with the goal of raising performance for entire practices, not just for attributed individuals, but noted that "providers definitely will look at attributed outliers." The official said that "hospitals are now able to look at how many visits are made outside of their network," implying attribution has an important role in care redesign and performance improvement at the provider level. Community-based providers may agree with this position given that some acknowledged in public comments on the midpoint assessment that they were able to offer solutions to problems in care coordination for attributed patients.

Key Lessons Learned and Recommendations

The key informant interviews illuminated several factors of attribution that may be helpful for other states pursuing similar demonstrations.

An attribution method takes time to develop when including stakeholder input, but it is also time sensitive. In the DSRIP demonstrations, there are no set federal requirements for an attribution method. States can experiment and customize attribution, but that process is time sensitive and ideally needs to be completed early on. Underlining the time sensitivity, some interviewees in New York said that attribution had been important in project selection, and in New Jersey, several interviewees said that the delayed decision making on attribution hindered project design. However, the time pressure makes it difficult to achieve an appropriate balance of stakeholder engagement and timely goal setting to guide design and implementation.

Attribution affects demonstration design but cannot be the sole driver of reform. Attribution methods can support the redesign of a delivery system (for example, greater coordination across a network of providers serving a specific community), but they cannot drive system change in isolation. Payment incentives associated with attribution were reported to be a principal motivator for change among community providers.

All stakeholders we interviewed in New York agreed that attribution pushed PPSs to build broader networks that reflected the range of providers needed to effectively care for Medicaid and uninsured patients. Attribution also directly affected take-up of the 11th project, which incorporated uninsured people into the demonstration. In New Jersey, attribution elevated the status of a reporting community partner working with a hospital. However, the lack of payment incentives for community partners means that many of these frontline providers will not engage in activities such as data sharing.

Attribution requires health IT infrastructure. High quality claims and encounter data and a data warehouse that supports information sharing are necessary for any state contemplating attribution on the scale of a statewide DSRIP. States need reliable data for all included populations to break claims down accurately by provider type. They also need the IT infrastructure necessary to receive and share patient-level data. This infrastructure may need to be built, especially for public and safety-net providers, which requires planning and funding.

For example, New Hampshire's special terms and conditions for its recently approved demonstration require each IDN to participate in a statewide project "to develop and implement a

plan for acquiring the [health IT] capacity it needs to meet the larger demonstration objectives." To support the building of this infrastructure, which is needed for downstream reforms, the valuation calculations for each IDN project weight the building of the infrastructure more heavily in early demonstration years than in later years.

CMS and a state contemplating a DSRIP demonstration need to accurately assess the state's capacity to exchange the necessary data before moving forward with a demonstration. Recognizing the time necessary to build such an infrastructure is longer than the implementation period for a DSRIP demonstration, the state should be able to complete all necessary reviews of its basic IT infrastructure before demonstration approval and identify appropriate steps to acquire additional health IT capacity specifically for DSRIP early in the demonstration.

Attribution and sharing of patient-level data can help providers better understand service patterns, which can decrease duplication and improve care coordination. Several interviewees across states noted that hospitals in particular are now able to see service patterns across a network of providers, something they were not able to see before they had attributed populations and more access to patient-level data. Some hospitals use the data collected on attributed populations to produce analytics that better explain service patterns. New Jersey interviewees said that having patient-level data that can be analyzed for such patterns could help reduce duplication of services and inform care coordination.

However, concerns around data exchange rules between unaffiliated hospitals limited this data sharing. In many states, key informants raised concerns which centered on (1) the lack of necessary infrastructure and (2) the sensitive nature of personally identifiable or protected health information and the extensive agreements that need to be in place to exchange information.

The challenges of data sharing are also readily apparent in many demonstration guidance documents. New Jersey hospitals had to develop strategies (such as hiring data extractors) to address the challenge of obtaining data from their partners. New York put out alternative guidance for first-year reporting that reflected the challenges of putting these agreements in place: "If a PPS does not have a completed business associate agreement or data exchange application & agreement in place with a network partner to allow for the sharing of protected health information (PHI) between the network partner and the PPS, the IA (independent assessor) will accept the submission of an aggregated count of actively engaged members by [the] provider" (Medicaid Redesign Team 2015b).

As DSRIP demonstrations move from hospital-driven programs to provider network-driven programs, data sharing between hospital-affiliated and unaffiliated providers will become more problematic. To address this, CMS could clarify the kinds of data sharing allowed in various DSRIP provider networks, pursuant to the Health Insurance Portability and Accountability Act. It could also encourage states to understand their own state-specific privacy and security laws to identify needed data arrangements to support demonstration goals (for example, data use agreements).

Attribution to nonhospital providers should be tied to dollars. The ability to enhance network collaboration through attribution is significantly improved if attribution is tied to funding for all provider partners. Where it is, states acknowledged that funding drives partner participation. All partners across networks should be able to share in funding; otherwise, attribution can become a reporting burden on those who are not receiving payment.

Attribution of high-need Medicaid populations requires special consideration. If attribution is based solely on primary care, the specialists who are essential to the high-cost, high-need populations in Medicaid will not have weight, and as a result, those patients may be more difficult to engage in the DSRIP demonstration. For example, a patient with SMI may feel more connected to a mental health provider than to a PCP. More recent attribution methods based on service use data, such as in New York and New Hampshire, appear to be addressing this issue by including specialty providers earlier in their hierarchical attribution process.

Another consideration is the instability of insurance coverage for high-need patients, who may cycle in and out of Medicaid eligibility. One way California addressed this issue in its demonstration renewal was to include in its attribution method a rule stating that beneficiaries be continuously enrolled with the provider for a specified period (for example, 12 months) before they can be attributed: "Assigned lives must have been continuously enrolled with the participating PRIME entity during the preceding 12 months, have no gaps in enrollment greater than 45 days, and be enrolled with the participating PRIME entity on the last day of the measurement period."

Attribution of uninsured people for payment should be done carefully. Both New Jersey and New York account for uninsured people in attribution, although the latter does so only for certain projects. New York accounts for this group primarily to determine the valuation of the PPSs conducting the 11th project serving people who have weak connections to the health care system. In contrast, New Jersey accounts for the uninsured as part of performance measurement and payment for all demonstration providers. One hospital representative said, "DSRIP became a program where the urban hospitals

[that treat a greater proportion of uninsured people] are supporting the suburban hospitals. Urban hospitals are donating money in, and suburban hospitals are taking money out of the performance pools." Given the uncertainty about the accuracy of data for the uninsured, CMS may want to encourage states to carefully consider their readiness to accurately and comprehensively attribute this population for performance measurement and payment.

The attribution methods used to date may not provide an adequate basis for accurate resource allocation and accountability. A major challenge in population-based payment is matching the payment to the value delivered and ensuring accountability for funds used. Some interviewees expressed concern that attribution methods reflected political decisions to favor certain providers. Others indicated that attribution did not appropriately weigh certain types of patients. CMS may want to carefully assess, using hard evidence, the ability of attribution methods to (1) match resource allocations to population needs and (2) match payments to services and to the value of services delivered. Based on that assessment, CMS could require use of attribution methods that best support accountability and the accurate allocation of resources.

The Future

If certain DSRIP demonstrations have done nothing else, they have brought specialty and community providers into networks based on shared accountability. Through attribution, the programs assign joint responsibility to a network for a set of patients and reward performance gains. However, payment in DSRIP is around performance and incentives; it is not a complete replacement for volume-based reimbursement.

As alternative payment models become prevalent and affected providers begin to engage in population-based payment arrangements, attribution will continue to be a major topic. New Hampshire, a more recently approved DSRIP demonstration, is already on this path. The state's special terms and conditions include milestones intended to drive movement toward "alternative payment model(s) in the MCO and Medicaid delivery contracts by the end of the demonstration period" (CMS and New Hampshire Department of Health and Human Services 2016). In the future, with greater integration of value-based purchasing, states and providers may require attribution methods designed to meet a broader set of needs.

Risk adjustment. The DSRIP attribution models that we studied do not risk adjust. However, as Medicaid programs move toward value-based purchasing, New York acknowledged that it will want to include risk adjustment in its attribution method used for value-based purchasing.

Medical records data. Although some states have the data infrastructure necessary to set up an attribution model within a production data warehouse, we did not hear in any interview that providers or networks were easily able to link to medical records. A state official in New York hypothesized that PPSs that can link to medical records will earn more of their awards sooner. This development should be monitored as these demonstrations mature and program outcomes are better understood.

Outcomes. It is too early to assess outcomes for most demonstrations that are using an attribution model. However, early signs from the New York midpoint assessment indicate that there is uncertainty about the distribution of funding across the networks. To date, 70 percent of the funding distributed has gone to hospitals or the project management office of the PPSs. In addition, the highest level of dissatisfaction among participating New York providers is among PCPs (Public Consulting Group 2016). Will these numbers shift as payment to PPSs becomes tied to performance and value-based purchasing is more thoroughly socialized? If specialists are going to figure into an attribution method, should that translate more directly to payment within a network?

Patient movement and network change. One thing that will be important to understand in the future is the mobility patterns of the attributed populations. In New York, state officials said that 16 percent of the Medicaid population moves

each year. What are the factors influencing that movement (for example, economic factors), and is it above or below expectations? To what extent does a highly mobile population affect the ability of PPS networks to improve population health and lower costs?

Conclusion

Attribution plays an important role in the design and measurement of delivery system reforms intended to improve population health, enhance the patient care experience, and reduce the cost of care. If the transition to value-based health care continues in the Medicaid and safety-net delivery systems, attribution will remain a critical tool for linking funding with improved individual and population health outcomes.

Echoing the variation across state Medicaid programs, DSRIP attribution methods vary in many ways. However, within the DSRIP states that we examined, a growing number of programs are using attribution, are identifying ACO-like entities as responsible for patients, and are including specialty providers and settings more prominently in their demonstrations. According to stakeholders in New Jersey and New York, attribution takes substantial time to implement and is constrained by limited health IT infrastructure and capabilities related to data exchange. Nevertheless, these methods help stakeholders understand service patterns and encourage cost and quality improvements, especially among high-cost and high-need populations.

Although states have run these programs for only a short time, they provide valuable lessons for future programs focused on delivery system reform.

References

Baller, Julia, Jessica Heeringa, Carey Appold, Keanan Lane, Ryan Stringer, and James Woerheide. "Implementing Measurement Requirements in DSRIP Demonstration Programs." Washington, DC: Mathematica Policy Research, June 1, 2017.

Centers for Medicare & Medicaid Services: Center for Medicare. "Medicare Shared Savings Program: Shared Savings and Losses and Assignment Methodology Specifications" (2015).

Chakravarty, Sujoy, Kristen Lloyd, Susan Brownlee, Jennifer Farnham, and Katie Zhang. "A Midpoint Evaluation of the New Jersey DSRIP Program: Findings from Stakeholder Interviews, Hospital Survey, Medicaid Claims Data, and Reported Quality Metrics." 2015. Available at http://www.state.nj.us/humanservices/dmahs/home/NJCW_Renewal_App_C2_DSRIP_Mid_Point_Evaluation_Report.pdf. Accessed March 8, 2017.

CMS. "Medicare Shared Savings Program: Shared Savings and Losses and Assignment Methodology Specifications." 2015. Available at https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/Shared-Savings-Losses-Assignment-Spec-V4.pdf. Accessed March 8, 2017.

CMS and California Health and Human Services Agency. "Special Terms and Conditions, No. 11-W-00193/9, California Bridge to Reform Demonstration." Approval Period: November 1, 2010–October 31, 2015, as amended February 27, 2015.

CMS and California Health and Human Services Agency. "Special Terms and Conditions, No. 11-W-00193/9, California Medi-Cal 2020 Demonstration." Approval Period: December 30, 2015–December 31, 2020.

CMS and Massachusetts Executive Office of Health and Human Services. "Special Terms and Conditions, No. 11-W-00030/1,

METHODS

The information in this brief is based on (1) an analysis of the special terms and conditions negotiated between CMS and each state, (2) DSRIP-specific protocols, and (3) semistructured interviews with key informants.

Mathematica staff completed two rounds of interviews for this report. First, the team conducted interviews between March and April 2016 with key informants in California, Massachusetts, New Jersey, New York, and Texas, which are the largest DSRIP demonstrations. Staff conducted 15 phone interviews with 39 participants in these five states. They collected general information on which DSRIP states were using attribution and their methods.

Between December 2016 and January 2017, Mathematica staff conducted a second round of interviews with key informants in New Jersey and New York. Interviewees included state administration officials, state contractors, DSRIP providers, and representatives of provider associations. Contacts for these interviews were identified through state documentation and public source documents.

The team developed interview protocols that included questions on the development of the state's attribution method, the impacts of attribution on the state's DSRIP demonstration, and lessons learned from developing and using the method. The research team also conducted six phone interviews with 17 participants in the two states. Writers then supplemented the information from these interviews with state and provider documentation.

MassHealth Medicaid Section 1115 Demonstration." Approval Period: December 20, 2011–June 30, 2014, as amended October 1, 2013.

CMS and Massachusetts Executive Office of Health and Human Services. "Special Terms and Conditions, No. 11-W-00030/1, MassHealth Medicaid Section 1115 Demonstration." Approval Period: October 20, 2014–June 30, 2019, as amended January 20, 2015.

CMS and Massachusetts Executive Office of Health and Human Services. "Special Terms and Conditions, No. 11-W-00030/1, MassHealth Medicaid Section 1115 Demonstration." Approval Period: November 4, 2016 - June 30, 2017, as amended November 4, 2016.

CMS and New Hampshire Department of Health and Human Services. "Special Terms and Conditions, No. 11-W-00301/1, New Hampshire Building Capacity for Demonstration." Approval Period: January 5, 2016–December 31, 2020, technical corrections approved April 28, 2016.

CMS and New Jersey Department of Human Services, Division of Medical Assistance and Health Services. "Special Terms and Conditions, No. 11-W-00279/2 (Title XIX), New Jersey Comprehensive Waiver Demonstration." Approval Period: October 1, 2012–June 30, 2017, technical corrections approved August 14, 2014.

CMS and New York State Department of Health. "Special Terms and Conditions, No. 11-W-00114/2, New York Partnership Plan Section 1115 Medicaid Demonstration." Approval Period: August 1, 2011–December 31, 2014; as amended April 14, 2014.

CMS and Texas Health and Human Services Commission. "Special Terms and Conditions, No. 11-W-00278/6, Texas Healthcare Transformation and Quality Improvement Program." Approval Period: December 12, 2011–September 30, 2016; amendment approved: February 26, 2015.

Health Care Payment Learning and Action Network. "Accelerating and Aligning Population-Based Payment Models: Patient Attribution." 2016. Available at https://www.mitre.org/sites/default/files/publications/pr-16-2430-accelerating-and-aligning-population-based-payment-models-patient-attribution.pdf. Accessed March 8, 2017.

Lewis, Valerie A., Asha Belle McClurg, Jeremy Smith, Elliott S. Fisher, and Julie P.W. Bynum. "Attributing Patients to Accountable Care Organizations: Performance Year Approach Aligns Stakeholders' Interests." Health Affairs, vol. 32, no. 3, March 2013, pp. 587–595.

Medicaid Redesign Team, New York State Department of Health. "A Path Towards Value-Based Payment." 2015a. Available at https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/docs/vbp_roadmap_final.pdf. Accessed March 8, 2017.

Medicaid Redesign Team, New York State Department of Health. "Revised DSRIP Actively Engaged: Project-Specific Definitions and Clarifying Information." 2015b. https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/docs/2015-10-28_actively_engaged_definitions.pdf. Accessed March 8, 2017.

Medicare Shared Savings Program. 42 CFR 425.400(a)(2)–(3) (2015).

Medicare Shared Savings Program. 42 CFR 425.402 (2016).

Medicare Shared Savings Program. 42 CFR 425.102(a) (2015).

Myers and Stauffer, LC. "New Jersey Delivery System Reform Incentive Payment (DSRIP) Program: DSRIP Performance Measurement Databook." 2016. Available at https://dsrip.nj.gov/Documents/Databook%202.0%20Jan%202016.docx. Accessed March 8, 2017.

National Committee on Quality Assurance. "Patient-Centered Medical Home Recognition." n.d. Available at http://www.ncqa.org/programs/recognition/practices/patient-centered-medical-home-pcmh. Accessed March 8, 2017.

New York State Department of Health. "FAQ—High-Performance Fund Webinar." 2015. Available at https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/2015_09-25_hpf_faqs_webinar.htm. Accessed March 8, 2017.

New York State Department of Health. "Number of Medicaid Enrollees by Category of Eligibility by Social Service District—Calendar Year 2013." 2014a. Available at https://www.health.ny.gov/statistics/health_care/medicaid/eligible_expenditures/el2013/2013-cy_enrollees.htm. Accessed March 8, 2017.

New York State Department of Health. "DSRIP Update: New Project, Attribution, and Valuation Webinar." August 1, 2014b. Available at https://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_attrib_and_valuation_webinar_slides.pdf. Accessed March 8, 2017.

Pope, Gregory C. "Attributing Patients to Physicians for Pay for Performance." In Pay for Performance in Health Care: Methods and Approaches, edited by Jerry Cromwell, Michael G. Trisolini, Gregory C. Pope, Janet B. Mitchell, and Leslie M. Greenwald. Research Triangle Park, NC: RTI Press, 2011.

Public Consulting Group, Inc. "Mid-Point Assessment Report: Final Report." 2016. Available at https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/pps_map/midpoint/docs/final_companion.pdf. Accessed March 8, 2017.

Yalowich, Rachel, Barbara Wirth, and Mary Takach. "Matching Patients with Their Providers: Lessons on Attribution and Enrollment from Four Multi-Payer Patient-Centered Medical Home Initiatives." Portland, ME: National Academy for State Health Policy, 2014.

Endnotes

[1] DSRIP providers is a term used generically in this report to mean either individual providers or provider networks, depending on the state. Under each state's DSRIP demonstration, providers implement a range of projects, including those focused on infrastructure, service transformation, and population health improvements as part of each state's demonstration.

[2] This brief includes information about the California Medi-Cal 2020 Demonstration, approved December 27, 2015.

[3] This brief includes information about pilot ACOs included in the November 2016 amendment to the MassHealth Medicaid Section 1115 Demonstration.

[4] New York, for example, assigns each project an index score based on its ability to transform the state's health care system.

[5] Although New Jersey's special terms and conditions state that both prospective and retrospective methods are used, an interviewee involved in designing the methodology indicated that beneficiary assignment for performance measurement solely relies on retrospective attribution.

[6] Other states, such as Texas and the original Massachusetts and California demonstrations, did not use an attribution method.

Appendix A. Attribution methods

Features	State 1115 demonstrations					Federal comparator
	New Hampshire	California PRIME (renewal period)	New York DSRIP	Massachusetts pilot ACO (second demo period)[a]	New Jersey DSRIP	Track 3 MSSP ACO
Attribution by managed care enrollment		✔		✔		
Attribution by utilization[b]	✔	✔	✔		✔	✔
Attribution method used in project valuation[c]	✔		✔			
Attribution method used in performance measurement[d]	✔	✔	✔	✔	✔	✔
Method limited by geographic area	✔	Unspecified	✔	Unspecified		
Uninsured included in attribution			✔		✔	
Attribution period[e] used for utilization-based attribution	Unspecified	1 year	1 year	n.a.	2 years	1 year
Unit of attribution[f]	IDNs	Designated public hospitals and district/municipal public hospitals	PPS	Network Medicaid ACO	Hospitals	ACOs

(continued)

	State 1115 demonstrations					Federal comparator
Features	New Hampshire	California PRIME (renewal period)	New York DSRIP	Massachusetts pilot ACO (second demo period)[a]	New Jersey DSRIP	Track 3 MSSP ACO
Hierarchy of provider types or settings used in utilization-based attribution[g]	Five-step process: Individuals are assigned to IDNs based on whether they received services in the following hierarchical categories: 1. Long-term care at a long-term care facility, and the facility is in a single IDN 2. Services from a community mental health center, and the center is in a single IDN 3. Care from a PCP, and the provider is in a single IDN 4. Recent services for behavioral health or substance use disorder, and the most recent provider is in a single IDN 5. Geographic criteria: if the previous steps do not result in assignment, the beneficiary is assigned to the IDN whose service area includes the member's residence	One-step process: Only primary care encounters are used in utilization-based attribution	Four-step process: If there are multiple PPSs in a region, individuals are attributed to providers based on the following hierarchical categories of services: 1. Developmental disabilities services (residential, day/vocational, care management, Article 16 clinic, other Office for People With Developmental Disabilities waiver services) 2. Long-term care (nursing home) services 3. Behavioral health services (health home transitional care model, Assertive Community Treatment, or Home and Community-Based Services; intermediate or intensive residential care; outpatient care; freestanding psychiatrist or psychologist; specialty medical or inpatient/ED services for behavioral health) 4. All other services (health home, PCP, other PCP or outpatient clinic, ED, inpatient services)	n.a.	Four-step process: Individuals are attributed to providers based on the following hierarchical categories; a plurality and a minimum threshold of 10 percent of weighted visits are needed to attribute an individual to a hospital/partner: 1. Visits to hospital-based clinics 2. Visits to EDs 3. Visits to community-based reporting partners 4. Visits to all other nonparticipating providers	Two-step process: 1. Beneficiaries are assigned to a participating ACO based on primary care services 2. For beneficiaries without primary care services from a PCP, assignment is based on specialist services