



RESEARCH REPORT

Puerto Rico Health Care Infrastructure Assessment

Site Visit Report

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Puerto Rico Site Visit Report

Project Purpose

Puerto Rico has been experiencing both an economic decline and an increase in the emigration of health care professionals. Together, these forces could undermine Puerto Rico's health care infrastructure and negatively impact the health of Puerto Rico's population. In light of these concerns, the US Department of Health and Human Services has initiated a study of Puerto Rico's health care infrastructure including Puerto Ricans' access to health care, the quality of the care received, and patient satisfaction with that care.

Through an environmental scan supplemented by in-depth phone and in-person conversations with key stakeholders in Puerto Rico, this study aimed to identify and explore potential barriers to accessing high quality care in Puerto Rico, including but not limited to deficiencies in provider supply, building infrastructure, the cost and payment environment, and the ability to provide basic diagnostic and preventive care and treatment. The study focused on primary care but also examined access to specialty, behavioral, and long-term care.

This brief relays insights from in-person and phone interviews with stakeholders involved in efforts to evaluate, maintain, and improve access to health care in Puerto Rico. Insights from these interviews are supplemented with information from historical records and previous research as needed. First, we describe the economic, social, and political contexts described by stakeholders. Then, we summarize stakeholders' perceptions of the major barriers to access to health care services in Puerto Rico. We conclude with a discussion of the implications of our findings for health care reform in Puerto Rico.

Methodology and Limitations

We met with 25 people from 16 different entities located in the San Juan metropolitan area of Puerto Rico. We spoke with representatives of the Office of the Governor of Puerto Rico, managed care organizations (MCOs), the Puerto Rico Health Insurance Administration, and health care providers in addition to medical educators and researchers spearheading efforts to provide data on demographic changes and health needs in Puerto Rico. Health care providers interviewed for our study included federally qualified health center (FQHC) physicians and administrators, physicians directing

independent physician associations (IPAs), pharmacists, medical educators, and hospital providers. Additionally, we interviewed officials in the Center for Medicare and Medicaid Services (CMS) who have worked with Puerto Rico's Medicare and Medicaid programs. Many of the individuals we interviewed served in multiple capacities. They were practicing physicians, dentists, and pharmacists who also organized provider associations, led health advocacy groups, and directed medical programs.

Interviews focused on four broad areas: (1) economic and social conditions affecting the Puerto Rican health care system, (2) federal and commonwealth policies affecting the Puerto Rican health care system, (3) barriers to health and health care services in Puerto Rico, and (4) promising strategies to overcome such barriers.

We transcribed all the interviews and then analyzed our transcripts to identify main themes, grouped messages by theme, and identified the most common narratives connecting those themes. The themes and the narratives arising from these themes reflect the responses we received overall. Further research should aim to evaluate the causal pathways suggested by those we interviewed.

The site visit and interviews with stakeholders gave us an important opportunity to listen to how each stakeholder took facts (e.g., migration of physicians and low Medicaid reimbursement rates) and weaved them into causal narratives (e.g., physicians migrate because of low payment rates). The site visit also allowed us to learn about and obtain additional supporting documents. Most importantly, it helped us understand the broader impact of the challenges facing Puerto Rico and its health care system. Many of those we interviewed expressed frustration and desperation. They felt that they had presented their case on the health care needs of Puerto Rico many times and in many different contexts. Without changes in the near future, they were uncertain that the commonwealth would be able to meet the health care needs of its residents.

While site visits provide substantial value, they also have limitations. First, given the two-day time frame provided for the site visit to Puerto Rico, we focused our interviews on individuals and organizations working in the San Juan metro area in northern Puerto Rico. While the majority of the Puerto Rican population lives in this region, health care services and access may vary outside of the San Juan metro area. Future research should evaluate health care services and access in the less urbanized municipalities of Puerto Rico. Second, we conducted only a few interviews with providers. To better understand practice styles, referral patterns, reimbursement structures, and reasons for migration, future research should gather additional data from providers through surveys and/or focus groups. Third, we did not conduct focus groups with patients to discuss their experiences accessing health care in Puerto Rico; patient focus groups were beyond the scope of this project. To better understand

barriers to care and quality of care concerns, future research should conduct surveys or focus groups with patients.

Overall, future research should aim to verify the causal narratives provided by respondents. Such studies could analyze health care providers' migration patterns, provider income and expenditures, and patient experiences (e.g., wait times, access to medical specialists, and pharmaceutical adherence) in different health care settings in Puerto Rico compared with the US mainland. Our interviews with stakeholders strongly suggested that problems were developing across the Puerto Rican health care system. Declines in health care infrastructure and the health of Puerto Ricans may become more prevalent with time, and long-term monitoring of the situation is likely to be needed.

Findings

In the following sections, we summarize key insights from our conversations. Three overarching themes emerged: (1) structural challenges, (2) payment environment, and (3) quality of care. Structural challenges included the weakening of Puerto Rico's public health infrastructure, demographic changes, and economic instability. The payment environment came down to the dependency of the commonwealth's private and public health care system on Medicaid and Medicare managed care funding and the relative absence of a commercial insurance base on the island. Quality of care discussions emphasized the migration of physicians (particularly those specializing in obstetrics-gynecology and endocrinology), the effects of managed care payment structures and physician shortages on access to health care services and investments in health care infrastructure, and access to pharmaceuticals for Medicare beneficiaries enrolled in traditional Medicare programs. Finally, our interviews discussed the implications for health care reform in Puerto Rico as well as current reforms under way.

Structural Challenges

The stakeholders emphasized four structural challenges affecting the Puerto Rican health care system and the commonwealth's capacity to address the health needs of its population: (1) the privatization of the public health care system and the rise of managed care, (2) the aging of the Puerto Rican population combined with high rates of poverty and some chronic health conditions, (3) the economic instability and low private-sector tax base of the commonwealth, and (4) the high cost of living in Puerto Rico.

THE PRIVATIZATION OF PUBLIC HEALTH AND THE RISE OF MANAGED CARE

According to several interviewees and scholars, Puerto Rico historically had a strong regionalized public health care system emphasizing prevention and sanitation. In Puerto Rico, health care was considered a fundamental human right, which was codified in an early version of Puerto Rico's constitution. The regional public health system, established with support from the John Rockefeller Foundation and in collaboration with the Centers for Disease Control and Prevention, included a School of Tropical Medicine founded in 1926 (now the University of Puerto Rico School of Medicine) and four 280-bed hospitals built in the late 1930s and located in Aguadilla, Arecibo, Bayamon, and Fajardo. Together with diagnostic and medical treatment centers in each of Puerto Rico's 78 municipalities, these four hospitals and another smaller hospital in Ponce formed the backbone of Puerto Rico's regionalized health care system until the 1970s (Arbona and Ramírez de Arellano 1978). Under this system, Puerto Rican health care providers, including physicians, largely worked as employees of the state.

In the 1970s, Puerto Rico's public health infrastructure began to weaken while the private sector began to grow (Arbona and Ramírez de Arellano 1978). In short, the public health system became increasingly decentralized and fragmented with particular funding streams and administrative agencies aimed at serving discrete populations (e.g., the medically indigent and the elderly). Over time, physicians who formerly worked as part of the public health care system opted to move into private practice (Pagan-Berlucchi and Muse 1983). At the same time, low-income populations insured by Medicaid and Medicare began to exit the public health care system and opted to receive their care through the newly formed private sector. Early evaluation of Puerto Rico's Medicaid program showed that approximately 12 percent of participating physicians billed for 43 percent of all Medicaid visits (Arbona and Ramírez de Arellano 1978). Some physicians billed at a rate of 1,000 visits per month and were reluctant to refer their patients for specialized care. This practice of minimizing referrals for specialty care in order to maximize income has continued under today's Medicaid managed care program in Puerto Rico (see the Quality of Care section).

By the 1990s, Puerto Rico had, according to one expert, shifted from a public health-based health care system to one that contracts with private insurers to manage the health care of the medically indigent (similar to the system in place on the US mainland). As a result of Puerto Rico's 1993 health care reform plan known as *la Reforma*, the municipal diagnostic and treatment centers (*centros de diagnóstico y tratamiento*, or CDT) were largely "dismantled," though some converted to not-for-profit FQHCs (receiving Section 330 funding) and FQHC look-alikes that continued to serve the medically indigent (Santos-Lozada 2012).¹ Public hospitals converted to for-profit and nonprofit private-sector hospitals. Additionally, multiple experts said that physicians located in the municipalities began to work

in private practice and contract with Medicaid and Medicare MCOs to provide services to both privately and publicly insured patients. Some physicians practicing in Puerto Rico consider the privatization of the public health care system the primary source of Puerto Rico's health care system problems today. They argue that the payment and organizational structures embedded in the current privatized managed care system reduce the capacity to coordinate care across physicians and between regions and shift the focus of care from prevention to treatment.

AGING, POVERTY, AND THE RISE OF CHRONIC HEALTH CONDITIONS

Experts in Puerto Rico agreed, and data² confirm, that Puerto Rico's population is aging, has high rates of poverty, and has high rates of some chronic conditions such as hypertension and diabetes (Levis-Peralta et al. 2016; Perreira et al. 2016). This combination of factors results in a relatively large population needing specialty services and more coordinated care (Santos-Lozada 2012; Velázquez-Estrada 2015).

ECONOMIC INSTABILITY, A SMALL PRIVATE-SECTOR ECONOMY, AND LIMITED LIQUIDITY

For over a decade, Puerto Rico has been in the midst of a significant economic decline (Perreira et al. 2016). Compared with states in the US mainland, Puerto Rico has always had a relatively small private-sector economy. Both the private-sector economy and gross national product have been shrinking, partly because of the phasing-out between 2001 and 2006 of Section 936 of the Internal Revenue Code, which granted tax incentives to US corporations operating in Puerto Rico.³ Thus, the Puerto Rican tax base has been shrinking.

To pay for the cost of public services, including publically funded health care services such as Medicaid, the commonwealth has routinely borrowed money by issuing municipal bonds. After it recently defaulted on the payment of some of this debt, Puerto Rico no longer has access to these capital markets. The US Congress enacted the Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA) to help address Puerto Rico's fiscal crisis. The new federal law created a fiscal oversight board to balance the Puerto Rican budget and restructure its debt. Though some stakeholders had hoped it would, PROMESA did not create an economic development plan aimed at improving the commonwealth's economic situation overall.⁴

According to some experts we interviewed, the economic instability of Puerto Rico and limited ability to borrow additional debt has resulted in very tight cash flows for the commonwealth government. Many respondents said that these tight cash flows limit the ability of the commonwealth to pay Medicaid providers in a timely manner. In April 2014, the Puerto Rico Health Insurance

Administration (referred to as ASES) withheld payment from Medicaid MCOs, who then withheld payments from their contracting providers. According to one expert, this created substantial uncertainty about the funding available for public health services and resulted in a spike in medical care utilization by Medicaid beneficiaries who were afraid that they would not be able to receive necessary medical care in the near future. One expert said that though the immediate crisis has been resolved and ASES has worked with CMS to devise a monthly payment plan for its Medicaid MCOs, health care providers continue to worry about the receipt of timely payments for the services they provide to Medicaid patients. One MCO pulled out of the Medicaid managed care market and no longer contracts with ASES, according to one expert. As discussed in more detail below, this has the potential to influence the availability and quality of services for Medicaid beneficiaries.

HIGH COST OF LIVING AND THE MIGRATION OF YOUNG PROFESSIONALS

Poor economic conditions combined with a high cost of living in Puerto Rico potentially reduce Puerto Rico's attractiveness as a place to live, according to some respondents. One interviewee compared it to poor rural and inner-city areas of the US mainland. Respondents highlighted the migration of young professionals, especially health care professionals, as a key structural problem in Puerto Rico.

Recent cost-of-living estimates conducted by the Puerto Rican Institute of Statistics (*Instituto de Estadísticas de Puerto Rico*, or IEPR) in collaboration with the Council for Community and Economic Research (C2ER) suggest that the typical professional's cost of living in Puerto Rico is approximately 12 percent higher than the average cost of living in the US mainland. These estimates are based on a standardized market basket of goods and services (e.g., groceries, housing, utilities, transportation, and health care) purchased by individuals living in the San Juan metro area and compared with the same set of goods purchased by individuals living in other areas of the United States (C2ER 2015; IEPR 2016). According to one expert, one of the primary reasons that the cost of living in Puerto Rico is high is that like Hawaii, Puerto Rico is isolated and most products must be shipped to the island.⁵

Health Insurance and Payment Environment

In discussing Puerto Rico's health insurance and payment environments, interviewees emphasized the dependency of the commonwealth's private and public health care systems on Medicaid and Medicare managed care funding and the relative absence of both a commercial and fee-for-service (FFS) insurance base on the island. Interviewees deemed Medicaid funding in Puerto Rico inadequate;

Medicare Advantage rates were considered unjustifiably low, and the small commercial sector limited the ability of providers to cross-subsidize the care provided to Medicaid and Medicare beneficiaries.

In 2014, Puerto Rico had a high health insurance coverage rate (94 percent) in comparison to the US mainland (88 percent). However, most of the health insurance provided in Puerto Rico was through publically funded insurance programs including Puerto Rico's Medicaid/CHIP program (39 percent), Puerto Rico's Medicare Advantage (16 percent) and Traditional Medicare programs (6 percent), and Veterans Affairs (3 percent). Only 36 percent of Puerto Ricans received health insurance through a commercial insurance provider with premiums paid for by an employer or the consumer (Levis-Peralta et al. 2016). This contrasted starkly with insurance coverage on the US mainland, where most (59 percent) individuals receive employer-sponsored insurance or purchase their own insurance through a commercial insurance provider (Perreira et al. 2016).

RESTRICTED MEDICAID ELIGIBILITY AND INADEQUATE MEDICAID FUNDING

With funding from the American Recovery and Reinvestment Act of 2009 (ARRA), Puerto Rico reformed its public health care system and implemented the Mi Salud program in 2010. The Mi Salud program was designed to serve four medically indigent populations: (1) federally funded Medicaid beneficiaries, (2) federally funded CHIP beneficiaries, (3) Medicare Platino beneficiaries who are eligible for both Medicare and federally funded Medicaid benefits, and (4) commonwealth-funded Medicaid beneficiaries. Additionally, Mi Salud provides health insurance to many of the commonwealth's public sector employees (Perreira et al. 2016). Mi Salud is funded from three primary sources: the US federal government, the commonwealth government, and each of Puerto Rico's municipalities.

The commonwealth establishes eligibility for federally funded Medicaid based on the commonwealth poverty level (CPL). Historically this has been set at \$4,800 (\$400 per month) for an individual and was raised to \$6,600 (\$550 per month) for an individual in 2013. This Medicaid eligibility rate is approximately 56 percent of the federal poverty level (FPL), which is \$11,770 for a single person.⁶ Medically indigent persons with monthly incomes over the CPL (\$550 per month) and under \$800 per month (82 percent of FPL) receive health care through commonwealth-funded Medicaid. The CPL is different from the FPL; it has no direct relationship to the cost of living in Puerto Rico or the basic resources needed to provide food and shelter for a family living in Puerto Rico, according to one expert. Given the relatively high cost of living in Puerto Rico, the medically indigent population is likely to be higher than the population reflected by Puerto Rico's federal and commonwealth-funded Medicaid eligibility levels.

Both the eligibility for federally funded Medicaid and commonwealth-funded Medicaid are set well below the Medicaid eligibility level allowed under the Affordable Care Act (138 percent of FPL). According to many of those we interviewed, this is because Medicaid funding in Puerto Rico is statutorily capped.⁷ The federally funded portion of the Medicaid program in Puerto Rico is effectively a block grant.

Puerto Rico receives federal matching funds for Medicaid up to the federal statutory cap. Although the nominal federal matching rate (called the federal medical assistance percentage, or FMAP), was set at 50 percent in 1968 for Puerto Rico and other US territories, the federal statutory cap results in a significantly lower effective matching rate (Sebelius 2013). One expert estimated that as currently structured, federal funds typically cover only about 23 percent of the cost of Puerto Rico's Medicaid population.

Stakeholders consider this a substantial source of inequity in health financing in Puerto Rico, resulting in less access to care for the low-income US citizens who reside in Puerto Rico. The FMAPs for the 50 US states and DC are determined based on a formula that allots a higher FMAP to states with lower average per capita incomes. In contrast, the FMAP in Puerto Rico and other US territories has no relation to per capita income. Because of its high poverty level and low per capita income, Puerto Rico would have its FMAP set to the highest possible level (83 percent) if it were a state (Sebelius 2013).

According to some respondents, the low FMAP in Puerto Rico combined with the annual federal cap on total reimbursement for Medicaid to Puerto Rico creates a structure that results in recurrent fiscal crises for Puerto Rico's Mi Salud program and a need for repeated infusions of additional funds to temporarily sustain the program. To sustain the Mi Salud program, Puerto Rico received its first infusion of funds from the ARRA in 2010. As these funds began to run out, the Mi Salud program experienced its first fiscal crisis. In 2011, Puerto Rico received an infusion of funds from the implementation of the ACA. Its FMAP was increased from 50 percent to 55 percent, and it received a temporary increase in the federal cap, which allowed Puerto Rico to receive an extra \$5.5 billion between July 1, 2011, and September 30, 2019 (Sebelius 2013). However, these extra funds are expected to be depleted by 2017, according to several respondents.

Despite its perennial fiscal challenges, the commonwealth has continually sought to provide for its low-income residents the same access to health insurance and health care that they would have on the US mainland. Before 1993, the commonwealth did this by having a publicly owned and operated health care system where physicians serving low-income patients were salaried (i.e., not paid FFS), where inpatient services were reimbursed on a per diem basis, and where vertical integration was used to

minimize referrals and control utilization (Pagan-Berlucchi and Muse 1983). At the same time, however, Puerto Rico was not able to invest in early Medicaid Management Information Systems (MMIS) and chose not to include some key benefits (e.g., long-term care) in its Medicaid package because of a lack of funds (Pagan-Berlucchi and Muse 1983).

Since 1993, the commonwealth has managed its fiscal challenges by adopting a Medicaid managed care system. All Mi Salud beneficiaries are enrolled in a managed care program. Puerto Rico does not have a traditional FFS Medicaid program. Instead, all Medicaid services in Puerto Rico are provided through risk-based contracts with health insurers operating as MCOs. These MCOs contract with ASES, the state agency responsible for overseeing all Medicaid services,⁸ to receive a set per member per month (PMPM) payment for their services. On the US mainland, only 26 states and DC have adopted a Medicaid managed care program that enrolls over 65 percent of the Medicaid population in managed care (CMS 2016). Only 13 states enroll close to 100 percent of their Medicaid beneficiaries in managed care (CMS 2016).⁹

While the Medicaid managed care payment system helps to provide the commonwealth with a predictable budget for the cost of Mi Salud beneficiaries, the experts we interviewed indicated that the Medicaid managed care payment system in Puerto Rico is associated with several problems. First, in 2015, the average Medicaid PMPM payment in Puerto Rico was less than 35 percent of the average Medicaid PMPM payment on the US mainland (\$167 versus \$482; Levis-Peralta et al. 2016).¹⁰ However, it is not clear how much of this difference reflects variation in prices versus utilization and how much reflects insufficient spending on nursing facilities. When reviewed by an actuarial firm, Puerto Rico's rates have sometimes been found to be actuarially unsound, and ASES has been required to raise them, according to one respondent. Because of these low Medicaid capitation rates, insurers were reportedly under pressure to keep provider payments low. Several respondents said that other medical costs (e.g., pharmaceuticals, medical equipment) are fixed and less easily controlled. Labor-related health care costs are the only variable costs that they can control. Some respondents also speculated that physician groups do not want to contract to serve Mi Salud beneficiaries. This potentially restricts the size and scope of Mi Salud physician networks and results in long wait times for specialized medical services.

Second, MCOs subcontract with IPAs, including FQHCs,¹¹ to provide Medicaid services to their members. Payments made to IPAs are under subcapitation that is intended to cover the costs of delivering all outpatient (e.g., X-rays, labs, and pharmacy) and inpatient hospitalization services. This subcapitation system places very loosely organized and small groups of providers at financial risk for the cost of their patients' care, according to some experts. This payment arrangement encourages

primary care physicians to restrict referrals of their patients for preventive services (e.g., mammograms) as well as specialty services (e.g., endocrinology). One respondent commented that some primary care providers had been directing their patients to particular providers (in this case pharmacists) in which they had a financial stake.¹²

Third, ASES has regionalized its Medicaid managed care contracts and now contracts with only six MCOs. Two serve one geographic region and three serve two geographic regions each. The sixth MCO serves a virtual region for women and children in foster care and/or victims of domestic violence. These MCOs mostly contract with providers in their service areas and may only have contracts with a few specialists outside of the service area. Thus, when Mi Salud members travel outside of their MCO's service area, the providers in the area may not be contracted to serve them even for relatively urgent care. Out-of-network hospitals are only required to provide emergency care to stabilize patients and then must transfer them to a hospital contracted to provide the services needed by the patients.

In addition to implementing Medicaid managed care, many experts said that Puerto Rico has also managed its fiscal challenges by choosing to keep Medicaid eligibility below the 138 percent FPL threshold permitted under the ACA, by choosing not to invest in health information technology despite incentives available from CMS, and by continuing to exclude some benefits (e.g., long-term care) from Medicaid coverage (Sebelius 2013). Health care providers in Puerto Rico worry that without systemic changes in Medicaid financing, the commonwealth will have to further restrict Medicaid eligibility and covered benefits (Levis-Peralta et al. 2016).

HIGH MEDICARE ADVANTAGE ENROLLMENT AND LOW REIMBURSEMENT RATES

Most Medicare beneficiaries in Puerto Rico are enrolled in Part C—Medicare's managed care program (called Medicare Advantage, or MA). Puerto Rico's first MA plan started in 2001 after the introduction of minimum MA rates (MMAPA 2015). As of September 2016, over 75 percent of Puerto Rico's Medicare beneficiaries (N=568,000) were enrolled in an MA plan (Levis-Peralta et al. 2016). About half of MA enrollees were low-income people qualifying for both Medicare and Medicaid and enrolled in Medicare Platino (Mach et al. 2016). By contrast, only about 31 percent of Medicare beneficiaries living on the US mainland choose to enroll in MA plans.¹³ The majority of US mainland beneficiaries are enrolled in traditional FFS Medicare with coverage for hospital inpatient services under Part A and coverage for physician's services under Part B.

Some experts indicated that MA plans are extremely popular because the majority of the Medicare-eligible populations live near poverty and MA premiums are lower than Part B premiums. In fact, many MA plans have consolidated monthly premiums for Part C and D of zero.¹⁴ While Part A coverage

typically requires no premium, Part B coverage typically requires premiums of between \$109 and \$134. Most of the MA plans in Puerto Rico also include Part D coverage for prescription drugs (Sebelius 2013). This inclusion is highly valued by low-income Medicare beneficiaries who are statutorily ineligible to receive low-income subsidies (LIS) in Puerto Rico (Sebelius 2013).¹⁵ Purchased separately, Part D premiums vary by income from \$0.00 to \$76.20. According to one respondent, Medicare beneficiaries in Puerto Rico seek out plans with no cost-sharing and change plans in response to small premium changes and small changes in copayments or deductibles for prescription drugs. Those enrolled in both Medicare and Medicaid in Puerto Rico will also switch plans monthly to get a particular procedure covered.

Some experts said that although they have been popular with beneficiaries, MCOs offering MA coverage in Puerto Rico worry about their financial solvency and continued pressure from CMS to reduce their PMPM rates. Like Medicaid MCOs in Puerto Rico, MCOs offering MA coverage receive monthly capitation payments and bear the risk that their beneficiaries may utilize care that exceeds the cost of their PMPM payments. Current MA benchmarks¹⁶ for Puerto Rico are set to \$488 PMPM. This is 38 percent less than current US average benchmark of \$788 (Puerto Rico Health Care Community Leaders 2016).¹⁷

Some respondents consider Puerto Rico's low benchmark to be a major source of inequity in health care financing that has the potential to reduce the quality of care available to US citizens residing in Puerto Rico. CMS evaluations of Puerto Rico's Medicare system and site visit respondents identified several reasons for this disparity. First, the benchmarks reflect historic underfunding of Puerto Rico's traditional Medicare FFS program. For example, Puerto Rican residents are ineligible for supplemental security income (SSI) which is used to calculate disproportionate share (DSH) and uncompensated care payments to hospitals. As a result, the current DSH and uncompensated care formulas may not adequately account for the higher cost of serving low-income Medicare beneficiaries in Puerto Rico (Sebelius 2013).¹⁸ Thus, CMS is currently considering changes in these formulas.¹⁹ Second, the benchmark does not reflect the cost of living in Puerto Rico. According to recent cost-of-living analyses, utility costs are 68 percent higher in Puerto Rico than on the mainland US and office rental costs are about equal (C2ER 2015). Yet the geographic price index (GPCI) used to calculate Medicare Part B payments to physicians does not reflect these differences in utility costs (IEPR 2015). CMS has acknowledged potential biases in the methodology used to calculate Puerto Rico's GPCI and has recently made changes. Third, the benchmark is based on a highly selective group of Medicare beneficiaries who can afford and choose to enroll in FFS Medicare. According to one respondent, Puerto Rico's FFS Medicare enrollees were richer and healthier than the typical MA enrollee.

Consequently, they were three times more likely to report no claims than the typical MA enrollee. CMS has confirmed the high rate of zero-dollar claimants in Puerto Rico and has adjusted the 2017 MA benchmark accordingly (Perreira et al. 2016).

Despite the fact that Puerto Rico's MA rates are lower than the rates paid to MCOs serving MA enrollees in the US mainland, MA plans pay providers more than either Mi Salud or other commercial insurers, according to several experts. Thus, Puerto Rican providers prefer to contract with Medicare more than any other insurer. Nevertheless, many Medicare insurers and providers (hospitals and physicians) are operating with extremely thin margins and with payments decreasing annually. In response, MCOs have pressured providers to accept lower and lower rates. Providers, feeling the pressure, have attempted to organize to resist these MCO price pressures (Meier, Albert, and Brau 2016).

LIMITED COMMERCIAL INSURANCE SECTOR

As noted above, the commercial or private-sector health insurance industry in Puerto Rico is small, covering just over one-third of Puerto Ricans (Levis-Peralta et al. 2016). The size of the commercial market depends on the private-sector economy. As the number of private-sector employees in Puerto Rico has declined, the commercial health insurance market has also declined.

When Triple-S was founded in 1959, it became the first commercial insurer in Puerto Rico. An affiliate of Blue Cross Blue Shield, Triple-S currently controls about 50 percent of the commercial market, including coverage for all federal employees in Puerto Rico. Other insurers serving the commercial group and individual market include Humana and MCS. Historically, these commercial insurers have paid providers on a FFS basis. While commercial insurers continue to reimburse providers on a FFS basis, these insurers have been entering into preferred provider arrangements in recent years, according to some respondents. Of these, Humana and Triple-S are reported to have the largest or most comprehensive provider networks.²⁰

While premiums can vary substantially by insurer, the average estimated premium PMPM for commercial plans in Puerto Rico is \$142 (Levis-Peralta et al. 2016). This is similar to the PMPM capitation rate paid to Medicaid MCOs in Puerto Rico. As noted by several of the experts we interviewed, health insurers in Puerto Rico keep premiums low because most Puerto Ricans have limited ability to pay. However, these low premium rates limit the ability of insurers and their providers to cross-subsidize the cost of care to Medicaid and Medicare beneficiaries with revenue from the commercial sector.

The development of the commercial health insurance sector in Puerto Rico has not only been stymied by Puerto Rico's weak private-sector economy but also by the limited implementation of the Affordable Care Act in Puerto Rico, according to one respondent. Commercial health insurers operating in Puerto Rico have guaranteed issue (i.e., policies are offered without regard to health status), but there is no individual mandate in Puerto Rico, no ability to risk-adjust premiums, and no access to reinsurance programs to insure health plans against high-cost cases. As a result, Puerto Rico has no way to deal with adverse selection.

Quality of Care

The health care insurance and payment environment in Puerto Rico have important implications for the quality of care in Puerto Rico. Interviewees noted significant health professional shortages, especially for physician specialists such as endocrinologists. These health professional shortages, together with the structure of managed care contracts for the Medicare and Medicaid insurance markets, were thought to result in poorly coordinated care, difficulty receiving referrals, and long wait times. Pharmacists also reported that their patients, especially those on Medicare, had substantial difficulty paying for prescribed medicines. Finally, partly because of low capitation rates for both the Medicare and Medicaid programs, all of those we interviewed commented on the difficulties of investing in health care infrastructure.

HEALTH PROFESSIONAL SHORTAGES

A recent report has documented substantial health professional shortages throughout Puerto Rico (Levis-Peralta et al. 2016). In general, our interviews and data from that report confirm that the island has an adequate supply of dentists (0.4 per 1,000 people), nurses (7 per 1,000 people), pharmacists (0.7 per 1,000 people), and physicians (2.5 per 1,000 people). However, these providers are distributed unevenly throughout Puerto Rico, leaving residents in several municipalities (especially those outside of the San Juan metro area) with limited access to care.

The greatest concern has been limited access to physicians. Seventy-two of Puerto Rico's 78 Municipalities have been deemed medically underserved areas by the US Health Resources and Services Administration (HRSA). Within these areas, HRSA has identified 32 primary care health professional shortage areas (HPSAs) with a population-to-primary care provider ratio of 3,500:1 or higher. Additionally, 23 percent of municipalities had a shortage of pediatricians, 68 percent had a shortage of OBGYNs, and 64 percent had a shortage of psychiatrists, according to HRSA guidelines

(Levis-Peralta et al. 2016). Data on other physician specialists were not available. However, many of those we interviewed believed there were significant shortages of surgeons, pulmonologists, neurologists, oncologists, endocrinologists, and emergency physicians. According to some respondents, all medical students graduating in emergency medicine in 2015 had left the island, only three neurosurgeons were thought to be practicing on the island, and Medicaid managed care plans reported difficulties contracting with sufficient numbers of specialists to serve their networks.

Those we interviewed offered one primary explanation for the shortage of physicians in some municipalities within Puerto Rico, especially specialists: physicians were migrating. Using data from the American Community Survey, a brief report on physician migrations prepared by the Puerto Rican Institute of Statistics estimated a net emigration of 138 physicians from Puerto Rico each year, or about 12 percent of all physicians living in Puerto Rico between 2011 and 2013 (IEPR 2015).

Respondents reported that physicians migrated because of a lack of training opportunities, low salaries for medical residents, and difficulty becoming certified to contract with health insurance plans. Many respondents reported that physician migration stemmed from low incomes relative to the cost of living in Puerto Rico and the incomes available to them in the US mainland. Provider groups on the US mainland also actively recruited Puerto Rican physicians because of demand for bicultural and bilingual physicians to treat Hispanic patients. Physicians were often recruited through growing social networks of providers who had migrated previously.

The health care provider shortage is exacerbated by a lack of midlevel providers like physician assistants (PAs) and nurse practitioners (NPs). PAs are not licensed to practice in Puerto Rico, and according to many respondents, physician groups have exerted ongoing pressure to maintain this arrangement. Some said that general practitioners worry about competition from PAs and the pressure this might create to further reduce reimbursement rates. By comparison, NPs face marginally better acceptance from the Puerto Rican medical community than PAs. Recently, Puerto Rico passed a law allowing NPs to practice, and several NP training institutions exist in the commonwealth. However, most graduates of these programs are either foreign students or Puerto Ricans intending to leave to practice elsewhere. Like physicians, bilingual nurses and NPs are in high demand on the US mainland and can earn significantly higher salaries there than in Puerto Rico.

POOR COORDINATION, DIFFICULTY RECEIVING REFERRALS, AND LONG WAIT TIMES

The shift from a regionalized health care system to a privatized one with *la Reforma* led to significant fragmentation across the health care delivery system, according to several respondents. Additionally,

experts agreed that health provider shortages, especially shortages of physician specialists, and subcapitation payment structures have led to limited referrals and long wait times in many cases.

For those enrolled in Mi Salud, care coordination is virtually nonexistent, and there is very minimal communication across providers about a given patient. According to one expert, one reason for the lack of coordination in Mi Salud is that plans are not subject to robust quality measurements and receive few incentives to focus effort on the coordination of care. Instead, providers and health plans focus their efforts on attempting to control utilization in order to minimize costs. Some people that we spoke to reported that many providers are failing to recommend preventive services like mammograms and Pap smears. Travel within the island can also lead to issues with continuity of care. When patients need nonemergency medical care outside their municipality or service region, they may face challenges accessing services because provider networks are regional. Care coordination is more robust for MA patients, in large part because MA plans are subject to CMS's Five-Star Quality Rating System, which incentivizes performance on care coordination and other quality of care measures. Similarly, FQHCs must meet certain quality measures.

Based on their own experiences and discussions with patient focus groups, several of the experts we interviewed indicated that patients face challenges in getting needed referrals, especially to specialists such as pediatricians, endocrinologists, neurologists, pulmonologists, and cardiologists. The managed care model can exacerbate the challenges with referrals in that patients must receive authorization for certain types of services or specialist referrals. According to one respondent, this process can be lengthy and burdensome and sometimes results in an authorization rejection with no explanation for the patient. Another respondent noted that some providers have monthly limits on the number of referrals they can make, leaving some patients with no route to access specialist care. Even when referrals are made, wait times can be very long—up to a year in some cases. This problem is especially acute for Mi Salud enrollees. ASES indicated that they have received reports of excessively long wait times. However, given the severity of the provider shortages on the island, ASES could not always intervene to help shorten wait times, according to one respondent.

Once an appointment is scheduled, patients also face long wait times in physicians' offices. Many specialists in Puerto Rico schedule appointments in two blocks per day (i.e., a morning block and an afternoon block). Patients arrive at the doctor's office toward the beginning of either block and may wait many hours to be seen. At the same time, doctors schedule many appointments in a day (up to 90 patients in some cases) to maximize FFS payments, according to several respondents. Since accessing needed specialty services can be so challenging for Puerto Ricans, regardless of insurance type or status, some utilize the emergency room for care. Although the patient may have to wait for emergency

care for many hours, he or she can access all the necessary tests and services in one location, without having to navigate complex and slow referral processes.

DIFFICULTY PAYING FOR PRESCRIPTION DRUGS

Another quality of care concern raised by some experts was prescription drug adherence, especially among Medicare enrollees. As previously discussed, residents of Puerto Rico are ineligible for LIS. Without this financial assistance, many low-income Medicare beneficiaries have trouble affording prescriptions.²¹ According to one expert, the problem of high prescription drug costs is compounded by increasing concentration within pharmaceutical distribution networks. A variety of mergers, acquisitions, and closures have resulted in only one pharmaceutical wholesale distributor serving Puerto Rico. In the absence of competition, this distributor is not motivated to keep drug prices low, said one respondent.

As a result, Medicare enrollees sometimes split pills, spread out dosages, or skip prescribed medication altogether, according to some respondents. One respondent said that these practices are so widespread that CMS is planning to alter the Five-Star Quality Rating System for Medicare methodology for MA plans in Puerto Rico to better reflect the challenges they face in performing well on medication adherence measures (CMS 2016). Additionally, several hundred pharmacists have partnered with two health insurance companies to implement a medication adherence program. As part of the program, pharmacists conduct home visits and perform audits to try to increase adherence. However, one expert said this has not reduced the affordability problem of prescriptions.

LIMITED RESOURCES TO INVESTMENT IN HEALTH CARE INFRASTRUCTURE

Overall, our interviewees indicated that the lack of resources available to invest in health care infrastructure hinders attempts to improve the quality of care in Puerto Rico. The primary concerns raised about Puerto Rico's health care infrastructure included: (1) the lack of data on health care access and quality, (2) the lack of health information technology, (3) the lack of investment in hospital infrastructure, and (4) the lack of long-term care infrastructure.

To evaluate the health of its residents, Puerto Rico's Department of Health relies on the Behavioral Risk Factor Surveillance System (BRFSS) and the Youth Risk Behavior Surveillance System (YRBSS). These data do not provide complete information on the health care needs of Puerto Rico's residents. Most importantly, they do not provide insights into the quality of care available. The primary sources of Medicare quality data are MA plans' Healthcare Effectiveness Data and Information Set reports and the Five-Star Quality Rating System. Other types of health plans are not required to collect the same

information. The primary sources of Medicaid quality data are ASES's consumer feedback reporting system, but these data are not comprehensive or representative of all health care quality, according to one expert (Puerto Rico Health Insurance Administration 2014).

A robust health information system could help to improve evaluations of Puerto Rico's health care needs and quality of care. In fact, many of the individuals we interviewed emphasized the need for a better health information system in Puerto Rico. Nevertheless, despite significant federal funding available for investments in health information technology (e.g., HITECH, meaningful use), few IPAs have made the investments in Puerto Rico. Several respondents attributed this to an aging physician workforce that is generally resistant to adopting new technologies and is dissuaded by the requirements associated with federal funding for health information technology (HIT). Other respondents felt that providers needed more training to develop HIT capacity. Some respondents traced providers' aversion to technology to cultural differences, noting that doctors in Puerto Rico value a personal provider-patient relationship and fear that introducing technology would threaten this rapport. While some individual health care providers, clinics, and hospitals had begun to use electronic health records (EHRs), the utility of EHRs was limited. These freestanding health information systems were not standardized and supported by a centralized system or interoperable health information exchange (HIE), according to one respondent. The absence of a centralized HIE system was believed to affect patient care. Communication between providers is time-consuming and complicated, hindering care coordination.

Though Puerto Rico's declining population and relatively low occupancy rates means that the commonwealth does not need new hospitals, some respondents felt that investments in Puerto Rico's existing hospital infrastructure had the potential to improve the quality of care delivered in that setting. For example, many hospitals in Puerto Rico lack backup generators and are left with a scarcity of electricity sources during power outages, according to one respondent. Some hospitals have not been updated since they were first built in the 1940s. Another respondent said that equipment is in short supply in some hospitals. Some hospitals do not have sufficient supplies of wheelchairs and/or gurneys. Common services on the mainland like MRIs, postexposure prophylaxis for HIV, and infusions for cancer care are difficult to access in Puerto Rico. One expert attributed the limited investment in hospital infrastructure to their low Medicare and Medicaid reimbursement rates.

Finally, Puerto Rico also has minimal long-term care infrastructure, and limited funds available for development, according to several respondents. Puerto Rico has four nursing facilities (NFs) and several *hogares*, which provide assisted living, but these are chronically understaffed and not certified to operate as long-term care facilities. The Veterans Administration operates a long-term care facility that

is not available to all residents. Without options for affordable long-term care, many respondents said that it is not uncommon for families to abandon older family members at hospitals if they are unable to care for them at home. In response, hospitals are building protocols to prevent patient abandonment, but ultimately it is difficult to completely eliminate the practice. Several people we spoke with reported a bleak outlook for the future of long-term care in Puerto Rico and agreed that there is not sufficient funding available to support system development.

Conclusions and Implications

Our interviews with health care insurers, regulators, and providers and our research in Puerto Rico revealed longstanding concerns about the privatization of Puerto Rico's public health care system and the rise of managed care. These concerns were magnified by other systemic challenges: the aging of Puerto Rico's population, increasing rates of chronic illness, high rates of poverty, a high cost of living, and general economic instability in the commonwealth. Each of these systemic challenges are well documented with research based on the BRFSS, population data from the American Community Survey, and cost of living analyses available from C2ER.

According to the experts we interviewed, the current structure of the health insurance and payment environment in Puerto Rico limits their capacity to address the health needs of Puerto Rico's residents and maintain high-quality medical services. US Census data on health insurance coverage in Puerto Rico show that most residents are dependent on public health insurance coverage (e.g., Medicaid and Medicare). The commercial insurance or employer-provided insurance sectors are comparatively small. CMS data on Medicaid managed care and Medicare Advantage (i.e., capitation) rates also reveal that the payment rates in Puerto Rico are less than 40 percent of the average PMPM rates for both programs in the US mainland. Medicaid managed care rates are kept low to accommodate a statutory cap set in 1968 on the total amount of matching funds available to Puerto Rico and an FMAP set to 55 percent—an FMAP rate reserved in the 50 US states for areas that have much higher average per capita incomes than Puerto Rico. On the other hand, low MA rates reflect the unique evolution of Puerto Rico's health care system, Medicare's limited FFS base, and Medicare FFS payment formulas (e.g., DSH and GPCI) that do not take into account the large number of low-income beneficiaries in Puerto Rico or the relatively high cost of living in Puerto Rico.

Finally, those we interviewed provided evidence that these structural challenges and payment systems are beginning to impact the quality of health care available to Puerto Rican residents. Their

evidence was based on state health assessment data on health professional shortages in Puerto Rico, analyses of migration patterns using data from the US Census, focus groups conducted with patients by researchers in Puerto Rico, and informal reports from physicians, pharmacists, and patients. Many municipalities within Puerto Rico have shortages of health care providers with fewer providers per capita than recommended by HRSA. Hospital and physician groups on the US mainland actively recruit Puerto Rican health care providers with bilingual and bicultural skills, especially physician specialists. Puerto Rican providers move to the US mainland for higher salaries and a better quality of life. New medical graduates move to the mainland to complete their residencies. As a result of these shortages and the migration of physicians, patients in Puerto Rico sometimes experience difficulties obtaining referrals and long wait times for specialty services (e.g., endocrinology). Within the Mi Salud program, subcapitation payment arrangements for primary care physicians further discourage referrals for specialty services. The limited availability of public transportation in Puerto Rico also makes it difficult for some patients to obtain medical care. Additionally, the lack of LIS for prescription drugs has led some Medicare patients to forgo needed medicines. These patients could not afford the deductibles, copays, or coinsurance required under both FFS Medicare and MA.

Overall, respondents view the current health care system in Puerto Rico as financially unstable and worry about sustaining Puerto Rico's health care infrastructure. To prevent future reductions in the availability of public health insurance for low-income populations and to protect the quality of health care available to the residents of Puerto Rico, they offered several proposals. Many of the experts we interviewed knew each other well and worked together in various government committees and advocacy organizations to develop these proposals. Some of these proposals do not require congressional action and have already been implemented or are under consideration by CMS.

The highest priority for the experts was addressing the inequities in financing Puerto Rico's Medicaid program.²² They recommended expanding the federal government's share of Medicaid expenditures by removing the current annual Medicaid cap and applying the same FMAP formula to Puerto Rico as the one applied to US states. These recommendations have been supported by the White House, as part of the President's FY17 Budget, and by the Secretary of the US Department of Health and Human Services.²³ These changes require congressional approval, but they are likely to have the most immediate and long-term impact on stabilizing Puerto Rico's public health care system (Park 2016).

The next priority for those we spoke with was increasing Medicare payments in Puerto Rico.²⁴ CMS has already taken several steps to boost Medicare payments in Puerto Rico.²⁵ First, CMS is revising Puerto Rico's geographic adjustment for calculating FFS payments to physicians under Part B. The

change will set payments at the national average because of a lack of data that accurately measures cost of living in Puerto Rico. Second, CMS has revised the formula used to calculate DSH and uncompensated care payments to Puerto Rican hospitals.²⁶ The revision takes into account Puerto Rican residents' ineligibility for SSI payments. Third, CMS has revised the formula used to calculate acute care hospital base rates under Medicare's Inpatient Prospective Payment System (IPPS; Mach et al. 2016).²⁷ The base rates applied to Puerto Rico's hospitals are now equivalent to the base rates provided to hospitals in the US mainland (Mach et al. 2016). Fourth, CMS has agreed to adjust the MA risk adjustment model to better account for limited FFS Medicare participation in Puerto Rico and the large proportion of Puerto Ricans who are dual eligible.²⁸

The final priority for the experts was the extension of the low-income subsidies program to Puerto Rico's low-income Medicare beneficiaries.²⁹ Though it was not discussed, the Enhanced Allotment Plan, which provides Medicaid coverage of prescription drug costs for Puerto Rico's Medicare beneficiaries dually eligible for Medicaid (Mach et al. 2016), would presumably be eliminated if the LIS program were adopted in Puerto Rico.

Several other recommendations were discussed but none of these were given the same priority as those mentioned above. They included increased investments in prevention programs, increased investments in health information technology, the development of super-utilizer programs for individuals with chronic illnesses, and expanded residency programs for Puerto Rican medical school graduates and graduates from the US mainland seeking specialized training to work with Hispanic populations.

Notes

1. By 2010, 21 CDTs had privatized, 7 had converted to nonprofit FQHCs, 23 remained publically owned and operated by a municipal government, and 2 had closed. Another 9 were owned by Puerto Rico's Department of Health but operated by private contractors (Santos-Lozada 2012).
2. Data on health in Puerto Rico is available through the Behavioral Risk Factor Surveillance System (BRFSS). Data on the aging of Puerto Rico's population is available through the American Community Survey (ACS) and decennial Census.
3. Scott Greenberg and Gavin Ekins, "Tax Policy Helped Create Puerto Rico's Fiscal Crisis," *Tax Policy Blog*, June 30, 2015, <http://taxfoundation.org/blog/tax-policy-helped-create-puerto-rico-s-fiscal-crisis>.
4. Gillian B. White, "Puerto Rico's Problems Go Way Beyond Its Debt," *The Atlantic*, July 1, 2016, <http://www.theatlantic.com/business/archive/2016/07/puerto-rico-promesa-debt/489797/>.
5. The Jones Act of 1920 also requires that all shipping between US ports use US-built, operated, and staffed ships. This requirement potentially increases the costs of goods shipped to Puerto Rico and reduces its competitiveness as a transportation hub and trade center (Collins, Bosworth, and Soto-Class 2006).
6. "Poverty Guidelines," US Office of the Assistant Secretary for Planning and Evaluation, posted January 25, 2016, <https://aspe.hhs.gov/poverty-guidelines>.
7. The current cap is \$321 million (Perreira et al. 2016).
8. ASES regulates only Medicaid managed care contracts and Medicare Platino contracts. It does not regulate commercial health insurance plans or Medicare Advantage plans.
9. "Medicaid Managed Care Penetration Rates by Eligibility Group," Kaiser Family Foundation, <http://kff.org/medicaid/state-indicator/managed-care-penetration-rates-by-eligibility-group/>.
10. The Medicaid PMPM rates reported by interviewees varied. Data shared with us by CMS suggest that rates in Puerto Rico for the 2016–17 contract year are \$167 on average and vary from \$138 in the western region to \$195 in the San Juan metro area and \$258 in the virtual region. The US average Medicaid PMPM rate is based on data from 2011 compiled by the Kaiser Family Foundation (see "Medicaid Spending per Enrollee [Full or Partial Benefit]," Kaiser Family Foundation, <http://kff.org/medicaid/state-indicator/medicaid-spending-per-enrollee/>). More recent data for the US average were not publicly available.
11. As of 2016, Puerto Rico had 20 FQHCs located in 53 of Puerto Rico's 78 municipalities. As Medicaid IPAs, they contract to provide comprehensive medical services coordinated by primary care providers (e.g., general practitioners and specialists in family medicine, internal medicine, and pediatrics) who work full-time or part-time for the FQHC. They also provide ancillary services such as nutrition and dental services. Approximately 10 percent of Puerto Ricans receive health care services through an FQHC. Those receiving care through an FQHC are insured by Mi Salud (68 percent), Medicare (9.5 percent), or another third-party payer (10 percent). Approximately 12 percent are uninsured (ASPR 2016). However, unlike other IPAs that contract with Medicaid, FQHCs receive additional payments to help them cover the costs of Medicaid patients. According to regulations from the Bureau of Primary Health Care, FQHCs cannot subsidize Medicaid with funds from the Health Resources and Services Administration (HRSA). Thus, the Puerto Rican Department of Health must pay for the costs of Medicaid managed care patients when their costs exceed the capitation rate provided. As a result, the Department of Health prefers that Medicaid MCOs contract with other IPAs, according to one respondent. Additional funds from HRSA also allow FQHCs to invest in infrastructure, including electric medical records, new equipment, and new clinics.
12. "IPA que violan la ley," *Primera Hora*, November 11, 2010, <http://www.primerahora.com/noticias/puerto-rico/nota/ipaqueviolanlaley-443413/>.

13. "Medicare Advantage Enrollees as a Percent of Total Medicare Population," Kaiser Family Foundation, <http://kff.org/medicare/state-indicator/enrollees-as-a-of-total-medicare-population/>.
14. "2017 Medicare Advantage Plans in Puerto Rico," MedicareHelp, <http://www.medicarehelp.org/2017-medicare-advantage/s/puerto-rico>.
15. Available to Medicare beneficiaries in the US mainland with incomes below 150 percent of FPL and limited assets, the LIS program provides assistance with Part D monthly premiums, yearly deductibles, and copayments. In place of access to LIS for beneficiaries, Puerto Rico receives an annual Enhanced Allotment Program (EAP) to be utilized for prescription drug coverage for Medicare Platino enrollees. However, the EAP is only available to low-income Medicare beneficiaries below the CPL (the eligibility level for federally funded Medicaid in Puerto Rico); these beneficiaries are typically enrolled in Medicare Platino (Sebelius 2013).
16. MA benchmarks are the maximum amount Medicare will pay an MCO PMPM in a given area (see "Medicare Advantage: Local Benchmarks [Weighted]," Kaiser Family Foundation, <http://kff.org/medicare/state-indicator/local-benchmarks-weighted/>). If an MCO's bid is higher than the benchmark, enrollees pay the difference. If the bid is lower than the benchmark, the MCO must provide supplemental benefits to enrollees. CMS sets benchmarks using a formula based on historical Medicare FFS spending in a geographic area. Areas with historically low Medicare FFS spending can have benchmarks of up to 115 percent of historical FFS spending. Geographic areas with historically high Medicare FFS spending have lower benchmarks of up to 95 percent of historical FFS costs. See Zarabozo (2000) for discussion of the Balanced Budget Act of 1997 and initial methods for computing Medicare capitation payments.
17. These 2016 benchmarks are likely unweighted and are slightly higher than weighted benchmarks reported for 2015 by the Kaiser Family Foundation. See "Local Benchmarks," KFF; and James P. O'Drobinak, David Rodriguez, Victor Ramos, Joaquín Vargas, Ramón Alejandro Pabón, Elliot Pacheco, Dennis Rivera, et al., "A Letter from the Puerto Rico Healthcare Community to the PROMESA Economic Development Task Force Members," July 29, 2016, <http://nebula.wsimg.com/40c152a8cf911d5e18ea1707218ea39d?AccessKeyId=C2485EFE08948AE5AAE0&disposition=0&alloworigin=1>.
18. A CMS analysis of Medicare cost reports in 2010 found no correlation between the cost of Medicare inpatient services and the proportion of low-income patients treated in Puerto Rico's hospitals. However, previous MedPAC reports of national data have found that higher inpatient costs are associated with higher proportions of low-income patients (Sebelius 2013).
19. CMS, "Supporting Medicare in Puerto Rico," news release, April 4, 2016, <https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2016-Fact-sheets-items/2016-04-04-2.html>.
20. "Puerto Rico Healthcare," New to Puerto Rico, <http://newtopuertorico.com/puerto-rico-healthcare/>.
21. Part D supplements in Puerto Rico typically require both deductibles (approximately \$400), copays of \$0 to \$42, and coinsurance of 20 to 48 percent. Because of the EAP, MA plans in Puerto Rico including Part D coverage have no deductibles but require copays (\$1 to \$82) and coinsurance (25 to 33 percent). See "Medicare Plan Finder," CMS, <https://www.medicare.gov/find-a-plan/questions/home.aspx>.
22. O'Drobinak et al., "Letter."
23. US Department of Health and Human Services, "HHS Fact Sheet: Working to Solve the Health Care Challenges in Puerto Rico," news release, October 17, 2016, <https://www.hhs.gov/about/news/2016/10/17/hhs-fact-sheet-working-solve-health-care-challenges-puerto-rico.html>.
24. O'Drobinak et al., "Letter."
25. HHS, "Fact Sheet."

26. This revision was implemented despite evidence that there was “no correlation between the cost of Medicare inpatient services in Puerto Rico and the proportion of low-income patients treated (Sebelius 2013, 6).
27. HHS, “Fact Sheet.”
28. HHS, “Fact Sheet.”
29. O’Drobinak et al., “Letter.”

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