Case study

The United States of America

Luca Lorenzoni

Organisation for Economic Co-operation and Development

Paris, France

Contents

Price setting and price regulation in health care: The United States of America

In the United States of America, private health insurance plans' prices are largely unregulated and agreed upon through negotiations between plans and the providers with whom they contract. Negotiated transaction prices are often unknown to final consumers and the public as they are treated as commercially sensitive. These prices can vary substantially for similar services across providers and insurers and bear little relation to the cost of production.

In contrast, Medicare and Medicaid – the two largest government health insurance programs - regulate the rates that providers receive. Under these rate-setting systems, the federal or state government establishes how much providers are paid for health care services. The rates reflect the costs that the typical efficient provider is expected to incur. The annual process for updating these prices is public and transparent.

Abstract

A high fragmentation of the health insurance and financing systems results in a large amount of resources devoted to health insurance marketing and administration, and to billing activities.

On January 2014, the state of Maryland implemented its All-Payer Model for hospitals, which shifted the state's hospital payment structure from an all-payer hospital rate setting system to an all-payer global hospital budget that encompasses inpatient and outpatient hospital services.

Overview

The United States of America (US) health care system has developed largely through the private sector and combines high levels of funding with a uniquely low level of government involvement. It can be thought of as multiple systems that operate independently with little coordinated system-level planning in comparison to other high-income countries (figure 1). This fragmented system results — among other things — in high administrative costs attributable to billing and insurance-related activities (Fuchs, 2018; Tseng et al., 2018). Hospital administrative overheads are far higher in the US than in other high-spending countries (Himmelstein et al., 2014).

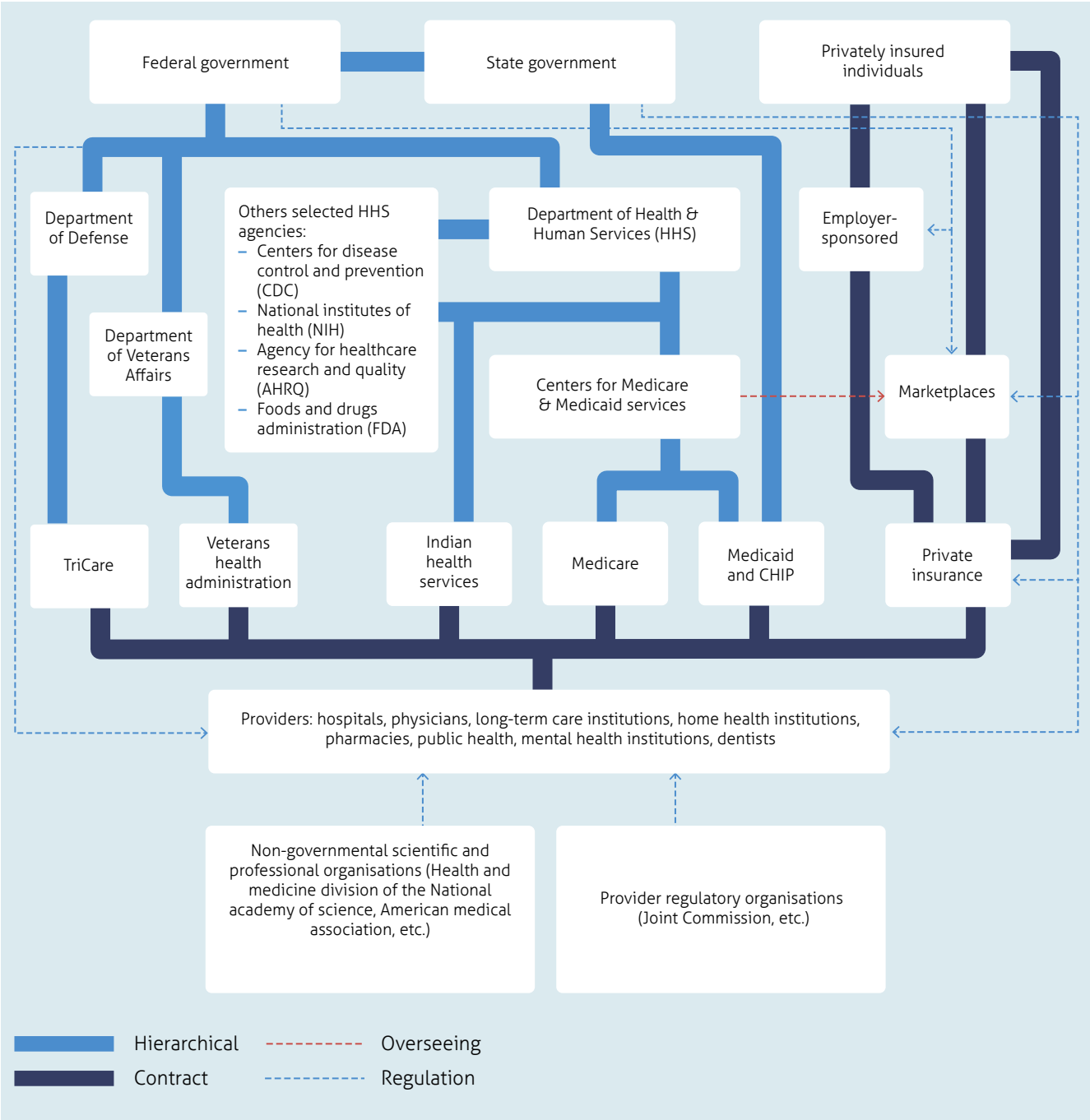
Private sector stakeholders play a stronger role in the US health care system than in other high-income countries. The private sector also led the development of the health insurance system in the early 1930s, as the major federal government health insurance programs, Medicare and Medicaid, were not established until the mid-1960s.

After a lengthy national debate, Congress passed legislation in 1965 establishing the Medicare and Medicaid programs as Title XVIII and Title XIX, respectively, of the Social Security Act. While Medicare was established in response to the specific medical care needs of the elderly, coverage was extended for disabled persons and persons with kidney disease in 1973. On the other hand, Medicaid was established in response to the widely-perceived inadequacy of welfare medical care under public assistance. Administrative responsibility for the Medicare and Medicaid programs was assigned to the Department of Health, Education, and Welfare — the forerunner of the current Department of Health and Human Services. Until 1977, the Social Security Administration (SSA) managed the Medicare program, and the Social and Rehabilitation Service (SRS) managed the Medicaid program. The responsibilities were then transferred from SSA and SRS to the newly formed Health Care Financing Administration (HCFA), renamed in 2001 as the Centers for Medicare & Medicaid Services (CMS)[1]. CMS also oversees the Children's Health Insurance Program (CHIP) and the Exchanges[2].

1 CMS is an operating division within the Department of Health and Human Services (HHS). HHS is the United States government's principal agency for protecting the health of all Americans and providing essential human services.

2 The Patient Protection and Affordable Care Act, signed into law in March 2010, made broad changes to the way health insurance is provided and paid for in the United States. In 2014, state and federally administered health insurance marketplaces (or Exchanges) were established to provide additional access to private insurance coverage, with income-based premium subsidies for low- and middle-income people. In addition, states were given the option of participating in a federally subsidized expansion of Medicaid eligibility.

Figure 1
Organization of the health care system in the United States



Source: Adapted from Rice et al., 2013.

In 2016, Medicare and Medicaid covered approximately 56 and 71 million people, respectively. Private health insurance covered 196 million people, and 29 million people were uninsured (Hartman et al., 2017). Total health care spending reached US$ 3.3 trillion in 2016, and its share in the gross domestic product was 17.9%. Hospital care accounted for 38% of spending (US$ 1082 billion), and physician and clinical services accounted for 23% (US$ 665 billion). Smaller shares went to expenditures on retail prescription drugs (12%, or US$ 329 billion), nursing care and continuing care retirement facilities (6%, or US$ 163 billion), and home health care services (3%, or US$ 92 billion).

Private health insurance accounted for 35.3% of health spending, and Medicare and Medicaid accounted for 21.1% and 17.8%, respectively. Smaller shares of spending were from household out-of-pocket (11.1%); other third-party payers and government public health activities (10.7%); and CHIP, Indian health services[3], Department of Defence[4] and Department of Veterans Affairs[5] (4%).

Both private and public payers purchase health care services from providers that are subject to regulations imposed by federal, state and local governments, as well as by private regulatory organizations. However, private and public payments for health care services are determined through very different mechanisms:

- Private plan prices are largely unregulated (except in the state of Maryland, see below) and agreed upon through negotiations between insurance plans and providers with whom they contract. Transaction prices are the result of many discrete negotiations often unknown to final consumers and to the public as they have been treated as commercially sensitive. These prices can vary substantially for similar services across providers and insurers[6], may bear little relation to the cost of providing services, and rise in response to changing market conditions.
- In contrast, Medicare and Medicaid – the two largest government health insurance programs — regulate the rates that providers receive. Under these rate-setting systems, the federal or state government establishes how much providers are paid for health care services. The rates reflect the costs that a typical efficient provider is expected to incur. The annual process for updating these prices is public and transparent with prices being constrained by policy to increase relatively slowly.

A description of the base for payment, the level of payment and the process by which the price level is determined by the three major insurers – Medicare, Medicaid and private plans – is reported below. As to the base upon which prices are defined and services paid for, large differences can be observed across provider types and insurers (figure 2).

3 The Indian Health Service, an agency within the Department of Health and Human Services, is responsible for providing federal health services to Native Americans and Alaska Natives.

4 The Military Health System - the global health system of the Department of Defense - operates a worldwide health care delivery system that includes care delivered in over 50 military hospitals and over 600 clinics, as well as a supporting network of private sector providers offered under its health insurance system known as Tricare. This system provides health services to approximately 9.6 million beneficiaries — active duty service members, military retirees, their eligible family members and survivors.

5 The Veterans Health Administration (VHA) is the largest integrated health care system, providing care at 1243 health care facilities, including 172 medical centres and 1062 outpatient sites of care of varying complexity (VHA outpatient clinics), serving 9 million enrolled Veterans each year.

6 This approach is called "price discrimination" in economist jargon. It means that an identical service is sold to different buyers at different prices.

Figure 2
Base upon which prices are defined and services paid

Provider type	Medicare	Medicaid	Private plans
Office-based physicians	Fee-for-service	Fee-for-service	Fee-for-service
Outpatient hospital services	Ambulatory payment classifications	Fee-for-service; ambulatory patient classification	Fee-for-service
Inpatient hospital services	Medicare severity diagnosis related groups	Diagnosis related groups, per diem	Diagnosis related groups, fee-for-service, per diem
Skilled nursing facilities	Per diem (adjusted using resource utilization groups)	Per diem	
Ambulatory surgical centres	Ambulatory payment classifications		

Source: author's compilation.

Starting in the late 1960s and early 1970s, at least 30 states implemented programs to either review or directly regulate hospital rates and budgets (Anderson, 1991). Evidence is mixed (Eibner et al., 2009); but some studies indicate that, if properly structured, rate setting systems show better ability to meet the goals of reduced cost growth and improved access than most market-based systems (McDonough, 1997; Murray, 2009; Murray and Berenson, 2015). Maryland was the first, most stable and only remaining all-payer hospital rate setting program. The main features of the Maryland price setting system are described below.

1 Medicare

Medicare is a health insurance program for people age 65 or older, people under age 65 with certain disabilities and people of all ages with end-stage renal disease (permanent kidney failure requiring dialysis or a kidney transplant).

Medicare has different parts that help cover specific services[7]:

- Part A (Hospital Insurance): it helps cover inpatient care in hospitals, including critical access hospitals, and skilled nursing facilities (not custodial or long-term care). It also helps cover hospice care and some home health care. Beneficiaries must meet certain conditions to get these benefits. Most people do not pay a premium for Part A because they or their spouse have already paid for it through their payroll taxes while working.
- Part B (Medical Insurance): it helps cover doctor services and outpatient care. It also covers some other medical services that Part A does not cover, such as physical and occupational therapist services, and some home health care. Part B helps pay for these covered services and supplies when they are medically necessary. Most people pay a monthly premium for Part B.
- Part D (Prescription Drug Coverage): it is available to everyone with Medicare. To get Medicare prescription drug coverage, people must join a plan approved by Medicare and pay a monthly premium.

The goal of the Medicare payment policy is to obtain adequate value for program expenditures, which means maintaining beneficiary access to high-quality services while encouraging efficient use of resources: "Anything less does not serve the interests of the taxpayers and beneficiaries who finance Medicare through their taxes and premiums" (Medicare Payment Advisory Commission, 2018a).

In 2016, managed care[8] was the largest Medicare spending category (28%), followed by inpatient hospital services (21%), prescription drugs provided under Part D[9] (14%), services reimbursed under the physician fee schedule (11%), outpatient hospital services (7%) and skilled nursing facilities (4%). Spending for inpatient hospital services was a smaller share of total Medicare spending in 2016 than it was in 2007, falling from 29% percent to 21%, whereas spending on beneficiaries enrolled in managed care plans grew from 19% to 28% over the same period (Medicare Payment Advisory Commission, 2018b).

7 https://www.cms.gov/Medicare/Medicare-General-Information/MedicareGenInfo/index.html.

8 The Medicare Advantage program allows Medicare beneficiaries to receive their Medicare benefits from private plans (managed care) rather than from the individual fee-for-service programs.

9 In 2006, Medicare began a voluntary outpatient drug benefit known as Part D. Prescription drug plans compete for enrollees on the basis of annual premiums, benefit structures, specific drug therapies covered, pharmacy networks, and quality of services. Medicare subsidizes premiums by about 75% and provides additional subsidies for beneficiaries who have low levels of income and assets (Medicare Payment Advisory Commission, 2018b).

Health care facilities must demonstrate compliance with the Medicare conditions of participation (providers), conditions for coverage (suppliers) or conditions for certification (rural health clinics) to be eligible to receive Medicare reimbursement.[10-11] Health care facilities that are "provider entities"[12] are allowed to demonstrate this compliance through accreditation by a CMS-approved accreditation program of a private, national Accrediting Organization (AO)[13]. Accreditation on a voluntary basis by a CMS-approved national AO is an alternative to being subject to assessment of compliance by an applicable State Survey Agency. AOs currently have CMS approval for eight provider or supplier program types: hospital, psychiatric hospital, critical access hospitals (CAH), home health agency (HHA), hospice, ambulatory surgical centre (ASC), outpatient physical therapy (OPT), and speech-language pathology services and rural health clinics (RHC). Figure 3 below reports the number of providers which received accreditation from an AO (deemed) and by a state survey agency (non-deemed) in Fiscal Year 2017.

Figure 3
Number of accredited providers by program type

Provider type	Deemed (%)	Non-deemed (%)	Total
Hospital	3460 (88)	481 (12)	3941
Psychiatric hospital	419 (85)	72 (15)	491
Critical Access Hospitals	418 (32)	895 (68)	1313
Home Health Agency	4276 (45)	5145 (55)	9421
Hospice	1868 (42)	2606 (58)	4474
Ambulatory Surgical Centres	1530 (28)	3982 (72)	5512
Outpatient physical therapy and speech-language pathology services	206 (10)	1905 (90)	2111
Rural health clinics	339 (8)	3812 (92)	4151
Total	**12178 (40)**	**18436 (60)**	**30614**

Source: Centers for Medicare and Medicaid Services, 2018. Note: Deemed are those providers that received accreditation from an Accrediting Organization. Non-deemed are those providers that received accreditation by a state survey agency.

10 Those "conditions" refer to health and safety standards which are the foundation for improving quality and protecting the health and safety of beneficiaries.

11 When services are furnished through institutions that must be certified for Medicare, the institutional standards must be met for Medicaid as well. In general, the only types of institutions participating solely in Medicaid are (unskilled) Nursing Facilities, Psychiatric Residential Treatment Facilities and Intermediate Care Facilities for the Mentally Retarded. Medicaid requires Nursing Facilities to meet virtually the same requirements that Skilled Nursing Facilities participating in Medicare must meet. Facilities for the Mentally Retarded must comply with special Medicaid standards.

12 "Provider entities" include providers of services, suppliers, facilities, clinics, agencies or laboratories. Physicians, as well as nurses and many allied health professionals are accredited by licensing boards in the state in which they practice. In addition to state-level regulations, physicians are also regulated at the federal level by CMS criteria for reimbursing providers.

13 The process of recognition of an AO by CMS is called "deeming".

As of September 2016, there were nine national AOs with 21 approved Medicare accreditation programs, the largest being The Joint Commission (figure 4) (Centers for Medicare and Medicaid Services, 2018).

Figure 4
Approved Medicare accrediting organizations by type of care

Accrediting organization	Hospital	Psychiatric hospital	CAH	HHA	Hospice	ASC	OPT	RHC
American Association for Accreditation of Ambulatory Surgery Facilities						174	206	194
Accreditation Association for Ambulatory Health Care						767		
Accreditation Commission for Health Care				682	215			
American Osteopathic Association/Healthcare Facilities Accreditation Program	122		27			28		
Community Health Accreditation Partner				1989	761			
Centre for Improvement in Healthcare Quality	39							
DNV GL-Healthcare	264		66					
The Compliance Team								145
The Joint Commission	3035	419	325	1605	892	561		
Total	**3460**	**419**	**418**	**4276**	**1868**	**1530**	**206**	**339**

Source: Centers for Medicare and Medicaid Services, 2018. Note: CAH: critical access hospitals; HHA: home health agency; ASC: ambulatory surgical centre; OPT: outpatient physical therapy, RHC: rural health clinics.

A description of the systems used by Medicare to pay for inpatient hospital services, skilled nursing facilities services, outpatient hospital services, physicians and other health professionals, ASC services and managed care as well as a description of quality payment incentive programs and bundled payments is reported below. Of note, there is no spending target or revenue cap at the provider level.

Hospital acute inpatient services

In 2016, 3238 hospitals provided almost 9.2 million discharges under Medicare's acute inpatient PPS, and 1345 CAH[14] provided 309 000 discharges. The number of discharges declined from 2015 to 2016 at both PPS hospitals and CAHs (Medicare Payment Advisory Commission, 2018c).

The acute inpatient prospective payment system (IPPS) rates are intended to cover the costs that reasonably efficient providers would incur in furnishing high quality care.[15] The IPPS pays per discharge rates that begin with two national base payment rates —covering operating and capital expenses — which are then adjusted to account for two broad factors that affect hospital costs of providing care: the patient's condition and related treatment strategy, and market conditions in the location of the facility.

To account for patient needs, discharges are assigned based on Medicare severity diagnosis related groups (MS–DRGs),[16] in other words, patient groups with similar clinical conditions that require similar amounts of hospital resources. Each MS–DRG has a relative weight that reflects the expected relative cost of inpatient treatment for patients in that group. CMS recalibrates the MS-DRG weights annually, without affecting overall payments, based on standardized costs for all cases in each MS-DRG.

To account for local market conditions, the payment rates for MS–DRGs in each local market are determined by adjusting the national base payment rates to reflect the relative input-price level in the local market (wage index).

In addition to these two factors, the operating and capital payment rates are increased for facilities that operate an approved resident training program (based on hospital teaching intensity)[17] or that treat a disproportionate share of low-income patients. Conversely, rates are reduced for certain transfer cases, and outlier payments are added for cases that are extraordinarily expensive. Figure 5 shows how an inpatient payment is calculated.

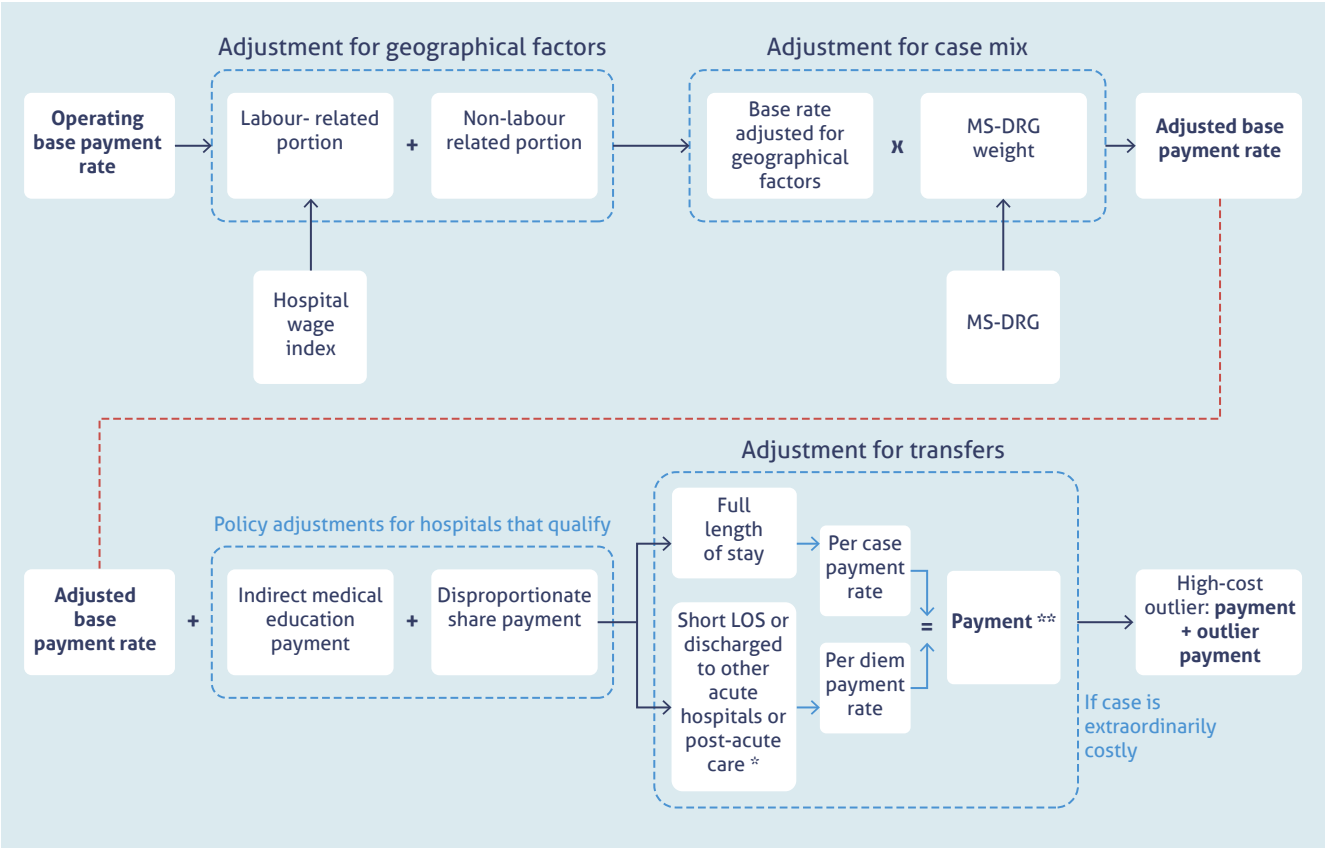
14 Eligible hospitals must meet the following conditions to obtain CAH designation: have 25 or fewer acute care inpatient beds; be located more than 35 miles from another hospital; maintain an annual average length of stay of 96 hours or less for acute care patients and provide 24/7 emergency care services.

15 Equity in payment — which means that hospitals in similar situations get paid the same price for the same service — is an underlying key principle of the IPPS design framework. This also means that payment is not hospital specific.

16 The MS-DRGs system has 335 base DRGs, most of which are split into two or three MS-DRGs based on the presence of either a comorbidity or complication or a major comorbidity and complication.

17 Medicare pays separately for the direct costs of operating approved training programs for residents.

Figure 5
Calculation of Medicare acute inpatient payment



Source: Adapted from Medicare Payment Advisory Commission, 2018e.
Note: * Transfer policy for cases discharged to post-acute care settings applies for cases in 280 selected MS–DRGs. ** Additional payment made for certain rural hospitals.

Skilled nursing facilities services

The total number of skilled nursing facilities (SNFs) has increased moderately since 2009, and the mix of facilities shifted from hospital-based to freestanding facilities. In 2017, hospital-based facilities made up 5% of the 15 277 SNF facilities. Medicare covered 2.3 million admissions with an average 25.7 days covered per admission in 2016 (Medicare Payment Advisory Commission, 2018c).

The Medicare SNFs benefit covers skilled nursing care, rehabilitation services and other goods and services and pays facilities a pre-determined daily rate for each day of care. The prospective payment system rates are expected to cover all operating and capital costs that efficient facilities would be expected to incur in furnishing most SNF services, with certain high-cost, low-probability ancillary services (such as magnetic resonance imaging and radiation therapy) paid separately.

Daily payments to SNFs are determined by adjusting the base payment rates for geographic differences in labour costs and case mix. To adjust for labour cost differences, the labour-related portion of the total daily rate is multiplied by the hospital wage index in the SNF's location. The daily base rates

are adjusted for case mix using a system known as resource utilization groups (RUGs)[18]. Each RUG has associated nursing and therapy weights that are applied to the base payment rates.

Outpatient hospital services

Most hospitals provide outpatient services, including outpatient surgery and emergency services. From 2007 to 2017, overall spending by Medicare and beneficiaries on hospital outpatient services increased by 115% (Medicare Payment Advisory Commission, 2018c).

The unit of payment under the outpatient prospective payment system (OPPS) is the individual service as identified by Healthcare Common Procedure Coding System codes. CMS classifies services (and their codes) into ambulatory payment classifications (APCs) based on clinical and cost similarity. All services within an APC have the same relative weight. In addition, drugs and biologicals whose costs exceed a threshold (US$ 110 per day in 2017) have separate APCs. Furthermore, CMS assigns some new services to "new technology" APCs based only on similarity of resource use. CMS chose to establish new technology APCs because some services were too new to be represented in the data the agency used to develop the initial payment rates for the OPPS[19].

CMS reviews and revises the APCs and their relative weights annually. The review considers changes in medical practice, changes in technology, addition of new services, new cost data and other relevant information. CMS consults with a panel of outside experts as part of this review. CMS also annually updates the conversion factor by the hospital market basket index minus a multi-factor productivity adjustment.

18 A new case-mix classification system — the Patient-Driven Payment Model (PDPM) — will be used as from October 1 2019. In the PDPM, there are five case-mix adjusted components: Physical Therapy (PT), Occupational Therapy (OT), Speech-Language Pathology (SLP), Non-Therapy Ancillary (NTA), and Nursing. Each resident is to be classified into only one group for each of the five case-mix adjusted components. For each of the case-mix adjusted components, there are a number of groups to which a resident may be assigned: 16 PT groups, 16 OT groups, 12 SLP groups, six NTA groups and 25 nursing groups. As opposed to RUG, in which a resident's classification into a single group determines the case-mix indexes and per diem rates for all case-mix adjusted components, PDPM classifies residents into a separate group for each of the case-mix adjusted components, which each have their own associated case-mix indexes and per diem rates. Additionally, PDPM applies variable per diem payment adjustments to three components, PT, OT, and NTA, to account for changes in resource use over a stay. The adjusted PT, OT, and NTA per diem rates are then added together with the unadjusted SLP and nursing component rates and the non-case-mix component, as is done under RUGs, to determine the full per diem rate for a given resident.

19 Services remain in these APCs for two to three years, while CMS collects the data necessary to develop payment rates for them.

Physician and other health professional payment system

In 2016, total primary care services had grown to 148.8 million units of service, an increase of about 10% compared with 2012. Primary care physicians accounted for most of these services (73%). Primary care services billed by advanced practice nurses[20] grew from 15.3 to 28.2 million, or 19%, from 2012 to 2016. Primary care services billed by physician assistants increased to 12.5 million, or 8% (from 7.5 million or 6% in 2012) (Medicare Payment Advisory Commission, 2018c).

Medicare reimburses specialist services (including office visits, surgical procedures and a broad range of other diagnostic and therapeutic services) according to a relative value scale that ranks several reimbursable medical procedures based on complexity and resources used.

Since 1992, the price of such services is calculated based on Relative Value Units (RVUs) developed with extensive input from the physician community, the United States Department of Health and Human Services, and academics. Medicare's physician fee schedule determines payments for over 7500 physician services. Physician services, as classified by Current Procedural Terminology (CPT) codes and Healthcare Common Procedure Coding System (HCPCS) codes, range from those requiring considerable amounts of physician time and effort, clinical staff, and specialized equipment, to those that require little if any physician time and minimal other resources.

For each service, Medicare determines RVUs for three types of resources. First, physician work accounts for the time, technical skill and effort, mental effort and judgment, and stress to provide a service. Second, practice expenses account for the non-physician clinical and non-clinical labour of the practice, and for expenses for building space, equipment, and office supplies. Third, professional liability insurance accounts for the cost of malpractice insurance premiums[21].

Adjustments are made to this ranking of services to transform them into fees used for payment. The payment is determined by multiplying the total value of those three factors by a "conversion factor," a dollar amount determined by CMS. The amount is adjusted after applying a geographic adjustment factor considering the varying costs of providing care based on resources available at a location. The RVUs are updated annually based on recommendations by the American Medical Association and its Specialty Society RVS Update Committee. CMS reviews the RVUs of new, revised, and some potentially mis-valued services annually. HCPCS codes and the conversion factor are also updated annually.

20 "Advanced practice nurses" include certified registered nurse anaesthetists, anaesthesiologist assistants, nurse practitioners, certified nurse-midwives and clinical nurse specialists.

21 Relative Value Units (RVUs), Health Policy Forum, January 12, 2015 http://www.nhpf.org/library/ the-basics/Basics_RVUs_01-12-15.pdf.

Ambulatory surgical centre

ASCs are distinct entities that furnish ambulatory surgical services not requiring an overnight stay. The most common ASC procedures are cataract removal with lens insertion, upper gastrointestinal endoscopy, colonoscopy, and nerve procedures. The number of Medicare-certified ASCs grew at an average annual rate greater than 1% from 2010 through 2016 to 5532 centres. 94% of those centres are for-profit facilities located in urban areas (Medicare Payment Advisory Commission, 2018c).

The unit of payment in the ASC payment system is the individual surgical procedure. Each of the approximately 3500 procedures approved for payment in an ASC is classified into an ambulatory payment classification (APC) group based on clinical and cost similarity. There are several hundred APCs. All services within an APC have the same payment rate. The ASC system largely uses the same APCs as the OPPS. The relative weights for most procedures in the ASC payment system are based on the relative weights in the OPPS. These weights are based on the geometric mean cost of the services in that payment group according to outpatient hospital cost data. The ASC system uses a conversion factor to translate the relative weights into dollar amounts.

Managed care

The Medicare Advantage (MA) program gives Medicare beneficiaries the option of receiving benefits from private plans rather than from the traditional fee-for-service (FFS) Medicare program. In 2017, the MA program included almost 3,300 plan options offered by 185 organizations and enrolled about 19 million beneficiaries (32% of all Medicare beneficiaries). Medicare pays plans a fixed rate per enrollee rather than FFS Medicare's fixed rate per service (Medicare Payment Advisory Commission, 2018d). Payments are enrollee specific, based on a plan's payment rate and an enrollee's risk score. Risk scores account for differences in expected medical expenditures and are based in part on diagnoses that providers code. Plans often have flexibility in payment methods, including the ability to negotiate with individual providers, care-management techniques that fill potential gaps in care delivery (e.g., programs focused on preventing avoidable hospital readmissions) and robust information systems that can potentially provide timely feedback to providers. Plans also can reward beneficiaries for seeking care from more efficient providers and give beneficiaries more predictable cost sharing, albeit one trade-off is that plans typically restrict the choice of providers.

The plan types are:

- HMOs and local preferred provider organizations (PPOs): these plans have provider networks and, if they choose, can use tools such as selective contracting and utilization management to coordinate and manage care and control service use. They can choose individual counties to serve and can vary their premiums and benefits across counties. These two plan types are classified as coordinated care plans (CCPs).
- Regional PPOs: these plans are required to offer a uniform benefit package and premium across CMS designated regions made up of one or more states. Regional PPOs have more flexible provider network requirements than local PPOs. Regional PPOs are also classified as CCPs.
- Private FFS (PFFS) plans: these plans are not classified as CCPs. They have to either locate in areas with fewer than two network plans or operate as network-based PFFS plans.

Two additional plan classifications cut across plan types: special needs plans (SNPs) and employer group plans. SNPs offer benefit packages tailored to specific populations (those beneficiaries who are dually eligible for Medicare and Medicaid, are institutionalized, or have certain chronic conditions). SNPs must be CCPs. Employer group plans are available only to Medicare beneficiaries who are members of employer or union groups that contract with those plans.

Plan bids partially determine the Medicare payments that plans receive. The bid covers an average, or standard, beneficiary and includes plan administrative cost and profit. CMS bases the Medicare payment for a private plan on the relationship between its bid and benchmark (a bidding target).

Quality Payment Program

The Quality Payment Program, established by the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), is a quality payment incentive program for physicians and other eligible clinicians, which rewards value and outcomes in one of two ways: Merit-based Incentive Payment System (MIPS) or Advanced Alternative Payment Model (APM).

Under MIPS, clinicians are included if they are an eligible clinician type and meet the low volume threshold, which is based on allowed charges for covered professional services under the Medicare Physician Fee Schedule and the number of Medicare Part B patients who are covered for professional services under the Medicare Physician Fee Schedule. Performance is measured through the data clinicians report in four areas: quality, improvement activities, promoting interoperability and costs.[22]

22 See https://qpp.cms.gov/mips/overview

An APM is a payment approach that gives added incentive payments to provide high-quality and cost-efficient care. APMs can apply to a specific clinical condition, a care episode or a population.[23]

Medicare Value-Based Purchasing

The Hospital Value-Based Purchasing (VBP) Program is a CMS initiative that rewards acute-care hospitals with incentive payments for the quality care provided to Medicare beneficiaries. CMS rewards hospitals based on:

- The quality of care provided to Medicare patients
- How closely best clinical practices are followed
- How well hospitals enhance patient experiences of care during hospital stays

Under the Hospital VBP Program, Medicare makes incentive payments to hospitals based on their performance on each measure compared with that of other hospitals during a baseline period or their performance improvement on each measure compared with their performance during the baseline period.

CMS bases hospital performance on an approved set of measures and dimensions grouped into four quality domains: safety, clinical care, efficiency and cost reduction, and person and community engagement. CMS assesses each hospital's total performance by comparing its achievement and improvement scores for each applicable Hospital VBP measure. Hospital VBP payment adjustments are applied to the base operating Medicare Severity DRG payment amount for each discharge occurring in the applicable fiscal year on a per-claim basis. The Hospital VBP Program is funded by reducing hospitals' base operating MS-DRG payments by 2%.

The Hospital Readmissions Reduction Program (HRRP) supports the VBP program by reducing payments to hospitals with excess readmissions. CMS uses excess readmission ratios (ERR) to measure performance for six conditions/procedures: acute myocardial infarction; chronic obstructive pulmonary disease; heart failure; pneumonia; coronary artery bypass graft surgery and elective primary total hip and/or total knee arthroplasty.

CMS calculates ERRs for Medicare FFS beneficiaries admitted for inpatient care at an applicable hospital, with a principal discharge diagnosis of one of the six conditions or procedures listed above. The measures assess all-cause unplanned readmissions that occur within 30 days of discharge from the initial admission. The measures count patients who are readmitted to the same hospital, or another acute care hospital, for any reason, that is regardless of the principal diagnosis.

23 See https://qpp.cms.gov/apms/overview

CMS calculates a payment adjustment factor for all applicable hospitals. The payment adjustment factor determines the percent the hospital's payment is reduced. In FY 2019, the maximum reduction is 3%. CMS applies the adjustment factor to all base operating DRG payments for discharges in the program year, regardless of the condition.

Beginning in FY 2019, CMS uses a stratified methodology to calculate hospital payment adjustment factors. The stratified methodology has the following steps:

- Hospitals are assigned to one of five groups based on a hospital's dual proportion. The groups are called peer groups. The dual proportion is the proportion of Medicare FFS and managed care stays where a patient was dually eligible for Medicare and full-benefit Medicaid.
- Median ERR is calculated for each measure and peer group. This peer group median ERR is the threshold CMS uses to assess hospital performance relative to other hospitals within the same peer group. Hospitals whose ERR is greater than the peer group median are considered to have excess readmissions.
- CMS assesses hospital performance for each measure for which the hospital has at least 25 discharges for that procedure or condition. If a hospital has excess readmissions on a measure, that measure enters a formula called the "payment adjustment factor formula". The formula used to determine the payment adjustment factor (P) is the following:

$$P=1-\min\left\{0.03, \sum \frac{NM_M Payment(dx) * \max\{(ERR(dx) - \text{Median peer group } ERR(dx)), 0\}}{\text{All payments}}\right\}$$

where "dx" is any one of the six conditions/procedures, "payments" are base DRG payments and "ERR" is a hospital's performance on that measure.

- The payment adjustment factor formula includes a neutrality modifier ("NM") that ensures that the stratified methodology meets requirements around maintaining the budget neutrality of the program.
- The payment adjustment factor formula calculates the size of the payment reduction. CMS caps the payment reduction at 3%, thereby setting a minimum payment adjustment factor of 0.97.

Bundled payments

The CMS Innovation Center has launched a new voluntary episode payment model, the Bundled Payments for Care Improvement Advanced (BPCI Advanced) for 32 Clinical Episodes. This model holds clinicians and provider organizations accountable for quality and costs of care across a

defined episode comprising either a hospitalization or procedure and 90 subsequent days. The first cohort of participants has started participation in this model on October 2018, and the initiative will run through the end of 2023.

BPCI-Advanced is defined by following key characteristics:

- Voluntary model
- A single retrospective bundled payment and risk track for Clinical Episodes, which begins on the first day of the triggering inpatient stay or outpatient procedure and extend through the 90-day period starting on the day of discharge from the inpatient stay or the completion of outpatient procedure
- Twenty-Nine Inpatient Clinical Episodes and three Outpatient Clinical Episodes[24]
- Payment is tied to performance on quality measures
- Preliminary target prices are provided in advance

BPCI Advanced aims to encourage clinicians to redesign care delivery by adopting best practices, reducing variation from standards of care and providing a clinically appropriate level of services for patients throughout a clinical episode. It operates under a total-cost-of-care concept, in which the total Medicare FFS spending on all items and services furnished to a BPCI Advanced Beneficiary during the Clinical Episode, including outlier payments, will be part of the Clinical Episode expenditures for purposes of the Target Price and reconciliation calculations (unless specifically excluded).

Acute Care Hospitals (ACHs) and Physician Group Practices (PGPs) can participate as a Non-Convener Participant (NCP), whereas eligible entities that are Medicare-enrolled providers or suppliers, eligible entities that are not enrolled in Medicare, ACHs and PGPs can participate as Convener Participant (CP). A CP is a type of participant that brings together multiple downstream entities, referred to as "Episode Initiators" (EI). A CP facilitates coordination among its EIs and bears and apportions financial risk under the model. A NCP is a participant that is an EI and does not bear risk on behalf of multiple downstream EIs.

24 The 29 Inpatient Clinical Episodes are the following: disorders of the liver excluding malignancy, cirrhosis, alcoholic hepatitis; acute myocardial infarction; back & neck except spinal fusion; cardiac arrhythmia; cardiac defibrillator; cardiac valve; cellulitis; cervical spinal fusion; COPD, bronchitis, asthma; combined anterior posterior spinal fusion; congestive heart failure; coronary artery bypass graft; double joint replacement of the lower extremity; fractures of the femur and hip or pelvis; gastrointestinal haemorrhage; gastrointestinal obstruction; hip & femur procedures except major joint; lower extremity/ humerus procedure except hip, foot, femur; major bowel procedure; major joint replacement of the lower extremity; major joint replacement of the upper extremity; pacemaker; percutaneous coronary intervention; renal failure; sepsis; simple pneumonia and respiratory infections; spinal fusion (non-cervical); stroke; and urinary tract infection. The Outpatient Clinical Episodes are the following: percutaneous coronary intervention; cardiac defibrillator; and back & neck except spinal fusion.

CMS has selected seven quality measures for the BPCI Advanced model. Two of them, All-Cause Hospital Readmission Measure and Advance Care Plan, are required for all Clinical Episodes. The other five quality measures below only apply to select Clinical Episodes:

- Perioperative Care: Selection of Prophylactic Antibiotic, First or Second-Generation Cephalosporin
- Hospital-Level Risk-Standardized Complication Rate following Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty
- Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate following Coronary Artery Bypass Graft Surgery
- Excess Days in Acute Care after Hospitalization for Acute Myocardial Infarction
- CMS Patient Safety Indicators

BPCI Advanced involves Medicare FFS payments with retrospective reconciliation based on comparing all actual Medicare FFS expenditures for a Clinical Episode for which the participant has committed to be held accountable to the final Target Price for that Clinical Episode. This results in a positive or a negative reconciliation amount. All positive and negative reconciliation amounts will be netted across all Clinical Episodes attributed to an EI, resulting in a positive or negative total reconciliation amount. This total reconciliation amount for an EI is then adjusted based on quality performance, resulting in the adjusted positive or negative total reconciliation amount, respectively.

For an EI that is a NCP, the adjusted positive total reconciliation amount is the Net Payment Reconciliation Amount (NPRA), which CMS will pay to the participant. If instead this calculation results in an adjusted negative total reconciliation amount, this amount is the repayment amount which must be paid by the participant to CMS.

For CPs, all adjusted positive total reconciliation amounts are netted against all the adjusted negative total reconciliation amounts for the participant's EIs to calculate either a NPRA or a Repayment Amount.

To determine the EI-specific Benchmark Price for an ACH, CMS will use risk adjustment models to account for the following contributors to variation in the standardized spending amounts for the applicable Clinical Episode:

- Patient case-mix
- Patterns of spending relative to the ACH's peer group over time
- Historical Medicare FFS expenditures efficiency in resource use specific to the ACH's Baseline Period

CMS uses an alternative method to determine the PGP's Benchmark Price. Specifically, since physician affiliation to a PGP changes over time, discrepancies often occur between the pool of Clinical Episodes in the Baseline Period and the pool of Clinical Episodes in the Performance Period. Consequently, BPCI Advanced will base the PGP's Benchmark Price on the Benchmark Price for the ACH where the Anchor Stay or Anchor Procedure occurs. CMS will adjust this ACH-specific Benchmark Price to calculate a PGP-specific Benchmark Price that accounts for the PGP's level of efficiency in the past and the PGP's patient case mix, each relative to the ACH.

The Target Price (TP) = Benchmark Price (BP) * (1 - CMS discount). Preliminary Target Prices will be provided prospectively before each applicant finalizes its participation agreement with CMS and prior to selection of Clinical Episodes. EIs will receive a preliminary Target Price, determined prospectively based upon the historical patient case-mix. A final Target Price will be set retrospectively at the time of reconciliation by replacing the historic Patient Case Mix Adjustment with the realized value in the Performance Period, which will be transparent and specific to the participant's beneficiaries.

If aggregate Medicare FFS expenditures for items and services included in the Clinical Episode are less than the final Target Price (the Target Price updated to account for actual patient case-mix) for that Clinical Episode, then this results in a Positive Reconciliation Amount. If aggregate Medicare FFS payments for items and services included in the Clinical Episode exceed the final Target Price, then this results in a Negative Reconciliation Amount.

Reconciliation payments, both to participants from CMS and from participants to CMS, are capped at ±20% of the volume-weighted sum of the final Target Prices across all Clinical Episodes netted to the level of the EI within the Performance Period.

Early enrolment data report 1547 participants, 715 (46%) physician group practices and 832 (54%) hospitals (Navathe, Huang, and Liao, 2018). On average, participants enrolled in eight clinical episodes each. As proportions of all selected episodes, major joint replacement of the lower extremity (53%), congestive heart failure (45%), and sepsis (44%) were the most commonly selected inpatient episodes. The least commonly selected inpatient episodes were double joint replacement of the lower extremity (11%) and combined anterior posterior spinal fusion (11%).

2
Medicaid

All states, the District of Columbia, and the US territories have Medicaid programs designed to provide health coverage for low-income people. Although the federal government establishes certain parameters for all states to follow, each state administers their Medicaid program differently, resulting in variations in Medicaid coverage across the country. Beginning in 2014, the Affordable Care Act provides states the authority to expand Medicaid eligibility to individuals under age 65 in families with incomes below 133% of the Federal Poverty Level[25] and standardizes the rules for determining eligibility and providing benefits through Medicaid, CHIP and the health insurance Marketplace.

The foundational statutory provision that governs payment for all Medicaid-covered services identifies several fundamental aims for Medicaid payment policy:

- Assure that payments promote efficiency, quality and economy
- Avoid payment for unnecessary care
- Promote access within geographic areas equal to the general population

There is little federal regulation addressing these payment principles, and states have considerable flexibility in the design of policies to achieve these objectives.

Medicaid uses a variety of payment approaches for different types of providers and for different kinds of services. These include:

- FFS payments with payment for each service determined based on a fee schedule, relative value scale, percent of charges, or another basis
- Per day, per visit, or per encounter payments, which include all services rendered during the relevant period
- Per episode or bundled payments, which include services associated with a specific procedure or diagnosis, usually over more than one day, and which can be narrow (e.g., only inpatient services) or broad (e.g., inpatient, outpatient, and ancillary services)
- Capitation, premium, or global payments that provide an individual with coverage for a defined set of benefits (whether they are used or not) for a specific time (generally one month)

25 Federal poverty levels are a measure of income issued every year by the Department of Health and Human Services (HHS). They are used to determine eligibility for certain programs and benefits, including savings on Marketplace health insurance, and Medicaid and CHIP coverage.

- Supplemental or incentive payments not directly related to a service, but generally to a provider characteristic (e.g., serves a disproportionate share of uninsured patients, located in a rural area) or a desired outcome (e.g., achieves certain utilization or spending targets, performs well on quality measures)

In the absence of detailed administrative rules, legal challenges (mainly by providers) have been used to determine the criteria by which these principles should be applied.[26]

On 4 January 2016, CMS implemented new regulations that create a standardized, transparent process for states to follow prior to implementing Medicaid provider payment rate changes in the provider payment structure for services provided on a FFS basis. States are now required to consider input from providers, beneficiaries, and other stakeholders when evaluating the potential impacts of rate changes. In addition, states need to analyse the effect that rate changes may have on beneficiary access to care and then monitor the effects for at least three years after the changes are effective.

In 2015, hospital care was the Medicaid largest spending category (33.9%), followed by nursing care facilities and continuing care retirement communities (16.9%) and physicians and clinical services (12.8%) (Medicaid and CHIP Payment and Access Commission, 2017a).

A description of the systems used by Medicaid to pay for inpatient hospital services, skilled nursing facilities services, outpatient hospital services, physicians and other health professionals and managed care is reported below. As each state is subject to a balanced budget, they frequently alter their tariff schedules as financial conditions warrant.

Hospital acute inpatient services

States have selected, and CMS approved, a wide range of payment methods for inpatient hospital services, including:

- Diagnosis-related groups (DRGs): most states have adopted payment methods based on DRGs, a classification system adopted by Medicare in 1983. Under this method, hospitals are paid a fixed amount per discharge, with outlier payments for especially costly cases.
- Per diem: some states pay hospitals for the number of days that a patient is in the hospital. Under this method, every procedure has the same base rate, which is multiplied by the total number of days during the stay to determine the total payment.
- Cost-based: some states pay for inpatient services based on each individual hospital's reported costs. This approach is less common than DRGs or per diem-based payment. Many

26 In January 2015, the U.S. Supreme Court heard arguments in the case of Armstrong v. Exceptional Child Care, Inc. and determined that only CMS has the authority to decide whether Medicaid rates are sufficient and that the private parties may not bring suit.

states use cost-based reimbursement for certain types of hospitals, such as small hospitals (such as CAHs) and government-owned hospitals.

As of March 2018, 37 states used DRGs[27] and eight established per diem rates for inpatient hospital services. Five states used some other method, such as a per stay payment or cost-based reimbursement (Medicaid and CHIP Payment and Access Commission, 2018a). For each of these payment methods, a state establishes a base payment. For DRG payments, states typically establish either a base rate specific to each hospital, a state-wide base rate, or a rate based on hospital peer groups. For per diem and cost-based payment methods, base payments are determined using hospitals reported costs.

States adjust hospitals' base payments according to a variety of factors. These include:

- Outlier (48 states): payments are adjusted to account for cases that are extraordinarily costly.
- Location (18 states): payments are adjusted for different geographic areas, generally to reflect significant underlying differences in the cost to provide care in rural versus urban areas.
- Hospital type: some states adjust the base payment or use a different payment method entirely for certain hospitals. For example, many states have separate payment policies for small hospitals, CAHs, teaching and academic medical centres, government-owned hospitals and children's hospitals.

All states have implemented non-payment polices for provider preventable conditions, including health care-acquired conditions such as foreign object retained after surgery and stage III and IV pressure ulcers, and other provider-preventable conditions such as surgical or other invasive procedure performed on the wrong body part. Thirty-two states made incentive payments to hospitals for reducing readmission rates.

States can supplement low FFS base payments by using upper payment limit (UPL) [28], disproportionate share hospital (DHS)[29] or uncompensated care pool payments to pay for Medicaid shortfall, which is the difference between a hospital's Medicaid payments and its cost to provide services to Medicaid-enrolled patients (Medicaid and CHIP Payment and Access Commission, 2018b).

27 Some states use the All-patient refined (APR), others the Medicare severity (MS) and a few the All-patient (AP) DRG classification system.

28 UPL payments are lump-sum payments that are intended to fill in the difference between FFS base payments and the amount that Medicare would have paid for the same service.

29 Medicaid DSH payments are statutorily required payments to hospitals that serve a high share of Medicaid and low-income patients.

Skilled nursing facilities services

State Medicaid programs typically pay nursing facilities a daily rate. State programs generally establish nursing facility payment rates through a cost-based or price-based methodology. In a few cases, states use a combination of the two.

- Cost-based: rates are established based on each nursing facility's reported costs. Typically, each facility's costs are divided by the number of days a patient is in the facility to determine a per diem (daily) amount. Facilities are then paid their actual costs per day up to a predetermined ceiling.
- Price-based: rates are established based on the costs of a group of facilities. All facilities in a group are paid the same base rate or price per day.

As of October 2014, 30 states used cost-based methods and 12 states established prices for nursing facilities. Nine states used a combination of these approaches (Medicaid and CHIP Payment and Access Commission, 2014).

States typically adjust base nursing facility rates according to a variety of factors which include:

- Acuity or case-mix (40 states): rates are adjusted to account for the acuity (level of need) of nursing facility residents. The most common source of information on resident acuity is known as the Minimum Data Set, which is also used to determine Medicare nursing facility payment.
- High-need patients (39 states): rates are adjusted to account for residents with particularly high needs such as ventilator dependence or traumatic brain injury.
- Peer groups (29 states): rates are determined based on peer groups of facilities of similar size and in the same geographic area.

States may also make supplemental payments or incentive-based payments to nursing facilities:

- Supplemental payments (20 states): these are typically lump-sum payments that are not directly associated with an individual nursing facility service. Such payments are often made to public facilities.
- Incentive payments: 23 states made incentive payments based on measures of quality of care. Also, 23 states made payments based on efficiency, typically to reward providers for keeping costs below a specified amount.

Physician and other health professional payment system

State Medicaid programs, like Medicare and commercial payers, typically pay physicians and other clinicians using a fee schedule that establishes base payment rates for every covered service. State Medicaid programs that pay physicians on a direct, FFS service basis generally use one of three methods for establishing base payment rates (fee schedules):

- The resource-based relative value scale (RBRVS): this system, initially developed for the Medicare program, assigns a relative value to every physician procedure based on the complexity of the procedure, practice expense and malpractice expense. The relative value is multiplied by a fixed conversion factor to determine the amount of payment. State Medicaid programs can use the relative value units and conversion factors established by Medicare or apply their own conversion factors and then update or change the factors when appropriate.
- Percentage of Medicare: this system adopts the Medicare fee schedule, which is based on RBRVS, but pays Medicaid providers a fixed percentage of the Medicare amounts. The Medicaid fee schedule in a state would then be updated automatically whenever Medicare adjusts its physician payment amounts. The amount Medicaid pays is typically less than 100% of the Medicare amount.
- State-specific factors: states can develop their own physician fee schedules, typically determined based on market value or an internal process. States may develop fee schedules when there is no Medicare or commercial equivalent or when an alternate payment methodology is necessary for programmatic reasons (e.g., to encourage provider participation in certain geographic areas).

As of November 2016, 23 states used the RBRVS, 14 states paid physicians a percentage of the Medicare fee schedule and 11 states had a state-developed fee schedule for physician services (Medicaid and CHIP Payment and Access Commission, 2017b).

States may adjust base physician payment rates according to a variety of factors which include:

- Site of service (30 states): payment rates are adjusted to account for the service site (e.g., physician's office or in an institutional facility).
- Patient age (25 states): separate fee schedules for adults and children are developed, particularly for physician services for which there is no adult equivalent (e.g., neonatal critical care) or where the paediatric protocols for an office visit are significantly different from adult protocols.
- Provider type (15 states): separate fee schedules for primary care physicians, mid-level professionals (e.g., nurse practitioners, physician assistants, or nurse midwives), and

specialists are developed. A state may pay mid-level practitioners a percentage of the physician fee schedule or pay specialists an additional amount for certain services.

As of November 2016, every state made some type of adjustment to the base physician fee schedule. The most common adjustments were for advanced practitioners (provider type) and site of service.

States may also make incentive or add-on payments to physicians. Common add-on payments include:

- Academic health centre (26 states): additional payments are made for professionals practicing in an academic health centre to account for the higher average acuity of their patients.
- Primary care case management (22 states): primary care case management programs, in which enrollees are assigned to a primary care provider who receives a small additional payment each month to assume responsibility for coordinating the enrollee's care and assure access.
- Health home (17 states): an incentive or add-on payment for Medicaid physicians practicing in a designated health home is offered.
- Quality or pay-for-performance (eight states): an incentive or pay-for-performance payment is offered if a physician meets certain quality benchmarks, such as a reduction in emergency department use or compliance with diabetes treatment protocols.

In most cases, physician payment is triggered when the provider submits a claim indicating that a service has been provided. Each claim contains a record of the services provided and these services are reported using billing codes. Physician services are commonly reported using CPT codes that are developed and maintained by the American Medical Association.

Outpatient hospital services

State Medicaid programs generally use one of four approaches to pay for hospital outpatient services:

- Fee schedule: a fee schedule is a state's complete list of services and the corresponding payment amounts, which are typically determined based on market value, an internal process, or as a percentage of the Medicare rate. States often have accommodations for services without an established fee.
- Cost-based reimbursement: states pay a percentage of hospital costs, typically as reported in a hospital's Medicare cost report. These costs have a maximum allowable reimbursement rate as well as other state-specific limits.
- APC groups: the APC system, used by Medicare, bundles individual services into one of 833 APCs based on clinical

and cost similarity. All services within an APC have the same payment rate. A single visit may have multiple APCs and multiple separate payments.

- Enhanced ambulatory patient groups (EAPGs): EAPGs bundle ancillary and other services commonly provided in the same medical visit; payment is based on the complexity of a patient's illness.

As of November 2015, 18 states used a bundled payment approach, such as APC or EAPG, 16 used a cost-based system and 13 states used a fee schedule (Medicaid and CHIP Payment and Access Commission, 2016).

States may adjust outpatient payment rates according to a variety of factors. These include but are not limited to:

- Hospital type: some states adjust the base payment or use a different payment method entirely for certain hospitals. For example, 29 states have separate payment policies for small hospitals and critical access hospitals. Less commonly, states establish separate payment policies for teaching hospitals (16 states), government-owned hospitals (11 states), children's hospitals (nine states) and psychiatric facilities (eight states).
- Location (six states): payments are adjusted for services provided in specific geographic areas, to reflect significant underlying differences in the cost to provide care in rural versus urban areas.
- Exempt services: other services, such as clinical laboratory services and partial hospitalizations, are excluded from the outpatient payment methodologies in most states. These services are usually paid for using a different method, such as a cost-based reimbursement.

Forty-five states require prior authorization for certain services before approving payment. The most common services requiring prior authorization are various forms of rehabilitation; physical, occupational, and speech therapies; mental health and certain psychiatric services, and certain diagnostic imaging or radiology services.

States may also provide incentive or add-on payments for outpatient hospital services in addition to the base payment. States commonly provide add-on payments to the following hospital types:

- Government owned: just over 20 percent of US hospitals in 2011 were state or local government owned or operated (Medicaid and CHIP Payment and Access Commission, 2016). About a third of states provide supplemental payments to these hospitals for outpatient services.
- Safety net (nine states): supplemental payments to safety-net hospitals, which provide a significant amount of care to vulnerable populations, are made.

- Academic health centre (13 states): additional payments are made for services provided in an academic health centre to account for higher patient acuity.
- Quality incentives (six states): incentive payments as part of initiatives to improve the quality of health care or to reward hospital efficiency are made.

Managed care

In 2014, almost 60 percent of all Medicaid beneficiaries were enrolled in a comprehensive managed care plan. States have incorporated managed care into their Medicaid programs for a number of reasons. Managed care provides states with some control and predictability over future costs. Compared with fee for service, managed care can allow for greater accountability for outcomes and can better support systematic efforts to measure, report and monitor performance, access and quality. In addition, managed care programs may provide an opportunity for improved care management and care coordination.

Use of managed care varies widely by states, both in the arrangements used and the populations served. Medicaid programs use three main types of managed care delivery systems (Medicaid and CHIP Payment and Access Commission, 2018c):

- Comprehensive risk-based managed care. In such arrangements, states contract with managed care plans to cover all or most Medicaid-covered services for their Medicaid enrollees. Plans are paid a capitation rate, a fixed dollar amount per member per month, to cover a defined set of services. The plans are at financial risk if spending on benefits and administration exceeds payments; conversely, they are permitted to retain any portion of payments not expended for covered services and other contractually required activities.
- Primary care case management (PCCM). In a PCCM program, enrollees have a designated primary care provider who is paid a monthly case management fee to assume responsibility for managing and coordinating their basic medical care. Individual providers are not at financial risk in these arrangements and continue to be paid on a FFS basis. Several states have enhanced their PCCM programs with targeted care monitoring and chronic illness management to specific enrollees with high levels of need, and by incorporating performance and quality measures and financial incentives for providers.
- Limited-benefit plans. Most states contract with limited-benefit plans to manage specific benefits or to provide services for a particular subpopulation, such as providing inpatient mental health or combined mental health and substance abuse inpatient benefits, non-emergency transportation, oral health or disease management.

States use a variety of methods to set rates for risk-based managed care plans, but all must pay within an actuarially sound range. Many use an administrative process in which a specific rate is set by the state. Others use a competitive bidding or negotiation process. States may also use hybrid approaches, such as setting a range of rates and then asking plans to bid competitively within that range.

At least 24 states use measures of health status to risk adjust their rates, rather than relying on demographic factors alone. Such techniques are meant to adjust rates to better reflect a plan's mix of enrollees and their expected care needs and related expenditures.

3
Private health insurance

States are the primary regulators of private health plans. Each state requires insurance issuers to be licensed to sell health plans in the state, and each state has a unique set of requirements that apply to state-licensed issuers and the plans they offer. State insurance laws have sought to keep insurance companies financially solvent, protect against fraud, ensure that consumers receive the benefits promised under their insurance policies and promote the spreading of health risks (Corlette et al., 2017). State regulation of insurance is grounded in laws enacted by each state, and as a result can vary significantly. State Departments of Insurance (DoI) are the primary entities that work directly with insurers to ensure compliance with federal and state standard. The range of regulatory and oversight tools provided via state laws includes in most cases licensing (insurance companies are required to apply for a "certificate of authority"), rate review (DoI have the authority to review premium rates before they are implemented), policy review (DoI review and approve insurers' policy forms before they can be sold), network adequacy, marketing practices and market oversight.

The federal government also regulates state-licensed issuers and the plans they offer. Federal requirements establish a federal floor with respect to access to coverage (e.g., prohibition from basing applicant eligibility on health status-related factors), premiums (e.g., a tobacco user can be charged up to 1.5 times the premium charged to a non-tobacco user), benefits (as an example, minimum hospital stay after childbirth), cost sharing (e.g., limits on annual out-of-pocket spending) and consumer protection (e.g., the percentage of premium revenue spent on medical claims). However, federal law does not prevent a plan from establishing varying reimbursement rates for providers based on quality or performance measures (Fernandez, Forsberg and Rosso, 2018).

Private sector health care prices are largely unregulated (except in the state of Maryland, see below) and agreed upon through negotiations between insurance plans and the providers with whom they contract. Negotiated transaction prices are often unknown to final consumers and to the public[30] as they have been treated as commercially sensitive ("Chaos behind a veil of secrecy" in Uwe Reinhardt's words (2006)). These prices can vary substantially for similar services across providers and insurers (Clemens, Gottlieb and Molná, 2017). On average, commercial prices are about 50% higher than average hospital costs and are often far more than 50% above Medicare payment rates (Cooper et al., 2019; Medicare Payment Advisory Commission, 2018a; Selden et al., 2015). Prices also vary substantially across regions, across hospitals within regions and even within hospitals (Cooper et al., 2019). At the state level, Massachusetts, New York, Rhode Island, Vermont, and New Hampshire have all published reports on the causes and extent of provider price variation within their borders. All reports conclude or assume that high prices are correlated with a provider's position within the health care market, which the reports define in terms of size, competitive position and/or brand. Although these studies were designed differently and use slightly different methodologies, the results are informative. In Massachusetts, "the highest-priced hospitals were consistently paid 2.5 to 3.4 times more than the lowest-priced hospitals for the same set of services" (The Commonwealth of Massachusetts, 2017). The New York report (New York State Health Foundation, 2016) concludes that, depending on the region, in 2014 the highest-priced hospitals were paid blended prices 150% to 270% more than the lowest-priced hospitals. The Rhode Island report (Xerox, 2012) determines that in 2010, its highest-paid hospital received rates that were 210% more for inpatient care and 73% more for outpatient care. The Vermont report (University of Vermont College of Medicine, University of Massachusetts Medical School, and Wakely Consulting Group 2014) finds that in 2012 its highest-paid hospital was paid 180% more for inpatient care. Finally, the New Hampshire report (London et al., 2012) finds that in 2009 its highest-paid hospital was paid 217% more.

Insurers and providers negotiate how much providers are paid for services. Like any negotiation, provider payments reflect the parties' respective bargaining positions. For example, if an insurer covers a large percentage of the patient population, it can steer a large amount of business to the "in-network" providers with which it contracts. Providers may agree to accept relatively lower rates from the insurer to access this patient volume and capture this source of revenue. On the other hand, if a provider has a good reputation or strong brand name, offers specialty services, or is the largest or only provider in the area, it may have the leverage to demand higher rate from insurers and have greater increases in prices over time (Baker et al., 2014).

30 The federal government adopted the requirement for hospitals — as of 1 January 2019 — to post list prices for all their services to promote "transparency" in health care in the belief that health markets would work better if consumers had more information.

Providers' market power and negotiating leverage are derived from several complex and mutually reinforcing factors, including reputation, location, and unique service offerings. Some hospitals and physicians can demand higher prices based on a reputation for quality, regardless of whether that reputation is correlated with objective measures of higher quality. Others benefit from their prominence as well-known, research-oriented, academic health centres. Insurers often believe that, without these so-called must-have providers, their networks will not be attractive to employers and consumers. Institutional details have been also found to have an influence on physician services pricing, with large providers likely to engage in detail bargaining with insurers over service-specific pricing, whereas insurers offer small physicians' groups contract based on a fixed fee schedule.

While factors that contribute to increased negotiating leverage in health care markets are complex and the outcome of price negotiations between dominant insurers and dominant providers — also known as a bilateral monopoly[31] — is difficult to predict, the result appears clear: prices bear little relation to the cost of production and price variations are not adequately explained by differences in hospital costs of delivering similar services at similar facilities.

A common feature of contracts negotiated between private health plans and providers is a form of benchmark to Medicare. This enables contractors to simplify their contracts, use the information available from Medicare on the relative cost of providing services as a benchmark and ensure access to "medically necessary" services (Clemens, Gottlieb and Molná, 2017). Hospital prices negotiated with private health plans have been found to be partly associated with Medicare payment rates (Cooper et al., 2019), whereas payment rates set by Medicare significantly influence private insurance payments to physicians, in particular, in markets with low physician concentration or high insurer concentration (Clemens, Gottlieb and Molná, 2017). Three quarters of the services and 55% of the spending (physicians) are benchmarked to Medicare. Deviations from Medicare payment rates involve contracts with large physicians' groups and payments for diagnostic imaging services. Benchmarking is strongest in payment for services where the average cost reimbursement will be most aligned with marginal costs.

The information content of the relative value scale on which Medicare's payments are based can be interpreted as a knowledge standard and, more generally, as a public good. However, as prices convey signals and guide firms when they make production decisions and consumers as they allocate their budgets, Medicare price distortions may result in inefficient allocation of resources among providers and levels of care, and inefficient provider cost structure.

31 As a matter of economic theory, under a "bilateral" monopoly, output falls below competitive levels and consumers are worse off than they would be with competitive structures in both markets (Blair, Kaserman, and Romano, 1989).

The markets for hospitals, specialist physician organizations, and primary care physician organizations at the Metropolitan Statistical Area (MSA) level became more concentrated across the United States between 2010 and 2016 (Fulton, 2017). In 2016, 90% of MSAs were highly concentrated[32] for hospitals, 65% for specialist physicians, 39% for primary care physicians and 57% for insurers. Insurance markets are highly concentrated: the national market shares of the four largest commercial health insurers was 83% in 2014 (up from 74% in 2006) (Dafny, 2018), and the two largest insurers had 70% or more of the market in half of the MSA (Gaynor, 2018).

Consolidation between hospitals, physician practices and insurers who are close competitors has reduced competition, leading to higher prices through enhanced bargaining position and leverage in negotiations with the relevant counterpart (Melnick and Fonkych, 2016; Dafny 2018; Gaynor, 2018).

4
Reference pricing

Reference pricing is a type of health benefit design that gives consumers seeking health care services an incentive to shop around for the best deal. Under reference pricing, the health insurer sets a cap — or "reference price" — for certain elective treatments and procedures (e.g., knee replacement) that represents the maximum amount the insurer will pay for the treatment or procedure regardless of the health care provider selected by the patient. If the patient selects a provider who has negotiated a price with the insurer that is at or below the reference price, the entire price is covered by the insurer and the patient owes nothing. If the patient selects a provider whose price is higher than the reference price, the insurer will pay the reference amount, leaving the patient responsible for the difference.

Reference pricing may increase pressures for price competition and lead to further cost-reducing innovations in health care products and processes (Robinson, Brown and Whaley, 2017). It could save money when there are big price variations and consumers have the time and information to shop for the best option in areas with several providers. However, if low-priced providers increase prices to the reference price or near it, potential savings will not materialize (Fronstin and Roebuck, 2014).

32 The Herfindhal-Hirschman index (HHI) is used to measure market concentration. It is calculated by squaring the market share of each firm competing in a market and summing those values across all firms. Highly concentrated markets are those with HHIs greater than 2500.

5
Balance billing

In 29 states and the District of Columbia, there are no state laws or regulations that protect privately insured consumers from balance billing by out-of-network providers in Emergency departments or in-network hospitals (Lucia, Hoadley, and Williams, 2017). Given that many insurance plans have very minimal or do not have any out-of-network coverage, exposure to balance billing is a source of increased concern to consumers (Hempstead, 2018).

Medicare participating providers[33] cannot balance-bill for additional charges, whereas non-participating providers can balance-bill beneficiaries, but by law the amount they balance-bill cannot exceed 15% of the Medicare-approved payment amount for non-participating providers for each service (95% of the Medicare fee schedule amount)[34].

Additional protections apply to Medicare beneficiaries with low incomes and limited savings who are enrolled in the Qualified Medicare Beneficiary (QMB) program. Beneficiaries enrolled in the QMB program do not have to pay Medicare cost sharing (deductibles, copayments, and coinsurance) and Medicare participating and non-participating providers are not allowed to bill them for Medicare cost sharing or balance billing amounts. The Medicaid program in the beneficiary's state is responsible for paying for cost-sharing expenses. The amount paid for cost sharing, however, may be limited according to state rules (Kosimar, 2017).

33 Medicare participating providers are those that have signed an agreement to accept the Medicare-approved amount as full payment for covered services, whereas non-participating providers are those that haven't signed an agreement to accept Medicare rates but they can still choose to accept Medicare rates for individual services.

34 https://www.medicare.gov/your-medicare-costs/part-a-costs/lower-costs-with-assignment.

6
Are hospitals cost shifting?

One argument for why prices have been rising is that hospitals are simply cost shifting by demanding higher private payment rates to make up for lower payment rates from Medicare and Medicaid. Price differences alone do not provide evidence of cost shifting because different payers may have a different willingness to pay for services. At issue is whether one set of payers (usually private insurers) is paying more because someone else (usually public payers) is paying less. The notion that high private payment rates are efforts to cost shift assumes that hospitals operate under a structure so that any reduction in payment rates from public programs like Medicare must be made up by increases in private payment rates.

There is an alternative theory that hospitals in concentrated markets with high private payment rates have negative Medicare margins because of higher costs (Frakt, 2014). Weak cost controls could be caused by the lack of competition in these markets. In this scenario, higher payments from private payers compensate for higher costs rather than for lower payments from public programs. This theory is consistent with findings from the Massachusetts Attorney General (The Commonwealth of Massachusetts, 2017) that higher prices for health care in the state reflected the hospitals' higher cost structures but were not necessarily caused by them. This theory is also consistent with recent studies demonstrating that private payment rates and market conditions are related to hospital cost structure. Hospitals in markets with less competition appear to be less efficient and thus have higher cost structures; this reduces their overall margins and necessitates higher commercial rates.

A study of 61 hospitals participating in the value-based purchasing initiative of the Integrated Healthcare Association demonstrated that hospitals in concentrated markets are more likely to focus on revenue enhancement from private payers — cost shifting — while hospitals in competitive markets are more likely to focus on cost moderation. A review of inpatient payment rates across hospital markets between 1995 and 2009 found that the hospitals most adversely impacted by Medicare cuts — that presumably had the highest Medicare volumes — did not make up the shortfall with increased prices from other payers, while those affected the least actually increased revenues. These studies find that what looks like cost shifting may be inefficient behaviour related to markets lacking competition (National Academy of Social Insurance, 2015).

7
Maryland[35]

In 1977, Maryland became the first and only state to receive a waiver from CMS, allowing the state to set rates for all patients, regardless of their insurance, so long as the state was able to keep the cost growth below the national level. An independent state agency, the Health Services Cost Review Commission (HSCRC)[36], was also empowered to set prices for hospital procedures across the state. These rates are updated each year based on multiple factors, including the Medicare "market basket" forecast, economic conditions, productivity improvements, changes in case mix and the previous year's performance. Hospitals can appeal the commission if they feel that rates are unfair.

Evidence shows that Maryland's rate setting program has consistently held hospital cost growth per admission to below the national average (Murray, 2009). Between 1976 and 2007, Maryland had the second lowest rate of increase in costs per admission in the US. The Maryland experience shows the advantages of a system that ties all stakeholders together under a common set of rules and illustrates the importance of an independent authority to set rates that ensure cost containment and provide the means of financial stability to hospitals.

The fact that Maryland's established rates have been relatively generous — set higher than Medicare reimbursements in the rest of the country — ensured that hospitals were able to cover their costs and have sufficient incentives to continue to provide the service, avoiding shortages. Additionally, the use of quality measures has protected against decreases in the quality of services provided. However, in recent years, the cost per admission grew at a faster rate in Maryland than in the rest of the nation, leading to concerns that, absent a change in this trajectory, Maryland's long-standing waiver could be in jeopardy. Furthermore, the focus on cost per admission was poorly aligned with other health care delivery system reforms under way in Maryland and nationally that focus on comprehensive, coordinated care across delivery settings.

On January 1, 2014, Maryland implemented its All-Payer Model for hospitals, which shifted the state's hospital payment structure to an all-payer, annual global hospital budget that encompasses inpatient and outpatient hospital services (Rajkumar et al., 2014). Maryland's All-Payer Model builds on the state's all-payer hospital rate setting system. The All-Payer Model operates under an agreement with CMS[37] that limits per

35 The state of Maryland has a population of 6 million inhabitants served by 47 general acute care hospitals.

36 The HSCRC works closely with the Maryland department of health, and its seven commissioners are appointed by the Maryland governor. The agency employs 39 full-time staff, and its budget of US$ 14.1 million is funded by a fee collected from hospitals. The HSCRC operates an Advisory Committee and technical Working Groups for formal expert technical consultation. The HSCRC is independent and thus its decisions are not reviewed by the legislative or executive branches.

37 http://www.hscrc.state.md.us

capita total hospital cost growth for both Medicare and all payers and generates US$ 330 million in Medicare savings over 5 years. Under the Maryland All-Payer Model, the HSCRC establishes an annual global budget[38] built from allowed revenues during a base period (the year 2013), which are adjusted for following years using a number of factors, both hospital specific and industry wide: an allowed rate of hospital cost inflation, approved changes in the hospital's volume based on changes in population demographics and market share, rising costs of new outpatient drugs, and additional adjustments related to reductions in potentially avoidable utilization and quality performance (Health Services Cost Review Commission, 2018).

The HSCRC sets an agreement with each hospital in Maryland following the "Global Budget Revenue" (GBR) model. This model is a revenue constraint and quality improvement system designed by the HSCRC to provide hospitals with strong financial incentives to manage their resources efficiently and effectively in order to slow the rate of increase in health care costs and improve health care delivery processes and outcomes. The GBR model is consistent with the hospital's mission to provide the highest value of care possible to its patients and the communities it serves. The GBR model assures hospitals that adopt it that they will receive an agreed-on amount of revenue each year — i.e., the hospital's "Approved Regulated Revenue" under the GBR system — regardless of the number of Maryland residents they treat or the amount of services they deliver provided that they meet their obligations to serve the health care needs of their communities in an efficient, high quality manner on an ongoing basis.

The GBR model removes the financial incentives that have encouraged hospitals to increase their volume of services and discouraged them from reducing their levels of "Potentially Avoidable Utilization". It also provides hospitals with flexibility to use their agreed-on global budgets to effectively address the objectives of better care for individuals, higher levels of overall population health and improved health care affordability. In accepting the agreement, the hospital agrees to operate within the GBR's financial constraints and to comply with the various patient-centred and population-focused performance standards established by the HSCRC, including all the existing components of the Maryland Hospital Acquired Conditions program, the Quality Based Reimbursement program and the readmissions reduction program. The hospital agrees also to cooperate with HSCRC in the collection and reporting of data needed to assess and monitor the performance of the GBR model and in the refinement of the GBR model and the related performance standards in the future.

The HSCRC then sets rates for services that Maryland hospitals use to bill all payers so that total payments (based on expected utilization) will match the global budget. As under Maryland's previous hospital payment system, each hospital bills payers

38 The global budgets encompass 95% of hospital revenues.

for services provided using the hospital's service-specific rates. Unlike the previous system, the global budget establishes a ceiling on hospital revenues. In this context, hospitals have an incentive to ensure that revenues do not fall short of or exceed their budgets. To the extent that actual utilization deviates from projected utilization and hospital revenues vary from the global budget, a one-time adjustment to the approved budget for the following year is made to compensate hospitals for charges less than the approved budget and to recoup charges in excess of approved revenues. However, hospital revenues are expected to conform closely to the global budgets, otherwise penalties are applied to discourage patterns of overcharging or undercharging.

To compensate for some amount of deviation from the underlying utilization assumptions, hospitals are permitted to adjust their rates during the course of the year to reach their global budgets[39]. However, there are limits on the size of adjustments that are permitted[40] and rate adjustments must be applied uniformly to all services.

Maryland's All-Payer Model has continued to reduce both total expenditures and total hospital expenditures for Medicare beneficiaries without shifting costs to other parts of the health care system outside of the global budgets. These reductions were driven by reduced expenditures for outpatient hospital services. In contrast, there were no statistically significant impacts on total expenditures or total hospital expenditures among commercial insurance plan members. Maryland hospitals were able to operate within their global budgets without adverse effects on their financial status (RTI International, 2018). However, the current approach, which is focused on hospitals, does not sufficiently provide for comprehensive coordination across the entire health care system. Because of this limitation, the federal government required Maryland to develop a new model that encompasses all of the health care that patients receive, both inside the hospital and the community. To this aim, on July 9, 2018, Maryland and the federal government signed the Total Cost of Care Model (TCCM) State Agreement, which became effective January 1, 2019. To achieve a patient-centred system, the TCCM includes the following key elements:

- Care will be coordinated across both hospital and non-hospital settings, including mental health and long-term care.
- The TCCM will invest resources in patient-centred care teams and primary care enhancements.
- Maryland will set a range of quality and care improvement goals. Providers will be paid more when patient outcomes are better.

39 The HSCRC monitors hospital charges and service volume through monthly reports to ensure compliance with the global budget of each hospital.

40 Hospitals are permitted to vary their charges from the approved rates plus or minus 5% without permission. Up to 10% variation is allowed but requires permission from the HSCRC. The HSCRC will consider variation beyond 10% under special circumstances such as to avoid penalizing hospitals for reductions in Potentially Avoidable Utilisation.

- Maryland will set a range of population health goals addressing opioid use and deaths, diabetes, and other chronic conditions.
- State flexibility will facilitate programs centred on the unique needs of Marylanders, the provider community, geographic settings, and other key demographics.

As part of the federal agreement to put the new TCCM in place, all-payer hospital cost growth will continue to be limited to 3.58% per capita, a limit that was set in 2014 based on the long-term growth of Maryland's economy. As part of this Model, Maryland commits to saving US$ 300 million in annual total Medicare spending by the end of 2023.

A central part of the TCCM is the Maryland Primary Care Program which is intended to support the delivery of advanced primary care throughout the state and allow community providers to play a vital role in prevention, improving health outcomes and controlling total health care spending growth. CMS will provide funding directly to the practices to strengthen and transform the delivery of primary care around five functions: access to care; care management; comprehensiveness and coordination; patient and caregiver experience; and planned care and population health. Care Transformation Organizations[41] will assist practices in meeting care transformation requirements by providing care coordination services; support for care transitions; data analytics and informatics; standardized screening; and assistance with meeting care transformation requirements.

41 A Care Transformation Organization is defined as an entity that hires and manages an interdisciplinary care management team capable of furnishing an array of care coordination services to practices. The interdisciplinary care management team may furnish care coordination services such as: pharmacist services, health and nutrition counselling services, behavioural health specialist services, referrals and linkages to social services, and support from health educators and community health workers (https://health.maryland.gov/mdpcp/Pages/care-transformation-organizations.aspx).

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