NORC at the University of Chicago

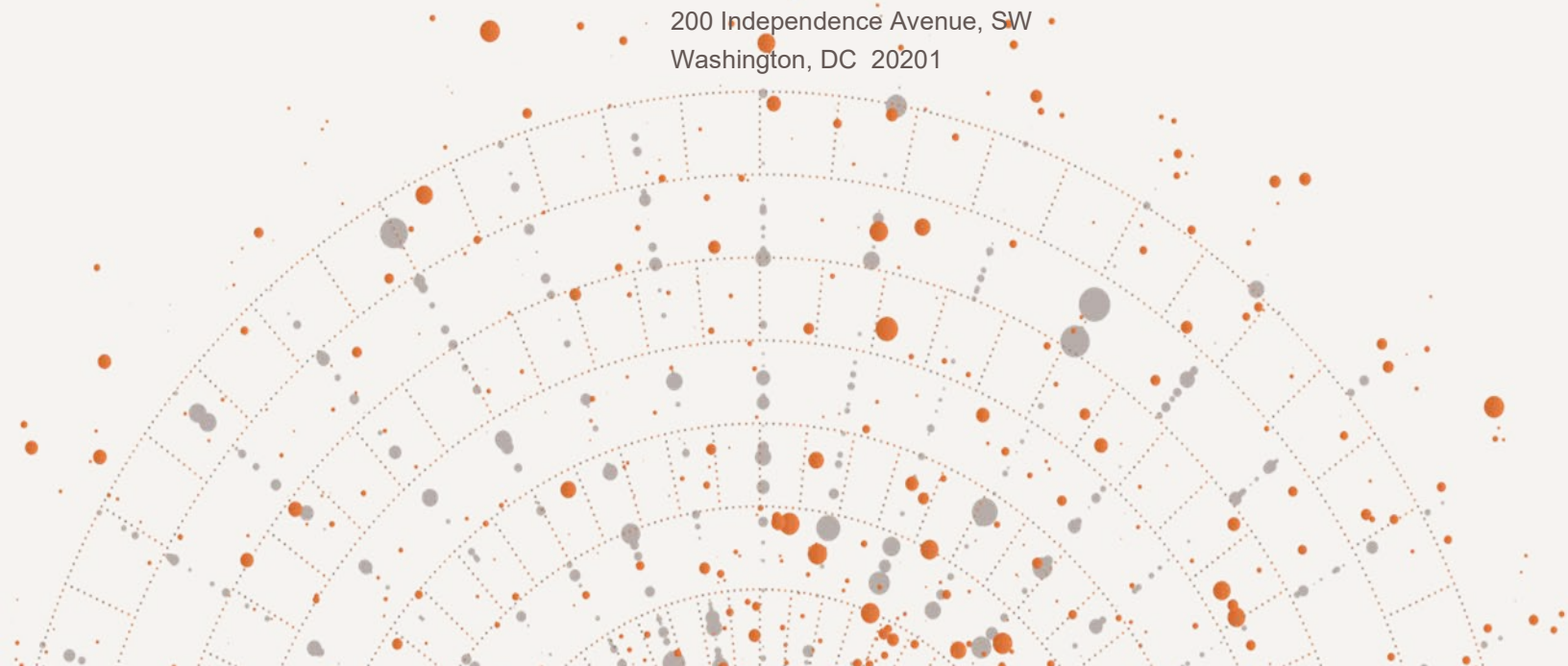
FINAL REPORT

August 8, 2025

Integrated Delivery System (IDS) Participation in Medicare Accountable Care Organizations (ACOs)

Presented by:
Erin Ewald, ScM, NORC
Audrey Weiss, PhD, NORC
Wen Hu, MS, NORC

Presented to:
Marsha Clarke
Office of the Assistant Secretary for Planning and Evaluation
Department of Health and Human Services
200 Independence Avenue, SW
Washington, DC 20201



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Executive Summary

This report was prepared at the request of the Office of the Assistant Secretary for Planning and Evaluation (ASPE) as a supplement to information that was included in the slides summarizing the findings of the Physician-Focused Payment Model Technical Advisory Committee's (PTAC's) Preliminary Comments Development Team (PCDT) for the Committee's March 2025 theme-based discussion on *Reducing Barriers to Participation in PB-TCOC Models and Supporting Primary and Specialty Care Transformation*.[i]

Accountable Care Organizations (ACOs) represent an approach to value-based care that involves groups of health care providers (including hospitals and group practices) working together to ensure high-quality patient care while managing overall patient costs.[ii] Following a period of growth in the 2010s, the number of ACOs and ACO-covered lives has leveled off in recent years.[iii] During this period, there has been substantial consolidation in the health care market, with a decrease in providers operating as solo practitioners,[iv] an increase in providers being employed by hospitals or corporate entities (which are commonly owned by integrated delivery systems [IDSs]),[v] and an increase in hospitals being affiliated with larger health systems.[vi] As such, understanding the nature of IDS participation in ACOs is important to determining how to further growth in ACOs.

This study had two key objectives: to explore IDS participation in Medicare ACOs, and to examine how Medicare ACOs differ based on IDS involvement.

Identification of Integrated Delivery Systems

An IDS is an organization that owns and/or manages a network of providers, including hospitals and physician groups, that are connected and have the capacity to provide comprehensive patient care.

[i] Physician-Focused Payment Model Technical Advisory Committee (PTAC) Preliminary Comments Development Team (PCDT). PCDT Presentation: Reducing Barriers to Participation in Population-Based Total Cost of Care (PB-TCOC) Models and Supporting Primary and Specialty Care Transformation. March 3, 2025. https://aspe.hhs.gov/sites/default/files/documents/8e17c502d5b195b322b28468577098b2/PTAC-Mar-2025-Reducing-Barriers-PCDT-Findings.pdf

[ii] Centers for Medicare & Medicaid Services (CMS). Accountable Care and Accountable Care Organizations. Last updated May 14, 2024. https://www.cms.gov/priorities/innovation/key-concepts/accountable-care-and-accountable-care-organizations

[iii] Muhlestein D, Bleser W, Saunders R, McClellan M. All-Payer Spread of ACOs and Value-Based Payment Models in 2021: The Crossroads and Future of Value-Based Care. Health Affairs Forefront. 2021. https://www.healthaffairs.org/content/forefront/all-payer-spread-acos-and-value-based-payment-models-2021-crossroads-and-future-valu

[iv] Kane CK. Recent Changes in Physician Practice Arrangements: Shifts Away from Private Practice and Towards Larger Practice Size Continue Through 2022. American Medical Association. https://www.ama-assn.org/system/files/2022-prp-practice-arrangement.pdf

[v] Physicians Advocacy Institute. Avalere Health. Updated Report: Hospital and Corporate Acquisition of Physician Practices and Physician Employment 2019-2023. April 2024. https://www.physiciansadvocacyinstitute.org/Portals/0/assets/docs/PAI-Research/PAI-Avalere%20Physician%20Employment%20Trends%20Study%202019-2023%20Final.pdf?ver=uGHF46u1GSeZgYXMKFyYvw%3d%3d

[vi] Levinson Z, Godwin J, Hulver S, Neuman T. Ten Things to Know About Consolidation in Health Care Provider Markets. Kaiser Family Foundation. April 2024. https://www.kff.org/health-costs/issue-brief/ten-things-to-know-about-consolidation-in-health-care-provider-markets/

The Agency for Healthcare Research and Quality (AHRQ) Compendium of U.S. Health Systems was used to identify IDSs across the United States in 2016, 2018, 2020, and 2022. IDSs were classified as large or small/medium based on the number of system beds and system physicians.[vii] Four nationwide primary care Medicare ACO models that were in operation for some or all of the period from 2016–2022 were included in this study: the Medicare Shared Savings Program, the Pioneer ACO model, the Next Generation ACO (NGACO) model, and the Global and Professional Direct Contracting (GPDC) model. IDS participation in Medicare ACO models was based on engagement of an IDS's affiliated hospitals and/or group practices as participants in the model. Medicare ACO participation and performance information was obtained from the Centers for Medicare & Medicaid Services (CMS) Medicare ACO Public Use Files (PUFs). Medicare ACOs were categorized based on whether the ACO included participation by large IDSs, by small/medium IDSs only (but no large IDS), or no IDS.

Based on this analysis, there were a total of 791 unique IDSs represented across the four data years, including 129 unique large IDSs and 662 unique small/medium IDSs.

Trends in IDS Participation in Medicare ACO Models by IDS Size

The first objective of this study focused on IDSs—the extent and nature of IDS participation in Medicare ACOs. Exhibit 1 summarizes overall IDS participation across the four Medicare ACO models included in this study. IDS participation in Medicare ACO models increased over time (from 55.9 percent of the 626 IDSs in 2016 to 71.3 percent of the 640 IDSs in 2022). Approximately 90–95 percent of large IDSs participated in Medicare ACOs each of the four study years (2016, 2018, 2020, 2022). Medicare ACO participation among small/medium IDSs increased from 47.8 percent in 2016 to 65.9 percent in 2022.

Exhibit 1. Overall IDS Participation in Medicare ACO Models, 2016–2022

Year	All IDSs		Large IDSs		Small/Medium IDSs	
	Number of IDSs	Participation in ACOs	Number of IDSs	Participation in ACOs	Number of IDSs	Participation in ACOs
2016	626	350 (55.9%)	122	109 (89.3%)	504	241 (47.8%)
2018	637	439 (68.9%)	119	114 (95.8%)	518	325 (62.7%)
2020	629	434 (69.0%)	115	108 (93.9%)	514	326 (63.4%)
2022	640	456 (71.3%)	112	107 (95.5%)	528	348 (65.9%)

Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

Exhibit 2 provides the number of Medicare ACO models in which large and small/medium IDSs participated and whether IDSs participated in Medicare ACO models through engagement of their affiliated hospitals and/or group practices. Between 2016 and 2022, large IDSs increasingly (with a noted drop in 2020) participated in more than one ACO model (25.5 percent in 2016 vs. 45.5 percent in 2022), whereas small/medium IDSs increasingly participated in one Medicare ACO model (42.1 percent

[vii] This method was validated based on system revenue, and in a few cases additional systems were classified as large.

in 2016 vs. 58.1 percent in 2022). Approximately two-thirds of IDSs participated in Medicare ACO models through engagement of at least one affiliated hospital and one affiliated group practice, and the remaining one-third participated through engagement of at least one affiliated group practice but no affiliated hospitals.

Exhibit 2. Extent of IDS Participation in Medicare ACO Models, 2016–2022

Year	Number of ACO Models in Which IDSs Participated (%)			Type of IDS Engagement (Hospitals and/or Group Practices) Among IDSs Participating in ACO Models		
	0 Models	1 Model	2+ Models	Hospitals AND Practices	Practices Only	Hospitals Only
Large IDSs						
2016	10.7	63.9	25.5	67.9	31.2	0.9
2018	4.2	58.0	37.8	77.2	21.9	0.9
2020	6.1	65.2	28.7	69.4	30.6	0.0
2022	4.5	50.0	45.5	68.2	31.8	0.0
Small/Medium IDSs						
2016	52.2	42.1	5.8	57.7	39.8	2.5
2018	37.3	52.7	10.7	64.3	33.8	1.8
2020	36.6	57.0	6.4	59.8	38.3	1.8
2022	34.1	58.1	7.8	51.7	46.8	1.4

Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

Note: While the Shared Savings Program operated in all four years of this analysis, three models were active during only some years of the analysis: Pioneer ACO (2016 only), Next Generation ACO (2016, 2018, 2020), and Global and Professional Direct Contracting (GPDC) (2022 only).

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

Within large IDSs, there were differences in size based on whether the IDS participated by engaging both its affiliated hospitals and group practices or by engaging its group practices only. The former group of large IDSs were on average even larger (had more providers, facilities, and revenue; data not shown) than the latter. This same trend did not hold for IDSs that were categorized as small/medium.

Exhibit 3 presents, for those IDSs that participated in Medicare ACOs, the median percentage of the IDS's affiliated hospitals and group practices that were engaged with ACOs. Overall, engagement of IDS-affiliated entities in Medicare ACOs was low, with IDSs participating in Medicare ACOs through engagement of only about one-third of their affiliated hospitals and group practices. Large IDSs had somewhat lower engagement of their affiliated hospitals and group practices compared with small/medium IDSs.

Exhibit 3. Engagement of IDS-Affiliated Hospitals and Group Practices Among IDSs Participating in Medicare ACOs, 2016–2022

Year	Large IDSs Participating in ACOs, Median % Engagement of:		Small/Medium IDSs Participating in ACOs, Median % Engagement of:	
	Hospitals	Practices	Hospitals	Practices
2016	22.2%	26.9%	33.3%	33.3%
2018	33.1%	33.3%	40.0%	40.0%
2020	22.9%	30.4%	33.3%	36.9%
2022	13.9%	33.3%	19.1%	40.0%

Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

Trends in Medicare ACOs by IDS Involvement

The second objective of this study focused on Medicare ACOs and whether ACOs differed based on involvement of IDSs. Exhibit 4 presents the composition of Medicare ACOs based on whether the ACO included large IDSs, included only small/medium IDSs (but no large IDSs), or did not include any IDSs. Approximately half of Medicare ACOs included participation by at least one large IDS, one-fourth included participation by at least one small/medium IDS (but no large IDS), and the remaining one-fourth of ACOs involved no IDS participation.

Exhibit 4. Medicare ACOs by Participation of IDSs, 2016–2022

Year	Total Medicare ACOs (Across 4 Models)	IDS Participation in Medicare ACOs		
		Includes Large IDSs (%)	Includes Only Small/Medium IDSs (%)	No IDS (%)
2016	458	45.2	21.0	33.8
2018	598	54.0	20.2	25.8
2020	550	49.1	21.1	29.8
2022	581	53.2	19.4	27.4

Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

Earned shared savings payments increased in Medicare ACOs over time regardless of IDS participation (data not shown). However, ACOs that did not include any IDS participation had higher earned shared savings than did ACOs that included IDSs.

Overall, results from this study indicate that, although participation in Medicare ACOs is common among IDSs, the degree to which IDSs participate—in terms of engagement of their affiliated hospitals and group practices in Medicare ACOs—is low. This suggests that there is a

significant opportunity to increase ACO participation by targeting IDSs that already are participating with some of their provider network. Engagement of IDSs across their entire range of providers and services may help better fulfill the vision of ACOs to provide high quality, patient-centered care while controlling and managing patients' total cost of care.

Introduction

This report was prepared at the request of the Office of the Assistant Secretary for Planning and Evaluation (ASPE) as a supplement to information that was included in the slides summarizing the findings of the Physician-Focused Payment Model Technical Advisory Committee's (PTAC's) Preliminary Comments Development Team (PCDT) for the Committee's March 2025 theme-based discussion on *Reducing Barriers to Participation in PB-TCOC Models and Supporting Primary and Specialty Care Transformation*.[viii]

Over the past 10–15 years, the Centers for Medicare & Medicaid Services (CMS) Innovation Center and other health care payers have been testing new approaches to value-based care that include Accountable Care Organizations (ACOs)—groups of hospitals, physicians, and other health care providers that work together to provide coordinated, high-quality, and lower-cost care for patients.[ix] Following a period of substantial growth until the late 2010s, the number of ACOs and ACO-covered lives has leveled off.[x] Beginning in 2010, the number of ACOs grew from fewer than 50 to over 1,000 nationwide ACOs in 2018, but then plateaued. Similarly, the number of ACO-covered lives grew to over 35 million during this same time period before stagnating. During the early and mid-2010s, the number of new ACO entrants was high, peaking near 250 new ACOs in 2012, with relatively few ACO exits. However, by 2019, the number of ACO entrants (just over 50) was surpassed by the number of ACO exits.

At the same time, the health care industry has become increasingly consolidated. Between 2012 and 2022, independent physician practices with fewer than five physicians decreased from 40.0 percent to 32.8 percent, solo practices decreased from 18.4 percent to 12.9 percent, and the proportion of physicians in private practice decreased from 60.1 percent to 46.7 percent.[xi] In the five-year span from 2019 to 2024, the percentage of physicians who were employed by hospitals or corporate entities, the majority of which are owned by integrated delivery systems (IDSs), increased from 62 percent to 78

[viii] Physician-Focused Payment Model Technical Advisory Committee (PTAC) Preliminary Comments Development Team (PCDT). PCDT Presentation: Reducing Barriers to Participation in Population-Based Total Cost of Care (PB-TCOC) Models and Supporting Primary and Specialty Care Transformation. March 3, 2025. https://aspe.hhs.gov/sites/default/files/documents/8e17c502d5b195b322b28468577098b2/PTAC-Mar-2025-Reducing-Barriers-PCDT-Findings.pdf

[ix] Centers for Medicare & Medicaid Services (CMS). Accountable Care and Accountable Care Organizations. Last updated May 14, 2024. https://www.cms.gov/priorities/innovation/key-concepts/accountable-care-and-accountable-care-organizations

[x] Muhlestein D, Bleser W, Saunders R, McClellan M. All-Payer Spread of ACOs and Value-Based Payment Models in 2021: The Crossroads and Future of Value-Based Care. Health Affairs Forefront. 2021. https://www.healthaffairs.org/content/forefront/all-payer-spread-acos-and-value-based-payment-models-2021-crossroads-and-future-value

[xi] Kane CK. Recent Changes in Physician Practice Arrangements: Shifts Away from Private Practice and Towards Larger Practice Size Continue Through 2022. American Medical Association. https://www.ama-assn.org/system/files/2022-prp-practice-arrangement.pdf

percent.[xii] Health care consolidation also has occurred among hospitals, with hospitals increasingly being affiliated with health systems (increasing from 53 percent in 2005 to 68 percent in 2022).[xiii]

Because of the extensive provider consolidation, IDSs, with their networks of physicians, practices, and facilities, represent a key source of potential participants in ACOs. IDSs can dominate a market area and may have the resources and relationships to provide the coordinated, comprehensive patient care that is characteristic of ACOs.

This study had two key objectives:

Objective 1: Explore integrated delivery system (IDS) participation in Medicare Accountable Care Organizations (ACOs).

The first objective focuses on describing how many IDSs are participating in Medicare ACO models, how participation differs based on size of the IDS, and, for those IDSs that are participating in Medicare ACO models, the extent of ACO engagement among their provider networks (hospitals and group practices).

This analysis addressed the following research questions:

1. What percentage of IDSs are participating in Medicare ACOs?
2. Does IDS participation in Medicare ACOs differ between large IDSs versus small/medium IDSs?
3. To what extent are IDSs participating in Medicare ACOs through engagement of their affiliated hospitals and group practices?
4. Has IDS participation in Medicare ACOs changed over time?

Objective 2: Examine Medicare ACO differences based on IDS involvement.

The second objective focuses on describing the extent to which Medicare ACOs include IDSs and how characteristics of those ACOs differ as a function of IDS involvement.

This analysis addressed the following research questions:

1. What is the composition of Medicare ACOs in terms of whether IDSs participate in ACOs and the size of participating IDSs (i.e., large IDS, small/medium IDS only, or no IDS participation)?
2. Do Medicare ACO characteristics differ based on the type of IDS participation?

[xii] Physicians Advocacy Institute. Avalere Health. Updated Report: Hospital and Corporate Acquisition of Physician Practices and Physician Employment 2019-2023. April 2024. https://www.physiciansadvocacyinstitute.org/Portals/0/assets/docs/PAI-Research/PAI-Avalere%20Physician%20Employment%20Trends%20Study%202019-2023%20Final.pdf?ver=uGHF46u1GSeZgYXMKFyYvw%3d%3d

[xiii] Levinson Z, Godwin J, Hulver S, Neuman T. Ten Things to Know About Consolidation in Health Care Provider Markets. Kaiser Family Foundation. April 2024. https://www.kff.org/health-costs/issue-brief/ten-things-to-know-about-consolidation-in-health-care-provider-markets/

This study focused on the period from 2016–2022 and examined IDS participation in four nationwide primary care Medicare ACO models. Results are presented in three sections: 1) number and size of IDSs and Medicare ACOs; 2) IDS participation and engagement of IDS-affiliated hospitals and group practices in Medicare ACO models; and 3) Medicare ACO characteristics by IDS involvement. Appendix A presents a list of the health systems classified as large IDSs in this study.

Data and Methods

Data

This study involved five primary data sources for four data years: 2016, 2018, 2020, and 2022:

- **Agency for Healthcare Research and Quality (AHRQ) Compendium of U.S. Health Systems ("the Compendium")** – publicly available data used to identify IDSs
- **Centers for Medicare & Medicaid Services (CMS) Medicare Accountable Care Organization (ACO) Public Use Files (PUFs)** – publicly available data used to obtain ACO participant information and financial/quality performance metrics for Medicare ACOs
- **CMS Master Data Management (MDM) files** – restricted access files on the CMS Virtual Research Data Center used to identify IDS participation in Medicare ACO models via affiliated providers (hospitals and group practices)
- **CMS Provider, Enrollment, Chain, and Ownership System (PECOS) PUF** – public provider enrollment data used to link IDS group practices in the Compendium data with ACO participation data in the MDM files
- **CMS Medicare Part B claims files** – restricted access files on the CMS Virtual Research Data Center used to facilitate linkage for some IDS group practices between the Compendium data and ACO participation data in the MDM files

The Compendium includes only information about health systems and their affiliated providers (hospitals and group practices); it does not include any information about ACOs. The CMS Medicare ACO PUFs include only information about Medicare ACOs and do not include any information about IDSs. The CMS MDM files, PECOS PUF, and Medicare Part B claims files were used to link IDSs in the Compendium with ACOs in the CMS Medicare ACO PUFs via identifiers (summarized in Exhibit 5) for IDS-affiliated providers (hospitals and group practices) that participated in the Medicare ACOs.

Exhibit 5. Identifiers Used for Data Linkages Between IDSs and Medicare ACOs

Identifier	Description	Assigned By	Data Source
System Identification Number	Used to uniquely identify health systems	AHRQ	• Compendium System, Hospital Linkage, and Group Practice Linkage Files
Taxpayer Identification Number (TIN)	Used by any entity (providers, facilities, ACOs) to file tax returns	IRS	• MDM Files • Medicare Part B Claims
National Provider Identifier (NPI)	Used by individual providers (Type 1 or individual NPI) and group practices (Type 2 or organizational NPI) to bill Medicare	CMS	• MDM Files • PECOS PUF • Medicare Part B Claims
PECOS Associate Control ID (PAC ID)	Used to identify individual and organizational providers that can bill Medicare; enrollment is via provider NPI	CMS	• Compendium Group Practice Linkage File • PECOS PUF
CMS Certification Number (CCN)	Used to certify facilities such as hospitals that can provide services to Medicare patients	CMS	• Compendium Hospital Linkage File • MDM Files
ACO Identifier	Used to uniquely identify an ACO participating in a particular Medicare ACO model	CMS	• CMS Medicare ACO PUFs • MDM Files

Abbreviations: ACO, Accountable Care Organization; AHRQ, Agency for Healthcare Research and Quality; CMS, Centers for Medicare & Medicaid Services; IRS, Internal Revenue Service; MDM, Master Data Management; PECOS, Provider Enrollment, Chain, and Ownership System; PUF, Public Use File

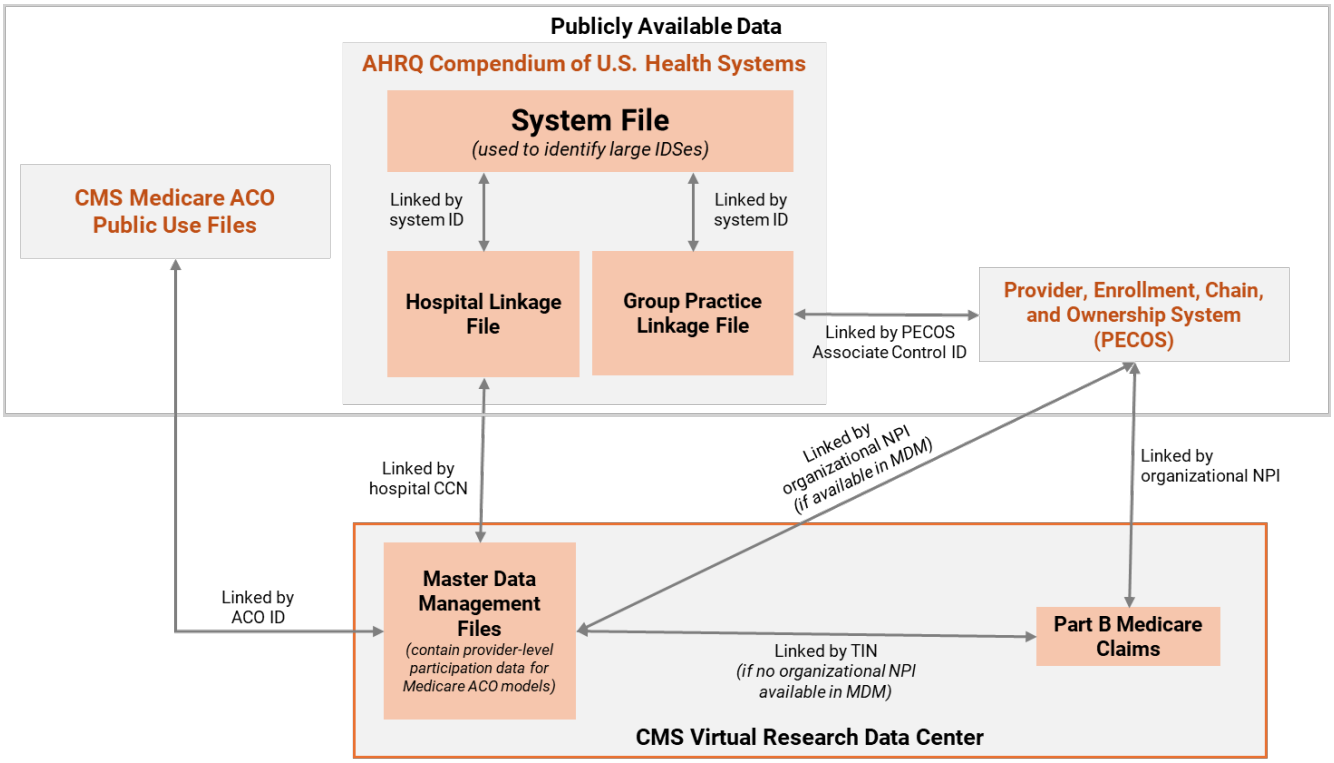
The Compendium files identify health systems via a unique system identification number which is used to link the system's affiliated hospitals and group practices. The CMS Medicare ACO PUFs identify ACOs via a unique ACO identifier. The CMS MDM files, PECOS PUF, and Medicare Part B claims were used as bridge files to link data in the Compendium and CMS Medicare ACO PUFs.

- To link Compendium and ACO data for IDS-affiliated hospitals, the hospital CMS Certification Number (CCN) was used. The hospital CCN is included in both the Compendium Hospital Linkage File and the CMS MDM files.
- To link Compendium and ACO data for IDS-affiliated group practices, indirect linkage was needed. The Compendium Group Practice Linkage File includes PECOS Associate Control (PAC) ID whereas the MDM files include either organizational NPI or TIN for group practices. To create this indirect linkage, two approaches were used:
  - For practices that include an organizational NPI in the MDM files, the Compendium Group Practice File PAC ID was linked to the PECOS PUF, which includes both the practice PAC ID and organizational NPI.

- For practices that include a TIN in the MDM files, the Compendium Group Practice File PAC ID was linked via both the PECOS PUF, which includes PAC ID and organizational NPI, and the restricted access Medicare Part B claims, which include NPI and TIN.

The linkages among data sources are depicted in Exhibit 6.

Exhibit 6. Data Sources and Linkages to Identify IDS Participation in Medicare ACOs



Abbreviations: ACO, Accountable Care Organization; AHRQ, Agency for Healthcare Research and Quality; CCN, CMS Certification Number; CMS, Centers for Medicare & Medicaid Services; ID, identifier; IDS, integrated delivery system; NPI, National Provider Identifier; PECOS, Provider Enrollment, Chain, and Ownership System; TIN, Taxpayer Identification Number

Additional details on the specific data sources used in this study are provided below. All data sources were available for all years of the analysis (2016, 2018, 2020, 2022).

AHRQ Compendium of U.S. Health Systems

The AHRQ Compendium of U.S. Health Systems ("the Compendium") includes data on U.S. health care organizations, including health systems, hospitals, and group practices.[xiv] The Compendium's definition of a health system requires that a provider organization include at least one affiliated hospital and one affiliated group practice. For the purposes of this report, health systems identified in the Compendium are referred to as IDSs. Compendium data files are available beginning in 2016 but are

[xiv] Agency for Healthcare Research and Quality (AHRQ). Compendium of U.S. Health Systems. Accessed November 11, 2024, and December 3, 2024. https://www.ahrq.gov/chsp/data-resources/compendium.html

not available for data years 2017 or 2019. Given this data limitation, this study focused on alternating data years: 2016, 2018, 2020, and 2022.

The Compendium's **System File** includes data on health system location, number of providers, number of facilities (hospitals and nursing homes), system financial characteristics (e.g., uncompensated care burden hospitals), and revenue. Most name changes among health systems are captured accurately in this file (e.g., the health system name in the data will change appropriately but the Compendium-specific ID assigned will remain the same); however, mergers, acquisitions, and consolidations may not be linked between entities in the data.

The Compendium's **Hospital Linkage File** links individual hospitals, identified by CMS CCN, to systems in the System File, and includes hospital characteristics (e.g., number of beds, discharges, ownership type, revenue). Because there is no linkable identifier to ACOs available in the Compendium System File, the hospital CCN in the Hospital Linkage File was used to link to hospital CCN in the CMS MDM files. Hospitals identified to be Medicare ACO model participants in the CMS MDM files were then linked to the Compendium System File to determine the hospitals' system affiliation and, thus, whether a system was participating in a Medicare ACO model.

The Compendium's **Group Practice Linkage File** links group practices, identified by PAC ID, to systems in the System File. The Group Practice Linkage File includes group practice characteristics (e.g., numbers of physicians, nurse practitioners, and physician assistants; total number of line items billed to Medicare claims). Similar to the approach used for hospitals, because there is no linkable identifier to ACOs available in the Compendium System File, the PAC ID in the Group Practice Linkage File was linked to the PECOS PUF and, if needed, Medicare Part B claims, to identify organizational NPI or TIN to link to the CMS MDM files. Group practices identified to be Medicare ACO model participants in the CMS MDM files were then linked to the Compendium System File to determine the practices' system affiliation and, thus, whether a system was participating in a Medicare ACO model.

CMS Medicare ACO Public Use Files (PUFs)

The CMS Medicare ACO Public Use Files (PUFs) provide data on ACOs participating in Medicare ACO models and include ACO-level characteristics (e.g., start date in the model, model risk-sharing arrangements) and financial and quality performance metrics. Available data elements can vary by model and performance year. Medicare ACO data are provided in separate PUFs for each model/program and year and are publicly available for download from the CMS website. Exhibit 7 summarizes the Medicare ACO models included in this study and the models' PUFs data that were available.

Exhibit 7. Availability of Medicare ACO PUFs for CMS Medicare ACO Models

Medicare ACO Model	Model in Operation	PUFs Available[xv]
Medicare Shared Savings Program	2013–present	ACO List: 2014–2025[xvi] Financial/Quality Results: 2013–2023[xvii]
Innovation Center Models		
Pioneer Accountable Care Organization (ACO)	2012–2016	2012–2016[xviii] (single file with both ACO list and financial/quality results)
Next Generation ACO (NGACO)	2016–2021	2016–2021[xix] (single file with both ACO list and financial/quality results)
Global and Professional Direct Contracting (GPDC)*	April 2021–present	ACO List: 2021–2024[xx] Financial/Quality Results: 2021[xxi]-2022[xxii]

Abbreviations: ACO, Accountable Care Organization; CMS, Centers for Medicare & Medicaid Services; PUF, Public Use File

* The GPDC model transitioned to the ACO REACH model on January 1, 2023. During GPDC (2021–2022), the ACOs were termed "Direct Contracting Entities."

CMS Master Data Management (MDM) Files

The CMS MDM files, which are in a restricted access folder that is available to researchers through the CMS Virtual Research Data Center, identify health care organizations, providers, and beneficiaries that participate in CMS programs and Innovation Center models. The MDM files include hospital CCNs, provider identifiers (TIN, organizational NPI), and Medicare ACO IDs. The MDM files, in conjunction with the PECOS PUF and Medicare Part B claims, were used as a bridge to link IDSs in the AHRQ Compendium (via their affiliated hospitals and practices) to Medicare ACO models (via ACO ID) in the CMS Medicare ACO PUFs. Nineteen Shared Savings Program ACOs that exited the model partway through a year are not included in the MDM files or this analysis.

[xv] PUF data availability is based on the most recent year available on the CMS website as of March 21, 2025.

[xvi] CMS. Accountable Care Organization Participants. Accessed December 17, 2024. https://data.cms.gov/medicare-shared-savings-program/accountable-care-organization-participants

[xvii] CMS. Performance Year Financial and Quality Results. Accessed December 3, 2024. https://data.cms.gov/medicare-shared-savings-program/performance-year-financial-and-quality-results/data

[xviii] CMS. Pioneer ACO Model. Accessed December 12, 2024. https://data.cms.gov/cms-innovation-center-programs/pioneer-aco-model/pioneer-aco-model

[xix] CMS. Next Generation ACO Model (NGACO) Public Use Files. Accessed December 17, 2025. https://www.cms.gov/data-research/statistics-trends-reports/next-generation-aco-model-ngaco-public-use-files

[xx] CMS. Realizing Equity, Access, and Community Health ACOs. Accessed December 10, 2024. https://data.cms.gov/cms-innovation-center-programs/aco-realizing-equity-access-and-community-health/realizing-equity-access-and-community-health-acos

[xxi] CMS. ACO Realizing Equity, Access and Community Health Financial and Quality Results. Accessed December 9, 2024. https://data.cms.gov/cms-innovation-center-programs/aco-realizing-equity-access-and-community-health/aco-realizing-equity-access-and-community-health-financial-and-quality-results/data (2021 data only)

[xxii] CMS. PY2022 GPDC Financial Results (XLSX). Accessed December 17, 2024. https://www.cms.gov/priorities/innovation/innovation-models/gpdc-model (2022 data only)

CMS Provider Enrollment, Chain, and Ownership System (PECOS) Public Use File (PUF)

The PECOS PUF contains information on providers actively enrolled in Medicare fee-for-service. These data include the PAC ID, which is used in the Compendium group practice file to identify group practices associated with health systems. The PAC ID, in conjunction with the MDM files and Medicare Part B claims, were used to link IDSs in Compendium data (via their affiliated group practices) to Medicare ACO models in the Medicare ACO PUFs.

CMS Medicare Part B Claims Files

The CMS Medicare Part B claims files include beneficiary health insurance claims under Medicare Part B (e.g., for medical services such as physician visits and outpatient care). Medicare Part B claims were used to link IDS-affiliated group practices with Medicare ACO participation data in the MDM files for providers for which no organizational NPI was available in the MDM files. In these cases, providers' TINs in the MDM files were linked to Medicare Part B claims to acquire the organizational NPI associated with the TIN, and the organizational NPI was used to link to the PECOS PUF to identify the PAC ID for linkage to the Compendium group practice data.

Methods

This report consists of two main types of analyses: 1) analysis of IDSs participating in Medicare ACOs; and 2) analysis of Medicare ACOs based on type of IDS participation. For the first analysis, IDSs were categorized as either large IDSs (those that fell approximately within the top 20th percentile for number of system beds and number of system physicians) or small/medium IDSs (all other IDSs that were not classified as large). For the second analysis, Medicare ACOs were classified based on whether they included at least one large IDS, at least one small/medium IDS (but no large IDS), or no IDSs. Details regarding the study population and analytic approaches used are described below.

Study Population

IDSs

The AHRQ Compendium of U.S. Health Systems was used to identify IDSs. All health systems identified by the Compendium were considered IDSs for the purpose of this analysis. The Compendium defines a "health system" as follows:[xxiii]

> *"A health system includes at least one hospital and at least one group of physicians that provides comprehensive care (including primary and specialty care) who are connected with each other and with the hospital through common ownership or joint management."*

[xxiii] AHRQ. Comparative Health System Performance Initiative: Compendium of U.S. Health Systems, 2022, Technical Documentation. https://www.ahrq.gov/sites/default/files/wysiwyg/chsp/compendium/2022-Compendium-TechDoc-021224.pdf

To be considered a health system, the Compendium requires that a system includes at least one non-federal acute care hospital, at least 50 physicians, and at least 10 primary care physicians. In 2022, the Compendium identified 640 health systems.

Medicare ACO Models

This study focused on four nationwide primary care Medicare ACO models operating during all or some of the period from 2016–2022: the CMS Medicare Shared Savings Program and the Innovation Center Pioneer, Next Generation ACO (NGACO), and GPDC models (see Exhibit 7 for years of operation for each Medicare ACO model).[xxiv]

Medicare ACOs

A Medicare ACO is an entity that participates in a Medicare ACO model. Medicare ACOs were identified from the CMS Medicare ACO PUFs. In general, an ACO may include hospitals, group practices, and/or individual physicians; some of these providers may be affiliated with IDSs, and others may not be IDS-affiliated. Medicare ACO models typically have rules that prohibit providers from participating in multiple models concurrently to reduce payment complexity and avoid the potential for opposing incentives.[xxv, xxvi]

Analytic Approach

IDS Classification by Size

IDSs identified in the Compendium were classified into large versus small/medium IDSs:

- **Large IDSs**: Health systems included in the Compendium that were among the largest in terms of the number of system beds, the number of system physicians, and/or revenue.
- **Small/medium IDSs**: All health systems that were included in the Compendium that were not classified as large IDSs.

To identify large IDSs, health systems in the top 20th percentile for both the number of system beds and the number of system physicians were identified in each year of the analysis (2016, 2018, 2020, 2022). Exhibit 8 provides the thresholds that defined the top 20th percentile of system beds and physicians each year.[xxvii]

[xxiv] The Vermont All-Payer ACO Model was excluded from this analysis because it was a single-state model (i.e., did not operate nationwide).

[xxv] CMS. Innovation Strategy Refresh. https://www.cms.gov/priorities/innovation/strategic-direction-whitepaper

[xxvi] For example, providers participating in the GPDC model are prohibited from participating in the Kidney Care Choices model, the Shared Savings Program, the Vermont All-Payer ACO model, the Primary Care First model, the Maryland Primary Care Program, Making Care Primary, ACO Primary Care Flex model, and other GPDC ACOs. Source: CMS. ACO REACH Model PY2025 Financial Operating Guide: Overview. (Table B.6.7) https://www.cms.gov/files/document/aco-reach-py25-fin-op-ovw.pdf.

[xxvii] Alternate definitions of large IDSs, such as the top 20th percentile of system beds OR system physicians, were also considered. However, when using those definitions, IDSs with fewer than 100 beds and/or physicians were flagged as large IDSs, which was considered too low relative to the other large IDSs identified. Using the top 20th percentile of both systems beds AND system physicians was determined to be more appropriate for identifying the largest IDSs.

Exhibit 8. Thresholds for Top 20th Percentile of Number of Health System Beds and Number of Health System Physicians, 2016–2022

Year	Top 20th Percentile Threshold for:	
	Number of System Beds	Number of System Physicians
2016	1,092	989
2018	1,107	1,233
2020	1,225	1,287
2022	1,193	1,413

Source: AHRQ Compendium of U.S. Health Systems (see "Data" section for full citation)

Applying the top 20th percentile criteria for both system beds and system physicians in at least one year yielded 115 unique health systems across the four data years classified as large IDSs. On average, these systems had approximately 4,000 beds and 3,800 physicians in each year, ranging from approximately 1,000–40,000 system beds and 1,000–25,000 system physicians in each year.

Of the 115 unique health systems:

- 71 systems (61.7 percent) were included in the Compendium in all four years and were consistently classified as large IDSs in all four years.
- 25 systems (21.7 percent) were included in the Compendium in all four years but were classified as large IDSs in at least one but fewer than all four years. However, these 25 systems met the 20th percentile threshold for one criterion (beds or physicians) and were within 15 percent of the threshold for the other criterion in these other years. Therefore, these systems were considered large IDSs in all four years of the analysis.
- 19 systems (16.5 percent) were not included in the Compendium in all four years. A manual assessment of press releases and news articles revealed that these 19 systems were involved in mergers, acquisitions, and consolidations during the analysis period. Thus, these 19 systems were assessed for appropriateness of inclusion of their pre-merger/acquisition health systems as large IDSs, based on the numbers of beds and physicians. If a pre-merger/acquisition IDS was in the top 20th percentile of beds *or* physicians in one or more years, the pre-merger/acquisition IDS was considered a large IDS (in addition to the post-merger/acquisition IDS) for purposes of this analysis. Four additional IDSs operating in 2016 and 2018 were considered large IDSs based on this assessment, yielding 119 unique health systems based on the Compendium data (see Appendix A for more details).

These 119 unique large IDSs (115 IDSs originally identified as large plus four pre-merger/acquisition IDSs that comprised large IDSs once merged) based on the Compendium data were then compared with a list of the 113 largest health systems based on 2023 revenue published in *Hospitalogy*.[xxviii] A total

[xxviii] Madden B. 113 of the Largest Health Systems Ranked by Revenue as of 2023. Hospitalogy. April 11, 2024. https://hospitalogy.com/articles/2024-04-11/113-largest-health-systems-by-revenue-2023/

of 77 of the 119 large IDSs (64.7 percent) from the Compendium data also were among the largest health systems ranked by revenue. Of the remaining 36 largest health systems based on revenue, 7 were not included in the Compendium data, 19 were in the Compendium data but did not fall in the top 20th percentile for either system beds or physicians, and 10 were in the Compendium data and were in the top 20th percentile for either system beds or physicians (but not both) in at least one data year. As such, these 10 high-revenue systems that also met either of the top 20th percentile bed or physician criteria were also considered to be large IDSs, yielding a final **total of 129 unique systems across the four data years categorized as large IDSs**. A list of the large IDSs identified for this study is provided in Appendix A.

All systems that were included in the Compendium data that were not among the 129 systems identified as large IDSs were considered to be small/medium IDSs. This resulted in a **total of 662 unique systems across the four data years categorized as small/medium IDSs**.

IDS Participation in Medicare ACO Models

IDS participation in Medicare ACO models was analyzed to address research questions under *Objective 1 (Explore IDS participation in Medicare ACOs)*, with the results presented in Exhibits 11–17. To identify participation in a Medicare ACO model, hospital and group practice identifiers from the Compendium data were linked to provider-level records of Medicare ACO model participation data in the CMS MDM files to provide a comprehensive list of which IDS-affiliated hospitals and group practices were engaged with Medicare ACOs (see Exhibit 6 for a schematic of the data linkages performed). The list of participating ACOs was then confirmed using the CMS Medicare ACO PUFs that include yearly ACO participant data.

Participation in a Medicare ACO model for an IDS was defined for this analysis based on whether at least one of an IDS's affiliated hospitals and/or group practices engaged in any of the four Medicare ACO models:

- **Hospital or group practice engagement**: The IDS participated in a Medicare ACO through engagement of at least one of the IDS's affiliated hospitals or group practices. This is the broadest definition of participation used for the analysis.
- **Hospital engagement only**: The IDS participated in a Medicare ACO through engagement of at least one IDS-affiliated hospital but no IDS-affiliated group practices.
- **Group practice engagement only**: The IDS participated in a Medicare ACO through engagement of at least one IDS-affiliated group practice but no IDS-affiliated hospitals.
- **Hospital and group practice engagement**: The IDS participated in a Medicare ACO through engagement of at least one IDS-affiliated hospital and at least one IDS-affiliated group practice.

All engagement determinations were made at the IDS level across Medicare ACOs by year. For example, if an IDS participated in one ACO through engagement of an affiliated hospital and the IDS participated in a different ACO through engagement of an affiliated practice in the same year, the IDS was counted as both hospital and group practice engagement for the year. This approach was used to reflect an IDS's participation in Medicare ACOs broadly rather than on an individual ACO basis.

Because participation in Medicare ACO models is determined at the provider level rather than the system level, a single IDS can have multiple affiliated providers engaged with various Medicare ACOs. For instance, an IDS-affiliated hospital can be a participant in the Shared Savings Program, while a different hospital affiliated with the same IDS can be a participant in the GPDC model in the same year. This IDS would be counted as participating in both the Shared Savings Program and GPDC in the same year. Different providers in a single IDS also could be participants in multiple ACOs in the same Medicare ACO model concurrently. For instance, the same IDS could have one affiliated group practice as a participant in the Shared Savings Program via a particular Shared Savings Program ACO and a second affiliated group practice also as a participant in the Shared Savings Program but via a different Shared Savings Program ACO. In this study, participation was analyzed descriptively over time, with summary statistics reported overall and by year, where appropriate.

Data on IDS characteristics are from Compendium data. IDS characteristics in this report include the number of providers, facilities, patient revenue, and system revenue, and are presented based on the four types of IDS participation in Medicare ACO models defined above (hospital or group practice engagement, hospital engagement only, group practice engagement only, hospital and group practice engagement).

Medicare ACO Characteristics by IDS Involvement

Characteristics of Medicare ACOs were presented to address research questions under *Objective 2 (Examine Medicare ACO differences based on IDS involvement)*, with the results presented in Exhibits 18–19. All data on Medicare ACO characteristics are from the CMS Medicare ACO PUFs. Medicare ACO characteristics in this report include risk arrangements, shared savings payments, and quality performance scores.

For these analyses, Medicare ACOs in each year were categorized based on the involvement of IDSs whose providers were engaged with the ACO. Three groups were identified:

- **ACOs including large IDSs**: A Medicare ACO that includes participation from one or more hospitals or group practices affiliated with at least one large IDS.
- **ACOs including only small/medium IDSs**: A Medicare ACO that includes participation from one or more hospitals or group practices affiliated with at least one small/medium IDS, but *no* participation from hospitals or group practices affiliated with a large IDS.
- **ACOs with no IDSs**: A Medicare ACO that has no participation from hospitals or group practices affiliated with either large or small/medium IDSs.

Limitations

There are several limitations to the findings presented in this report.

First, the results may underreport IDS participation in Medicare ACOs. The AHRQ Compendium data do not include information about solo practices or individual practitioners that are affiliated with health systems. Thus, the findings in this study are limited to IDS participation through engagement of affiliated hospitals and group practices only. However, trends in practice consolidation and ACO

participation suggest the impact of IDS-affiliated individual physicians participating in ACOs (particularly without the concurrent involvement of an IDS-affiliated hospital and/or group practice) may be small. A low and decreasing proportion of physicians overall are solo practitioners (16.5 percent in 2016 and 12.9 percent in 2022),[xxix] and solo physicians are least likely to participate in Medicare ACOs (22.6 percent in 2018).[xxx]

Second, due to a lack of direct identifiers to link IDSs and Medicare ACOs in this study, there is the potential for incomplete hospital and group practice linkages to determine participation in Medicare ACO models. The indirect linkage strategy used in this study relies on complete and accurate reporting of hospital and group practice identifiers in both the AHRQ Compendium data and the CMS data files. However, because the identification strategy is broad and considers participation among all hospitals and group practices in the IDS, it is unlikely that a small amount of misclassification or missing data among hospitals and group practices would meaningfully affect the findings in this report, particularly for large IDSs. Any misclassification errors may be more impactful for small/medium IDSs because of the fewer hospitals and group practices included in each IDS.

Finally, the data sources in this study do not provide information about the nature of an IDS's engagement with Medicare ACOs or the degree of affiliation that ACO-participating hospitals and group practices have with the IDS. IDSs can participate in Medicare ACO models in a variety of ways that may reflect different levels of engagement by the IDS. For instance, the IDS could participate as a lead organization (i.e., owner of an ACO) or as a Medicare ACO participant through engagement of its affiliated providers. This study cannot distinguish between ACOs that are led by an IDS versus ACOs that are not led by an IDS. Similarly, this study does not provide information on the degree of affiliation between the IDS and its hospitals and group practices, which could range from loose affiliation, such as through a joint management agreement structure, to tight alignment through employment (i.e., vertical integration). Hospitals and practices that are loosely affiliated with the IDS may have greater autonomy in deciding whether to join a Medicare ACO model.

Results

Results are organized into three sections:

- Number and Size of IDSs and Medicare ACOs
- IDS Participation in Medicare ACO Models
- Medicare ACO Characteristics by IDS Involvement

[xxix] Kane CK. Recent Changes in Physician Practice Arrangements: Shifts Away from Private Practice and Towards Larger Practice Size Continue Through 2022. American Medical Association. https://www.ama-assn.org/system/files/2022-prp-practice-arrangement.pdf

[xxx] American Medical Association. A Majority of Physicians Now Take Part in an ACO. September 12, 2019. https://www.ama-assn.org/practice-management/payment-delivery-models/majority-physicians-now-take-part-aco

Number and Size of IDSs and Medicare ACOs

This section (Exhibits 9 and 10) presents:

- the overall number and size (number of physicians and beds) of IDSs in the United States between 2016 and 2022 (Exhibit 9); and
- the overall number and size (number of aligned beneficiaries) of ACOs across the four Medicare ACO models included in this study between 2016 and 2022 (Exhibit 10).

Exhibit 9 provides the total number of IDSs in the United States (as reported in the AHRQ Compendium) overall and subset by IDS size (large vs. small/medium), along with the associated average number of physicians and hospital beds, from 2016 through 2022.

Exhibit 9. Number and Size of IDSs in the United States, 2016–2022

Year	All IDSs			Large IDSs			Small/Medium IDSs		
	Number of IDSs	Average Number of Beds	Average Number of Physicians	Number of IDSs	Average Number of Beds	Average Number of Physicians	Number of IDSs	Average Number of Beds	Average Number of Physicians
2016	626	965	742	122	3,151	2,539	504	433	307
2018	637	963	927	119	3,328	3,326	518	417	376
2020	629	1,000	945	115	3,525	3,382	514	432	399
2022	640	982	1,031	112	3,565	3,857	528	429	431

Abbreviations: IDS, integrated delivery system

Note: Number of beds was missing for a small number of small/medium IDSs (<1% each year).

Source: AHRQ Compendium of U.S. Health Systems (see “Data” section for full citation)

There was an average of 633 total IDSs in the United States each year between 2016 and 2022 (ranging from 626 in 2016 to 640 in 2022). Of these, an average of 117 (18.5 percent) were classified as large IDSs in this analysis, and 516 (81.5 percent) were classified as small/medium IDSs. The majority of IDSs were the same in each year, with a total of 129 unique large IDSs and 662 unique small/medium IDSs represented across the four data years.

The average number of physicians increased 38.9 percent across IDSs, from 742 in 2016 to 1,031 in 2022, with a greater increase for large IDSs than for small/medium IDSs (51.9 percent vs. 40.4 percent). The average number of beds remained relatively stable over time overall and for small/medium IDSs but increased somewhat for large IDSs (13.1 percent).

Exhibit 10 provides the total number of ACOs and aligned beneficiaries participating in each of the four Medicare ACO models examined in this study, from 2016 through 2022.

Exhibit 10. Number and Size of Medicare ACOs, 2016–2022

Year	Total	Shared Savings Program		Pioneer ACO		Next Generation ACO		GPDC	
		N	%	N	%	N	%	N	%
Number of ACOs									
2016	458	432	94.3%	8	1.7%	18	3.9%	–	–
2018	598	548	91.6%	–	–	50	8.4%	–	–
2020	550	513	93.3%	–	–	37	6.7%	–	–
2022	581	482	83.0%	–	–	–	–	99	17.0%
Number of Aligned Beneficiaries									
2016	8,646,192	7,884,058	91.2%	290,400	3.4%	471,734	5.5%	–	–
2018	11,496,271	10,096,874	87.8%	–	–	1,399,397	12.2%	–	–
2020	11,695,822	10,614,589	90.8%	–	–	1,081,233	9.2%	–	–
2022	12,247,324	10,418,297	85.1%	–	–	–	–	1,829,027	14.9%

Abbreviations: ACO, Accountable Care Organization; GPDC, Global and Professional Direct Contracting

Note: Three models were active during only some years: Pioneer ACO (2012–2016), Next Generation ACO (2016–2021), and GPDC (2021–2022). Inactive model years are noted by "–" in the table.

Source: CMS Medicare ACO Public Use Files (see "Data" section for full citations)

The number of Medicare ACOs fluctuated between 2016 and 2022, from a low of 458 in 2016 to a high of 598 in 2018. The vast majority of Medicare ACOs were in the Shared Savings Program. The number of beneficiaries aligned with a Medicare ACO increased 41.6 percent over time, from 8,646,192 in 2016 to 12,247,324 in 2022.

IDS Participation in Medicare ACO Models

This section (Exhibits 11–17) presents:

- overall IDS participation in the four Medicare ACO models included in this analysis (Exhibits 11–12);
- engagement of IDS-affiliated hospitals and group practices among IDSs participating in Medicare ACO models (Exhibits 13–16); and
- characteristics (providers, facilities, ownership) of IDSs participating in Medicare ACO models (Exhibit 17).

All results in this section are focused on the IDS as the unit of analysis. Results are presented separately for large IDSs versus small/medium IDSs.

Overall IDS Participation in Medicare ACO Models

Exhibit 11 provides the number and proportion of IDSs participating in the four Medicare ACO models examined in this study, by IDS size, between 2016 and 2022.

Exhibit 11. IDS Participation in Medicare ACO Models, 2016–2022

Year	Total Number of IDSs	Any Medicare ACO Model		Shared Savings Program		Pioneer ACO		Next Generation ACO		GPDC	
		N	%	N	%	N	%	N	%	N	%
Large IDSs											
2016	122	109	89.3%	102	83.6%	14	11.5%	32	26.2%	–	–
2018	119	114	95.8%	108	90.8%	–	–	51	42.9%	–	–
2020	115	108	93.9%	105	91.3%	–	–	36	31.3%	–	–
2022	112	107	95.5%	104	92.9%	–	–	–	–	54	48.2%
Small/Medium IDSs											
2016	504	241	47.8%	220	43.7%	18	3.6%	36	7.1%	–	–
2018	518	325	62.7%	284	54.8%	–	–	93	18.0%	–	–
2020	514	326	63.4%	307	59.7%	–	–	52	10.1%	–	–
2022	528	348	65.9%	322	61.0%	–	–	–	–	67	12.7%

Abbreviations: ACO, Accountable Care Organization; GPDC, Global and Professional Direct Contracting; IDS, integrated delivery system

Note: Three models were active during only some years: Pioneer ACO (2012–2016), Next Generation ACO (2016–2021), and GPDC (2021–present). Inactive model years are noted by "–" in the table.

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

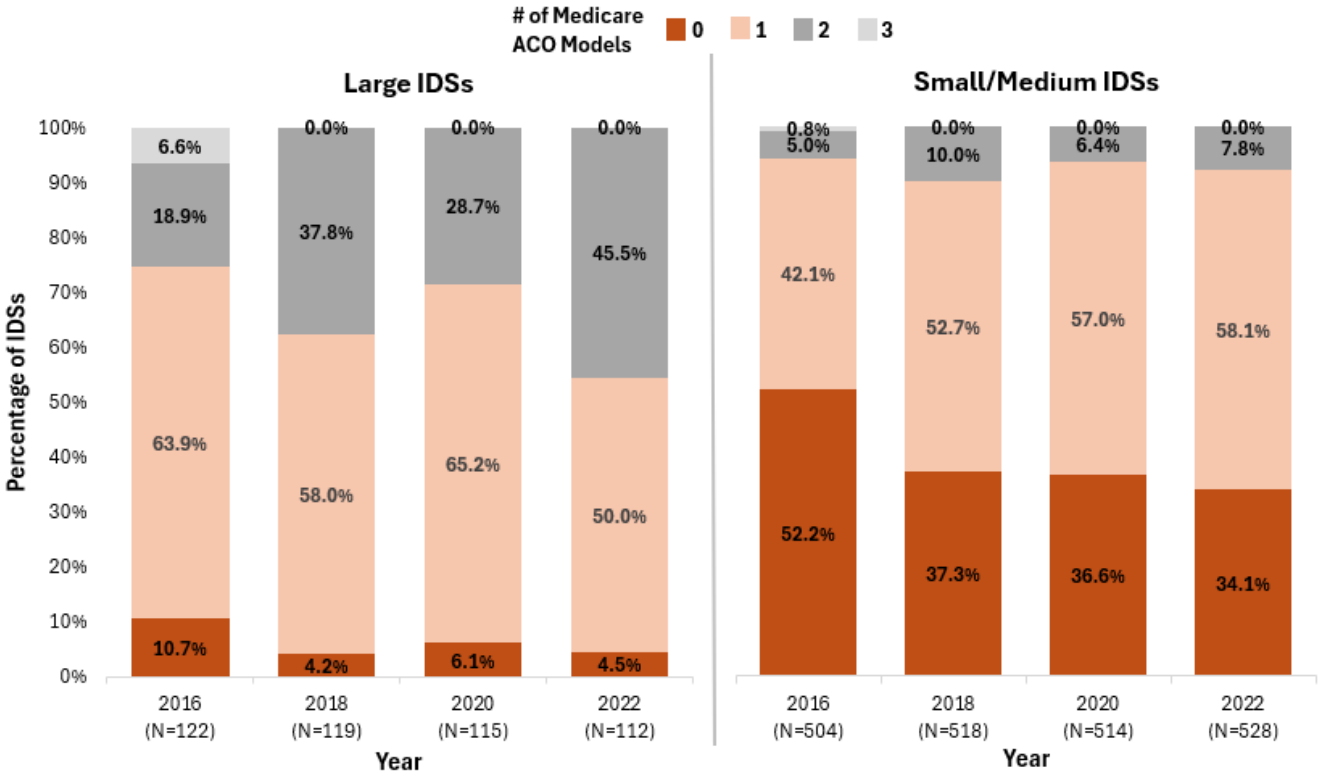
Participation in Medicare ACO models was high overall among IDSs, driven largely by participation in the Shared Savings Program. Participation was higher among large IDSs than small/medium IDSs.

Among large IDSs, participation in Medicare ACO models was approximately 90 percent or higher in all years. Of the 129 unique large IDSs across all four years, 86 (66.7 percent) participated in one or more Medicare ACO models in all four years (data not shown). Only one of the 129 unique large IDSs did not participate in any Medicare ACO model in any year.

Among small/medium IDSs, participation in Medicare ACO models increased from 47.8 percent in 2016 to 65.9 percent in 2022. Of the 662 unique small/medium IDSs across all four years, 136 (20.5 percent) participated in one or more Medicare ACO models in all four years (data not shown). Nearly one-fourth (23.6 percent) of the 662 unique small/medium IDSs did not participate in any Medicare ACO model in any year.

Exhibit 12 provides the distribution of IDS participation across the four Medicare ACO models examined in this study, by size of IDS (large vs. small/medium), between 2016 and 2022.

Exhibit 12. Number of Medicare ACO Models in Which IDSs Participated, 2016–2022



Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

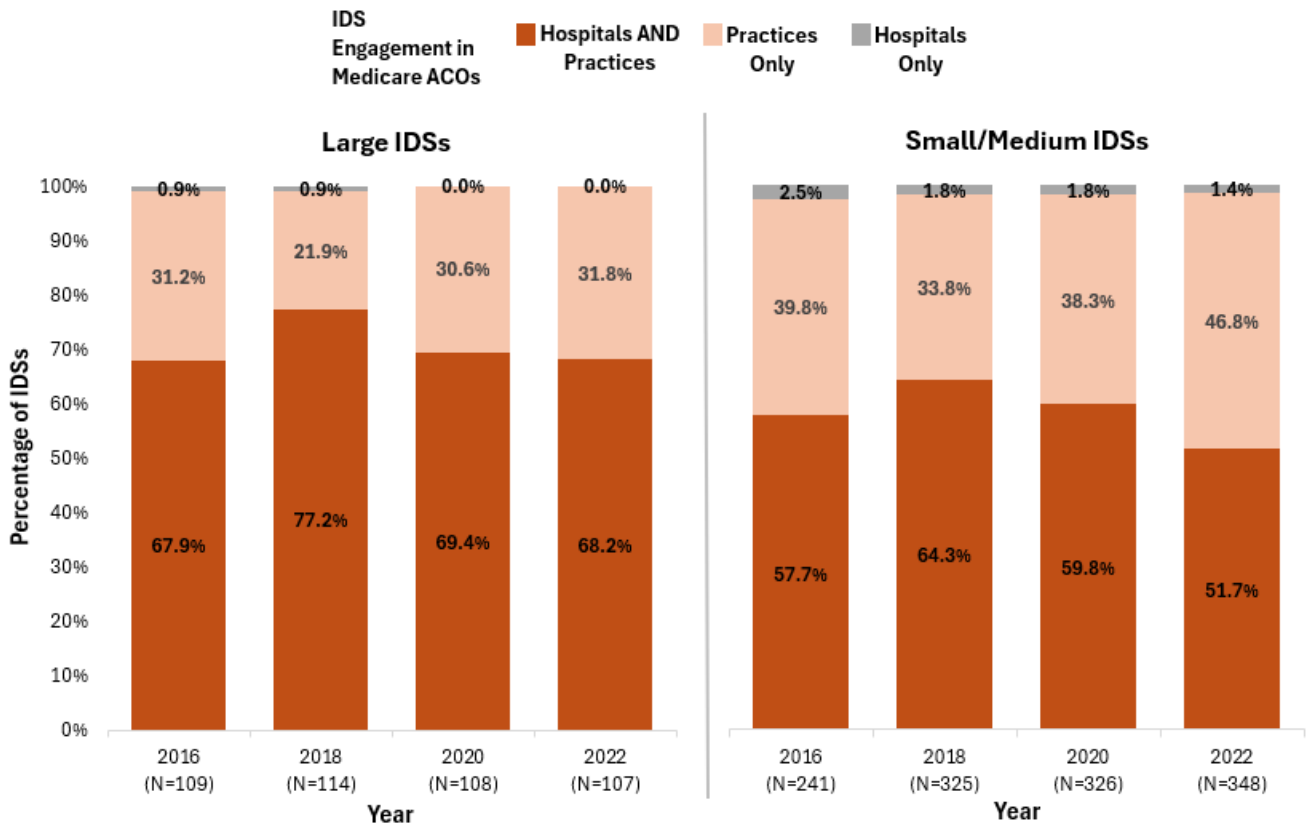
Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

Participation in multiple Medicare ACO models was more common among large IDSs (ranging from one quarter to nearly half of large IDSs across years) than among small/medium IDSs (10 percent or less of small/medium IDSs in any year). Among large IDSs, participation in multiple Medicare ACO models increased over time, from 25.5 percent in 2016 to 45.5 percent in 2022. Among small/medium IDSs, participation in multiple ACO models remained relatively low, ranging from 5.8 percent in 2016 to 10.0 percent in 2018; however, participation in one Medicare ACO model increased from 42.1 percent in 2016 to 58.1 percent in 2022.

Engagement of IDS-Affiliated Hospitals and Group Practices in Medicare ACO Models

Exhibit 13 provides the distribution of IDSs that participated in Medicare ACO models based on whether the IDS was engaged with its affiliated hospitals and/or group practices, by size of IDS (large vs. small/medium), between 2016 and 2022.

Exhibit 13. Engagement of IDS-Affiliated Hospitals and Group Practices in Medicare ACO Models, 2016–2022



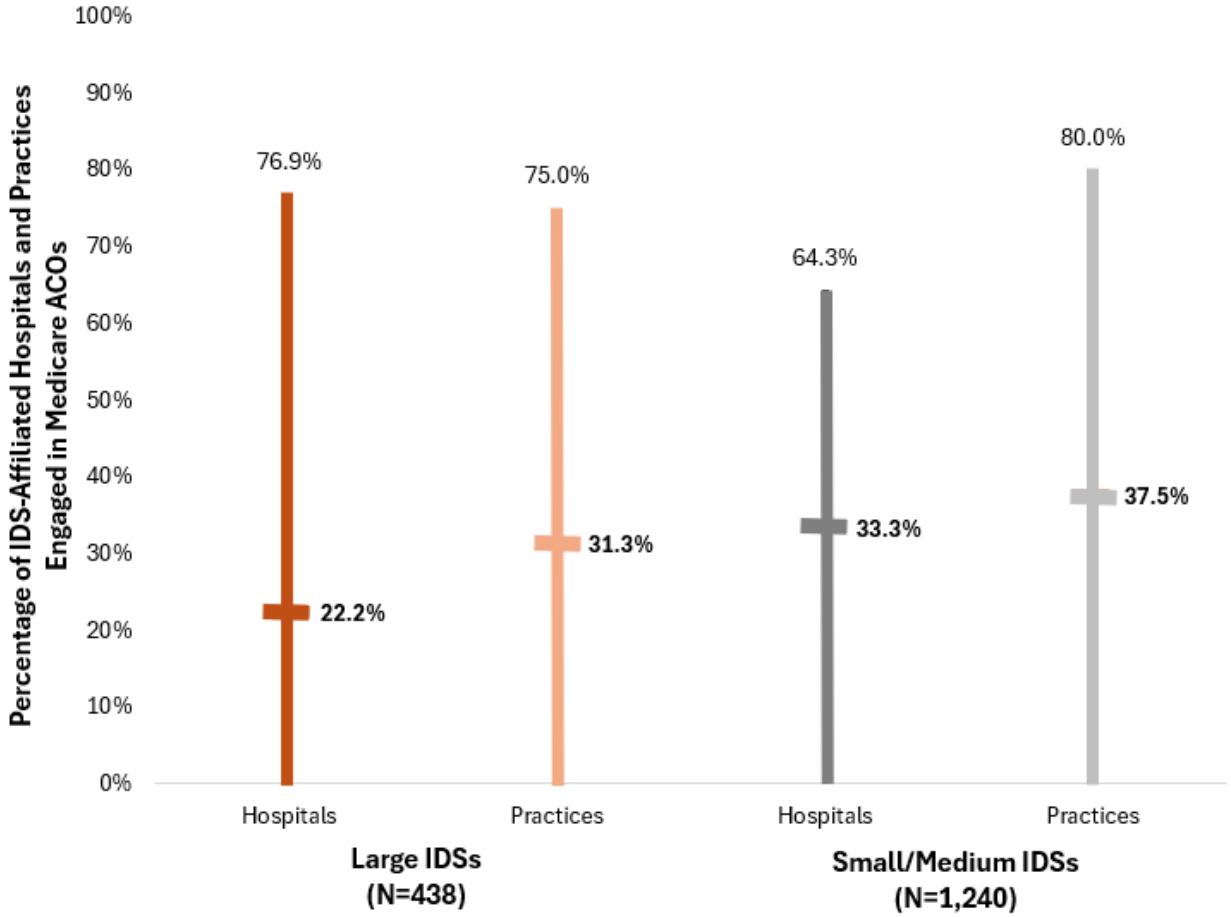
Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

Among IDSs that participated in Medicare ACO models, they were most likely to participate through engagement of both their affiliated hospitals and group practices. Large IDSs were more likely to engage both their affiliated hospitals and practices than were small/medium IDSs (70.7 percent vs. 58.4 percent, averaged across all four data years). In 2022, just over half (51.7 percent) of small/medium IDSs engaged both their affiliated hospitals and practices, the lowest level across IDSs and years. Very few IDSs of either size participated in Medicare ACO models by engaging only their affiliated hospitals (less than 3 percent).

Exhibit 14 provides the median and range for the percentage of an IDS's affiliated hospitals and practices that were engaged with Medicare ACOs, by size of IDS (large vs. small/medium), between 2016 and 2022. This analysis was conducted at the level of the participating IDS by year; that is, each IDS participating in each year was included: 438 large IDSs (109 IDSs participating in 2016, 114 IDSs in 2018, 108 IDSs in 2020, and 107 IDSs in 2022) and 1,240 small/medium IDSs (241 IDSs participating in 2016, 325 IDSs in 2018, 326 IDSs in 2020, and 348 IDSs in 2022). Results for each of the four data years separately are presented in Exhibit 3.

Exhibit 14. Median and Range of the Proportion of IDS-Affiliated Hospitals and Group Practices Engaged in Medicare ACOs, 2016–2022



Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

IDSs that participated in Medicare ACOs did so by engaging a low proportion (approximately one-third or less) of their affiliated hospitals and group practices. Large IDSs engaged a lower proportion of their hospitals and practices than did small/medium IDSs (22.2 percent vs. 33.3 percent of affiliated hospitals and 31.3 percent vs. 37.5 percent of affiliated practices). No IDSs participated in Medicare ACOs by engaging all of their affiliated hospitals or group practices.

Exhibit 15 provides the average number of Medicare ACOs with which IDSs participated based on whether the IDS engaged its affiliated hospitals and/or group practices, by size of IDS (large vs. small/medium), between 2016 and 2022.

Exhibit 15. Average Medicare ACO Participation by Engagement of IDS-Affiliated Hospitals and Group Practices, 2016–2022

Year (# of Participating IDSs)	Average Number of Medicare ACOs Among IDSs Participating in Medicare ACOs Through Engagement of IDS-Affiliated:		
	Hospitals OR Practices (any engagement type)	Hospitals AND Practices	Practices Only
Large IDSs			
2016 (N=109)	3.3	3.6	2.6
2018 (N=114)	5.1	5.7	3.4
2020 (N=108)	4.4	5.2	2.5
2022 (N=107)	5.2	6.2	3.0
Small/Medium IDSs			
2016 (N=241)	1.6	1.7	1.4
2018 (N=325)	1.7	1.8	1.5
2020 (N=326)	1.6	1.6	1.5
2022 (N=348)	1.7	1.8	1.7

Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

Note: Results are not reported for IDSs participating through engagement of their affiliated hospitals only, which represent a very small number (<10) of participating IDSs in any year.

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

On average, large IDSs participated in more Medicare ACOs than did small/medium IDSs (average of 5.2 vs. 1.7 Medicare ACOs in 2022). IDSs participated in a higher average number of Medicare ACOs each year when they were engaged with both their affiliated hospitals and group practices than when they were engaged through their affiliated practices only. This differential was more apparent for large IDSs than for small/medium IDSs, which overall participated in fewer than two Medicare ACOs per IDS.

Among participating large IDSs, the average number of Medicare ACOs overall ranged from 3.3 in 2016 to 5.2 in 2022. The average number of Medicare ACOs was higher among large IDSs that participated through engagement of both their affiliated hospitals and practices than through engagement of their affiliated practices alone. For example, in 2022, large IDSs that participated through engagement of both their hospitals and practices participated in an average of 6.2 Medicare ACOs versus 3.0 Medicare ACOs among IDSs that participated through engagement of their group practices only.

Among participating small/medium IDSs, the average number of Medicare ACOs overall ranged from 1.6 (2016 and 2020) to 1.7 (2018 and 2022). The average number of Medicare ACOs was slightly higher among small/medium IDSs that participated through engagement of both their affiliated hospitals and practices than through engagement of their affiliated practices alone.

Exhibit 16 provides the percentage of IDSs, among those that participated in Medicare ACO models, that span more than one state (i.e., the IDS provides services in multiple states), by size of IDS (large vs. small/medium), between 2016 and 2022.[xxxi]

Exhibit 16. Multi-State Service Area Among IDSs Participating in Medicare ACOs, 2016–2022

Year (# of Participating IDSs)	Percentage of IDSs with Multi-State Service Areas Among IDSs Participating in Medicare ACOs Through Engagement of IDS-Affiliated:		
	Hospitals OR Practices (any engagement type)	Hospitals AND Practices	Practices Only
Large IDSs			
2016 (N=109)	47.7%	48.7%	44.1%
2018 (N=114)	50.0%	54.6%	32.0%
2020 (N=108)	49.1%	56.0%	33.3%
2022 (N=107)	48.6%	54.8%	35.3%
Small/Medium IDSs			
2016 (N=241)	11.2%	13.7%	8.3%
2018 (N=325)	11.1%	13.4%	6.4%
2020 (N=326)	10.7%	13.9%	6.4%
2022 (N=348)	12.1%	14.4%	8.6%

Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

Note: Results are not reported for IDSs participating through engagement of their affiliated hospitals only, which represent a very small number (<10) of participating IDSs in any year.

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

Overall, among IDSs participating in Medicare ACOs, a higher percentage of large than of small/medium IDSs spanned multiple states (in 2022, 48.6 percent vs. 12.1 percent). A higher percentage of IDSs that participated in Medicare ACOs through engagement of both their affiliated hospitals and practices spanned multiple states each year than did IDSs that participated through engagement of their affiliated group practices alone.

Among participating large IDSs, approximately half spanned multiple states each year. The percentage of participating large IDSs that spanned multiple states was higher among large IDSs that participated through engagement of both their affiliated hospitals and practices than through engagement of their practices alone. For example, in 2022, 54.8 percent of large IDSs that participated in Medicare ACOs

[xxxi] This refers to the service area of the IDS overall. It does not necessarily mean that the IDS is participating in Medicare ACOs in multiple states.

through engagement of both their hospitals and practices spanned multiple states compared with 35.3 percent of large IDSs that participated through engagement of their group practices alone.

Among participating small/medium IDSs, approximately 11–12 percent spanned multiple states each year. The percentage of participating small/medium IDSs that spanned multiple states was higher among small/medium IDSs that participated through engagement of both their affiliated hospitals and practices than through engagement of their practices alone. For example, in 2022, 14.4 percent of small/medium IDSs that participated in Medicare ACOs through engagement of both their hospitals and practices spanned multiple states compared with 8.6 percent of small/medium IDSs that participated through engagement of their group practices alone.

Characteristics of IDSs Participating in Medicare ACO Models

Exhibit 17 provides characteristics of IDSs (e.g., mean and range for number of providers and facilities; system ownership) that participated in Medicare ACO model, by size of IDS (large vs. small/medium), between 2016 and 2022. This analysis focused on unique IDSs across all four data years in this study: 129 large IDSs and 662 small/medium IDSs. Of these, 128 large IDSs (99.2 percent) and 506 small/medium IDSs (76.4 percent) participated in Medicare ACO models. IDS characteristics are based on the most recent year of data available in the AHRQ Compendium.

Exhibit 17. Characteristics of IDSs Participating in Medicare ACO Models, 2016–2022

IDS Characteristic	All IDSs	Characteristics of IDSs Among IDSs Participating in Medicare ACOs Through Engagement of IDS-Affiliated:		
		Hospitals OR Practices (any engagement type)	Hospitals AND Practices	Practices Only
Large IDSs	**N=129**	**N=128**	**N=85**	**N=43**
IDS Providers, Mean (Range)				
Physicians	3,745 (671, 25,352)	3,749 (671, 25,352)	4,108 (901, 15,019)	3,040 (671, 25,352)
Primary Care Physicians	1,202 (189, 11,390)	1,205 (189, 11,390)	1,308 (344, 4,930)	1,002 (189, 11,390)
Nurse Practitioners*	924 (163, 5,265)	924 (163, 5,265)	1,078 (228, 5,265)	621 (163, 2007)
Physician Assistants*	523 (50, 2,634)	526 (56, 2,634)	583 (56, 2,634)	413 (75, 1,815)
IDS Facilities, Mean (Range)				
Non-Federal General Acute Care Hospitals	20 (1, 167)	20 (2, 167)	25 (2, 167)	10 (2, 40)
Outpatient Centers	417 (27, 2,053)	418 (10, 2,053)	489 (75, 2,053)	278 (10, 693)
Beds	3,511 (667, 37,478)	3,528 (846, 37,478)	4,220 (846, 37,478)	2,159 (952, 9,217)

IDS Characteristic	All IDSs	Characteristics of IDSs Among IDSs Participating in Medicare ACOs Through Engagement of IDS-Affiliated:		
		Hospitals OR Practices (any engagement type)	Hospitals AND Practices	Practices Only
Patient Revenue for System Hospitals, $ billions*				
Mean	$27.7	$28.4	$32.8	$19.5
Median	$16.9	$17.6	$20.2	$15.0
System Ownership, N (%)*				
Nonprofit	74 (57.4%)	71 (55.5%)	42 (49.4%)	29 (67.4%)
Church-operated	19 (14.7%)	19 (14.8%)	15 (17.7%)	4 (9.3%)
Public/government	15 (11.6%)	14 (10.9%)	11 (12.9%)	3 (7.0%)
For profit/investor-owned	8 (6.2%)	8 (6.3%)	7 (8.2%)	1 (2.3%)
Not reported	13 (10.1%)	16 (12.5%)	10 (11.8%)	6 (14.0%)
Small/Medium IDSs	**N=662**	**N=506**	**N=244**	**N=250**
IDS Providers, Mean (Range)				
Physicians	383 (50, 3,171)	414 (50, 3,171)	395 (52, 2,662)	441 (50, 3,171)
Primary Care Physicians	133 (10, 1,035)	140 (10, 1,035)	139 (14, 1,035)	145 (10, 760)
Nurse Practitioners*	127 (2, 864)	132 (2, 864)	135 (2, 585)	132 (3, 864)
Physician Assistants*	58 (0, 482)	63 (0, 482)	67 (2, 482)	59 (0, 418)
IDS Facilities, Mean (Range)				
Non-Federal General Acute Care Hospitals	3 (1, 38)	3 (1, 38)	3 (1, 38)	2 (1, 20)
Outpatient Centers	49 (0, 339)	54 (1, 339)	57 (1, 312)	53 (2, 339)
Beds	418 (13, 2,762)	446 (20, 2,762)	461 (25, 2,762)	433 (20, 2,530)
Patient Revenue for System Hospitals, $ billions*				
Mean	$2.8	$3.0	$2.9	$3.1
Median	$1.8	$1.9	$1.8	$2.0

IDS Characteristic	All IDSs	Characteristics of IDSs Among IDSs Participating in Medicare ACOs Through Engagement of IDS-Affiliated: Hospitals OR Practices (any engagement type)	Hospitals AND Practices	Practices Only
System Ownership, N (%)*				
Nonprofit	390 (58.9%)	281 (55.5%)	139 (57.0%)	135 (54.0%)
Church-operated	26 (3.9%)	24 (4.7%)	11 (4.5%)	12 (4.8%)
Public/government	129 (19.5%)	94 (18.6%)	41 (16.8%)	52 (20.8%)
For profit/investor-owned	10 (1.5%)	7 (1.4%)	3 (1.2%)	4 (1.6%)
Not reported	107 (16.2%)	100 (19.8%)	50 (20.5%)	47 (18.8%)

Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system; N, number

Note: The most recent available year of data is used for each IDS. Results are not reported for IDSs participating through engagement of their affiliated hospitals only, which represent a very small number (<10) of participating IDSs in any year.

* Data not available in 2016 or 2018.

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

Compared with large IDSs that participated through engagement of their group practices only, those that participated through engagement of both their hospitals and practices had a higher average number of providers (e.g., physicians, mean=4,108 vs. 3,040; nurse practitioners, mean=1,078 vs. 621); facilities (e.g., hospitals, mean=25 vs. 10; outpatient centers, mean=489 vs. 278); and patient hospital revenue (mean=$32.8 billion vs. $19.5 billion). A lower proportion of large IDSs that participated through engagement of both their hospitals and practices were nonprofits than were IDSs that participated through engagement of their practices alone (49.4 percent vs. 67.4 percent).

Small/medium IDSs did not differ substantially (e.g., by more than 10 percent) on most characteristics between those that participated through engagement of both their hospitals and practices compared with those that participated through engagement of their practices alone. One exception was that small/medium IDSs that participated through engagement of both their hospitals and practices had a lower average number of physicians than did IDSs that participated through engagement of their practices alone (mean=395 vs. 441).

Medicare ACO Characteristics by IDS Involvement

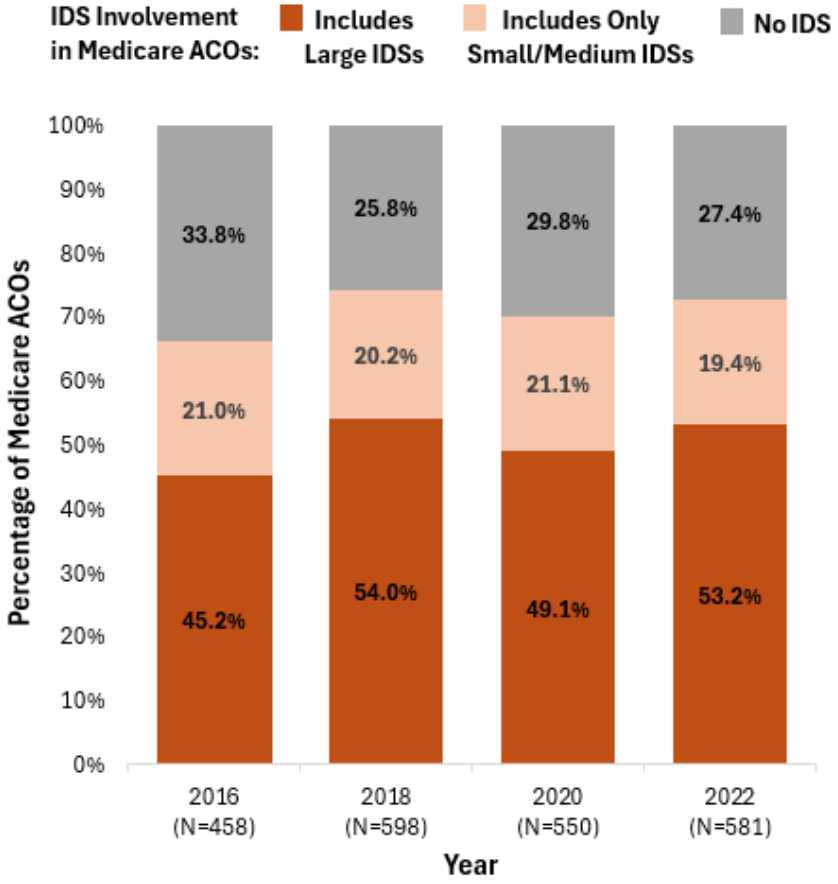
This section (Exhibits 18–19) presents:

- composition of Medicare ACOs by IDS involvement (Exhibit 18), and
- characteristics of Medicare ACOs by IDS involvement. ACO characteristics presented are:
  - two-sided risk arrangements, shared savings payments, and quality performance scores across all four Medicare ACO models; and
  - number of providers and beneficiaries for the Shared Savings Program alone (Exhibit 19).

All results in this section are focused on the Medicare ACO as the unit of analysis. Results are presented separately for Medicare ACOs that included at least one large IDS, at least one small/medium IDS (but no large IDS), or no IDS.

Exhibit 18 shows the composition of Medicare ACOs in terms of whether ACOs included large IDSs, only small/medium IDSs, or no IDSs, between 2016 and 2022.

Exhibit 18. Medicare ACOs Composition by IDS Involvement, 2016–2022



Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

Approximately half of Medicare ACOs each year involved participation of at least one large IDS (through engagement of the IDS's affiliated hospitals or group practices). Approximately 20 percent of ACOs included at least one small/medium IDS (but no large IDS). The remaining approximately 30 percent of ACOs did not involve participation of any IDS.

Exhibit 19 presents characteristics of ACOs, by IDS involvement, between 2016 and 2022. The following ACO characteristics are provided across the four Medicare ACO models in this study:

- the proportion electing two-sided risk arrangement
- the proportion earning shared savings payments and the mean payment earned

- the mean quality performance scores

This exhibit also presents the mean number of providers and beneficiaries for Shared Savings Program ACOs only.

Exhibit 19. Characteristics of Medicare ACOs by IDS Involvement, 2016–2022

Year	All ACOs	IDS Involvement in Medicare ACOs		
		Includes Large IDSs	Includes Only Small/Medium IDSs	No IDS
All Medicare ACOs				
Two-Sided Risk Arrangements, %				
2016	10.5%	15.0%	9.4%	5.2%
2018	24.2%	29.7%	17.4%	18.2%
2020	41.3%	41.5%	32.8%	47.0%
2022	65.9%	63.8%	51.3%	80.5%
Earned Shared Savings Payments, %				
2016	33.4%	32.9%	22.9%	40.6%
2018	40.6%	39.3%	26.4%	54.5%
2020	69.1%	71.9%	55.2%	74.4%
2022	65.1%	60.8%	59.3%	77.4%
Shared Savings Earned (per beneficiary per year), Mean $*				
2016–2022	$410	$328	$383	$541
Quality Performance Score, Mean				
2016	94.8	95.4	95.8	93.5
2018	92.9	92.8	94.0	92.3
2020	97.7	97.6	97.7	98.0
2022	84.6	84.0	83.8	86.2
Shared Savings Program ACOs Only				
Shared Savings Program Providers, Mean Number				
2016	519	879	454	128
2018	924	1,381	728	200
2020	1,132	1,878	781	220
2022	1,423	2,170	776	295

Year	All ACOs	IDS Involvement in Medicare ACOs		
		Includes Large IDSs	Includes Only Small/Medium IDSs	No IDS
Shared Savings Program Beneficiaries, Mean Number†				
2016	18,250	25,987	15,915	10,401
2018	18,425	24,696	13,723	9,979
2020	20,691	29,421	15,515	10,730
2022	21,615	29,032	13,971	11,477

Abbreviations: ACO, Accountable Care Organization; IDS, integrated delivery system

Notes: Data are not available for Pioneer ACOs; 2016 results include only Shared Savings Program ACOs.

* Shared savings earned is an average across the ACOs that earned any shared savings.

† Although the average number of beneficiaries in Shared Savings Program ACOs declined from 2016 to 2018 for each of the three subgroups of ACOs, there was an overall increase in the average number of beneficiaries across all ACOs that was driven by an increase in the percentage of ACOs involving participation by any large IDS in 2018.

Sources: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

The proportion of Medicare ACOs operating under two-sided risk arrangements increased from 10.5 percent in 2016 to 65.9 percent in 2022. Increased risk-sharing occurred regardless of IDS involvement in ACOs, but by 2022, the highest proportion of ACOs with a two-sided risk arrangement (80.5 percent) was among ACOs with no IDS involvement.

The proportion of Medicare ACOs earning shared savings payments increased from 33.4 percent in 2016 to 69.1 percent in 2020 and 65.1 percent in 2022. Increases occurred regardless of IDS involvement in the ACO, but the proportion of ACOs earning shared savings payments was highest for ACOs with no IDS involvement in 2022 (77.4 percent). Average ACO per-beneficiary-per-year shared savings also were highest among ACOs with no IDS involvement ($541) and lowest among ACOs that included large IDSs ($328).

Average quality performance scores were high overall and did not vary based on IDS involvement. Performance scores decreased from an average of 95.1 (out of 100) from 2016–2020 to 84.6 in 2022, regardless of IDS involvement in the ACO.[xxxii]

The number of providers and beneficiaries participating in Shared Savings Program ACOs was directly related to involvement of IDSs within the ACO, with the highest number of providers among ACOs that included at least one large IDS (2,170 in 2022), followed by ACOs that included at least one small/medium IDS (but no large IDS) (776 in 2022), and then ACOs with no IDS involvement (295 in 2022); a similar pattern was observed for Shared Savings Program beneficiaries. The average number of providers participating in Shared Savings Program ACOs generally increased over time, with the

[xxxii] In 2020, due to the COVID-19 public health emergency, CMS waived the requirement for Shared Savings ACOs to report patient experience scores via the Consumer Assessment of Healthcare Providers and Systems (CAHPS) and provided full credit for those measures in the quality score calculation. This change, along with other score calculation adjustments, may have contributed to the higher quality performance scores observed in 2020. For additional details, refer to: https://www.cms.gov/files/document/covid-ifc-2-medicare-shared-savings-program.pdf and: https://www.cms.gov/newsroom/fact-sheets/final-policy-payment-and-quality-provisions-changes-medicare-physician-fee-schedule-calendar-year-1

largest increase occurring among ACOs that included at least one large IDS (increasing from an average of 879 providers in 2016 to 2,170 providers in 2022). The average number of beneficiaries in Shared Savings Program ACOs also generally increased over time (from an average of 18,250 beneficiaries in 2016 to 21,615 beneficiaries in 2022), but there was fluctuation across years based on IDS involvement.

Conclusion

This study explored IDS participation in four nationwide primary care-focused Medicare ACO models and examined the nature of Medicare ACOs based on whether IDSs were involved during the period from 2016 to 2022.

The first analysis described IDS participation in Medicare ACO models for IDSs categorized as large versus small/medium in size based primarily on the number of system beds and system physicians.

- The vast majority of large IDSs (approximately 90 percent or more) and nearly two-thirds of small/medium IDSs participated in Medicare ACOs.
- Participation in Medicare ACOs generally increased over time:
  - Large IDSs moved from participation in one model to participation in multiple Medicare ACO models; and
  - Small/medium IDSs increasingly moved from non-participation to participation (in one model).
- More than half of IDSs participated in Medicare ACOs through engagement of at least one affiliated hospital and one affiliated group practice; this proportion was higher among large than small/medium IDSs. The remaining IDSs participated in ACOs through engagement of at least one affiliated group practice but no affiliated hospitals, with very few IDSs participating in ACOs through engagement of one or more affiliated hospitals but no affiliated group practices.
- Although the level of IDS participation in Medicare ACO models was high, the extent of IDS participation was low. On average, IDSs participated in ACOs through engagement of approximately one-third of their affiliated hospitals (22.2 percent among large IDSs and 33.3 percent among small/medium IDSs) and affiliated group practices (31.3 percent among large IDSs and 37.5 percent among small/medium IDSs).
- IDSs that participated in Medicare ACOs through engagement of both their affiliated hospitals and group practices participated in a higher number of Medicare ACOs on average than did IDSs that participated in ACOs through engagement of their affiliated practices alone.
- Large IDSs that participated in Medicare ACOs through engagement of both their affiliated hospitals and group practices differed from large IDSs that participated in ACOs through engagement of their practices alone: they had a higher average number of providers (including physicians, nurse practitioners, and physician assistants), facilities (including hospitals and outpatient centers), and patient revenue; were less likely to be nonprofit; and were more likely to have a service area that spanned multiple states (this was also true among small/medium IDSs).

Overall, participation in Medicare ACOs by large IDSs was high, indicating that there is broad interest in Medicare ACOs among most of the nation's largest health systems. Unsurprisingly, participation in Medicare ACOs was higher among large IDSs, given their larger networks and reach, than small/medium IDSs.

The data sources used in this study did not include information about the nature of an IDS's engagement with Medicare ACOs. However, while data on leadership structure are not available for Shared Savings Program ACOs, which constitute more than 80 percent of Medicare ACOs each year, findings from CMS Innovation Center evaluation reports indicate that the share of Innovation Center Medicare ACOs led by IDSs has declined since 2016.[xxxiii] In 2016, six of the eight participating Pioneer ACOs (75 percent) were led in full or jointly by IDSs.[xxxiv] Between 2016 and 2020, the percentage of Next Generation ACOs that were led by IDSs decreased from 56 percent in 2016 to 36 percent and 39 percent, respectively, in 2018 and 2020.[xxxv] Finally, in 2022, only 18 of 78 Standard ACOs (23 percent) in the GPDC model were IDSs led by a hospital system.[xxxvi]

Given the relatively low proportion of affiliated hospitals and/or group practices engaged in Medicare ACOs among both large and small/medium IDSs, opportunities remain for IDSs to increase the extent of their engagement of affiliated hospitals and group practices, potentially through more intentional engagement with Medicare ACOs across market areas. IDSs may be best able to fulfill the goals of providing coordinated, comprehensive, team-based care and managing total cost of care if they participate in ACOs with their full range of providers and services.

The second analysis examined Medicare ACO characteristics based on whether IDSs were involved in the ACO.

- Approximately half of Medicare ACOs included at least one large IDS, approximately 20 percent of ACOs included at least one small/medium IDS (but no large IDS), and the remaining 30 percent of ACOs did not involve IDSs.
- The proportion of ACOs earning shared savings payments and the average per-beneficiary-per-year shared savings was highest among ACOs that did not involve participation by IDSs.
- Among Shared Savings Program ACOs, the average number of providers and impacted beneficiaries was highest among ACOs that included a large IDS, followed by those that included a small/medium IDS (but no large IDS), and then ACOs that did not involve IDSs.

Although the majority of Medicare ACOs involved participation from an IDS (large or small/medium), there remains a substantial proportion of Medicare ACOs that do not include any IDS-affiliated hospitals or group practices. More information is needed about how and why IDSs engage with Medicare ACOs

[xxxiii] IDS leadership determination was based on ACO application data, interviews, and/or survey data collected by the model evaluators. Thus, there may be variation in the definition of IDS leadership of ACOs across the models.

[xxxiv] L&M Policy Research. Evaluation of CMMI Accountable Care Organization Initiatives: Pioneer ACO Final Report. December 2, 2016. https://www.cms.gov/priorities/innovation/files/reports/pioneeraco-finalevalrpt.pdf

[xxxv] NORC at the University of Chicago. Fourth Evaluation Report: Next Generation Accountable Care Organization (NGACO) Model Evaluation. October 2021. https://www.cms.gov/priorities/innovation/data-and-reports/2021/nextgenaco-fourthevalrpt

[xxxvi] NORC at the University of Chicago. Evaluation of the Global and Professional Direct Contracting Model: Annual Report 2. July 2024. https://www.cms.gov/priorities/innovation/data-and-reports/2024/gpdc-2nd-ann-report

more broadly to understand these findings. For example, ACOs that did not engage with IDS-affiliated hospitals or group practices earned more shared savings than ACOs with IDS affiliations; however, the data available for this analysis do not include information on why that may be the case. The need for additional data on the nature of IDS participation or engagement is particularly important for Shared Savings Program ACOs, which comprise over 80 percent of Medicare ACOs and their aligned beneficiaries in each year.

Appendix A: List of Large IDSs

This appendix provides the list of large IDSs as identified for this study (Exhibit A1) and presents examples of large health systems that underwent mergers or acquisitions over the period from 2016 through 2022 (Exhibits A2 and A3).

Exhibit A1 presents the list of 129 unique large IDSs identified for this study. The number of system beds, number of system physicians, and net revenue are based on the most recent year of data available for the health system as provided in the AHRQ Compendium of U.S. Health Systems.

Exhibit A1. List of Large IDSs, 2016–2022

System Name	City	State	Beds	Physicians	Net Revenue[xxxvii]	Years
AdventHealth	Altamonte Springs	FL	8,041	3,254	$12,182,248,964	2016, 2018, 2020, 2022
Adventist Health	Roseville	CA	2,786	1,652	$4,675,853,698	2016, 2018, 2020, 2022
Advocate Aurora Health	Downers Grove	IL	4,989	5,295	$8,054,267,524	2018, 2020
Advocate Health	Charlotte	NC	10,528	10,307	$19,729,805,898	2022
Advocate Health Care	Downers Grove	IL	2,996	2,496	—	2016
Allegheny Health Network	Pittsburgh	PA	1,975	1,824	$2,842,110,852	2016, 2018, 2020, 2022
Allina Health	Minneapolis	MN	1,703	1,823	$3,435,770,123	2016, 2018, 2020, 2022
Ascension Health	Saint Louis	MO	16,103	10,724	$22,327,082,185	2016, 2018, 2020, 2022
Atlantic Health System†	Morristown	NJ	1,597	1,348	$3,141,766,126	2016, 2018, 2020, 2022
Atrium Health	Charlotte	NC	5,168	4,766	$8,441,290,055	2016, 2018, 2020
Aurora Health Care, Inc.	Milwaukee	WI	1,951	2,075	—	2016
Banner Health	Phoenix	AZ	5,189	3,970	$9,768,177,578	2016, 2018, 2020, 2022
Baptist Memorial Health Care Corporation	Memphis	TN	2,398	1,130	$2,722,248,070	2016, 2018, 2020, 2022

[xxxvii] Net revenue is missing for some health systems because this information was available in the Compendium only for 2020 and 2022.

System Name	City	State	Beds	Physicians	Net Revenue[xxxvii]	Years
Baylor Scott and White Health	Dallas	TX	3,991	3,889	$7,268,801,459	2016, 2018, 2020, 2022
Beaumont Health Systems	Southfield	MI	2,977	2,153	$3,840,648,453	2016, 2018, 2020
Beth Israel Deaconess Medical Center*	Boston	MA	952	3,288	—	2016, 2018
Beth Israel Lahey Health	Cambridge	MA	2,101	5,343	$4,473,822,654	2020, 2022
BJC Healthcare	Saint Louis	MO	3,166	4,470	$5,642,640,305	2016, 2018, 2020, 2022
Bon Secours Health System*	Marriottsville	MD	1,821	1,232	—	2016, 2018
Bon Secours Mercy Health	Cincinnati	OH	6,053	3,626	$8,900,565,452	2020, 2022
Catholic Health	Rockville Centre	NY	1,724	1,877	$2,587,604,508	2016, 2018, 2020, 2022
Catholic Health Initiatives	Englewood	CO	11,026	5,965	—	2016, 2018
Cedars Sinai Health System	West Hollywood	CA	1,978	2,233	$5,323,060,567	2016, 2018, 2020, 2022
ChristianaCare†	Wilmington	DE	1,304	1,048	$2,281,889,160	2016, 2018, 2020, 2022
Christus Health	Irving	TX	3,902	1,829	$5,580,755,101	2016, 2018, 2020, 2022
Cleveland Clinic	Cleveland	OH	5,106	5,737	$11,576,550,403	2016, 2018, 2020, 2022
CommonSpirit Health	Chicago	IL	17,107	15,019	$28,133,761,083	2020, 2022
Community Health Systems	Franklin	TN	10,077	3,879	$11,027,601,435	2016, 2018, 2020, 2022
Corewell Health	Grand Rapids	MI	4,689	4,198	$8,093,441,435	2022
Dignity Health	San Francisco	CA	7,288	8,553	—	2016, 2018
Duke University Health System	Durham	NC	1,535	3,430	$3,875,811,811	2016, 2018, 2020, 2022
Emory Healthcare	Atlanta	GA	2,215	3,485	$2,632,103,092	2016, 2018, 2020, 2022
Essentia Health†	Duluth	MN	966	1,161	$2,276,906,247	2016, 2018, 2020, 2022
Fairview Health Services†	Minneapolis	MN	1,623	3,178	$3,839,113,250	2016, 2018, 2020, 2022
Franciscan Health	Mishawaka	IN	1,495	1,276	$2,933,166,911	2016, 2018, 2020, 2022

System Name	City	State	Beds	Physicians	Net Revenue[xxxvii]	Years
Froedtert and the Medical College of Wisconsin	Milwaukee	WI	1,259	2,379	$3,881,722,370	2016, 2018, 2020, 2022
Geisinger	Danville	PA	1,296	2,008	$2,895,174,675	2016, 2018, 2020, 2022
Greenville Health System	Greenville	SC	975	6,306	—	2016, 2018
Hackensack Meridian Health	Edison	NJ	3,099	2,114	$5,574,894,329	2016, 2018, 2020, 2022
Hartford Healthcare	Hartford	CT	1,605	2,540	$3,801,509,924	2016, 2018, 2020, 2022
HCA Healthcare	Nashville	TN	37,478	14,232	$48,444,256,449	2016, 2018, 2020, 2022
Henry Ford Health	Detroit	MI	1,774	3,631	$4,235,585,611	2016, 2018, 2020, 2022
HonorHealth†	Scottsdale	AZ	1,416	671	$2,300,744,959	2016, 2018, 2020, 2022
Houston Methodist	Houston	TX	2,629	1,750	$5,685,580,023	2016, 2018, 2020, 2022
Indiana University Health	Indianapolis	IN	2,483	3,455	$6,072,765,203	2016, 2018, 2020, 2022
Inova Health System	Falls Church	VA	1,666	1,994	$4,022,826,564	2016, 2018, 2020, 2022
Integris Health	Oklahoma City	OK	1,204	750	$1,687,021,016	2016, 2018, 2020, 2022
Intermountain Healthcare	Salt Lake City	UT	3,950	3,685	$8,976,687,106	2016, 2018, 2020, 2022
Jackson Health System	Miami	FL	1,893	1,243	$1,471,427,135	2016, 2018, 2020, 2022
Jefferson Health	Philadelphia	PA	3,181	4,147	$5,011,820,164	2016, 2018, 2020, 2022
Johns Hopkins Health System	Baltimore	MD	2,316	4,711	$4,674,764,286	2016, 2018, 2020, 2022
Kaiser Permanente	Oakland	CA	9,217	25,352	$22,065,542,810	2016, 2018, 2020, 2022
Lahey Health System*	Burlington	MA	846	1,263	—	2016, 2018
Lehigh Valley Health Network	Allentown	PA	1,672	1,702	$3,112,331,966	2016, 2018, 2020, 2022
Lifepoint Health	Brentwood	TN	6,013	2,979	$6,859,558,352	2016, 2018, 2020, 2022
Los Angeles County Department of Health Services	Los Angeles	CA	1,190	2,245	$3,074,624,373	2016, 2018, 2020, 2022
Mass General Brigham	Boston	MA	2,715	9,127	$8,668,452,698	2016, 2018, 2020, 2022

System Name	City	State	Beds	Physicians	Net Revenue[xxxvii]	Years
Mayo Clinic Health System	Rochester	MN	2,758	7,792	$9,822,026,506	2016, 2018, 2020, 2022
McLaren Health Care Corporation	Grand Blanc	MI	1,736	1,385	$2,625,306,862	2016, 2018, 2020, 2022
Medical University of South Carolina Medical Center†	Charleston	SC	1,039	2,582	$2,704,726,090	2016, 2018, 2020, 2022
MedStar Health	Columbia	MD	2,364	3,640	$4,665,447,031	2016, 2018, 2020, 2022
Memorial Hermann Healthcare System	Houston	TX	3,537	1,273	$5,980,789,574	2016, 2018, 2020, 2022
MemorialCare Health System	Fountain Valley	CA	1,196	3,402	$1,862,983,590	2016, 2018, 2020, 2022
Mercy	Chesterfield	MO	4,453	3,348	$6,330,240,493	2016, 2018, 2020, 2022
Mercy Health	Cincinnati	OH	3,420	2,050	—	2016, 2018
Montefiore Medical Center	Bronx	NY	2,308	2,964	$4,648,052,058	2016, 2018, 2020, 2022
Mount Sinai Health System	New York	NY	2,452	5,393	$5,858,209,413	2016, 2018, 2020, 2022
New York City Health and Hospitals Corporation	New York	NY	3,161	2,813	$7,932,196,160	2016, 2018, 2020, 2022
New York Presbyterian Healthcare System	New York	NY	3,970	6,580	$9,678,041,598	2016, 2018, 2020, 2022
NorthShore Edward-Elmhurst Health	Evanston	IL	1,397	2,300	$3,911,932,537	2016, 2018, 2020, 2022
Northwell Health	New Hyde Park	NY	5,287	9,631	$12,260,733,531	2016, 2018, 2020, 2022
Northwestern Medicine	Chicago	IL	2,252	3,231	$5,599,144,466	2016, 2018, 2020, 2022
Norton Healthcare†	Louisville	KY	1,545	1,094	$2,569,357,151	2016, 2018, 2020, 2022
Novant Health	Winston Salem	NC	2,888	2,323	$5,353,333,509	2016, 2018, 2020, 2022
NYU Langone Health	New York	NY	1,746	4,171	$6,870,871,844	2016, 2018, 2020, 2022
Ochsner Health System	New Orleans	LA	3,295	3,397	$4,637,414,944	2016, 2018, 2020, 2022
Ohiohealth	Columbus	OH	2,271	2,079	$4,449,753,188	2016, 2018, 2020, 2022

System Name	City	State	Beds	Physicians	Net Revenue[xxxvii]	Years
Orlando Health	Orlando	FL	2,440	1,691	$4,064,110,622	2016, 2018, 2020, 2022
OSF Healthcare System	Peoria	IL	1,955	1,285	$3,112,483,765	2016, 2018, 2020, 2022
Palmetto Health*	Columbia	SC	1,340	901	—	2016, 2018
Parkview Health System	Fort Wayne	IN	996	800	$1,953,709,514	2016, 2018, 2020, 2022
Peacehealth	Vancouver	WA	1,225	2,399	$3,024,833,937	2016, 2018, 2020, 2022
Piedmont Healthcare	Atlanta	GA	3,257	1,985	$4,988,970,455	2016, 2018, 2020, 2022
Presence Health	Chicago	IL	2,645	1,153	—	2016
Prime Healthcare Services	Ontario	CA	6,473	1,500	$5,128,976,930	2016, 2018, 2020, 2022
Prisma Health	Greenville	SC	2,175	2,646	$3,754,081,374	2020, 2022
ProMedica†	Toledo	OH	1,274	1,258	$2,246,752,306	2016, 2018, 2020, 2022
Prospect Medical Holdings	Los Angeles	CA	1,944	5,002	$1,946,455,518	2016, 2018, 2020, 2022
Providence	Renton	WA	9,511	13,203	$17,576,517,123	2016, 2018, 2020, 2022
Quorum Health Corporation	Brentwood	TN	3,339	1,675	$3,969,827,766	2020, 2022
Rush System for Health	Chicago	IL	1,208	2,225	$3,006,377,300	2016, 2018, 2020, 2022
RWJBarnabas Health	West Orange	NJ	3,972	2,390	$6,100,048,274	2016, 2018, 2020, 2022
Saint Joseph Health System	Irvine	CA	2,665	1,204	—	2016
Saint Lukes University Health Network	Bethlehem	PA	1,208	1,446	$2,336,464,162	2016, 2018, 2020, 2022
Sanford Health	Sioux Falls	SD	1,946	1,971	$4,545,058,856	2016, 2018, 2020, 2022
Scripps Health	San Diego	CA	1,173	1,435	$2,487,141,942	2016, 2018, 2020, 2022
Sentara Healthcare	Norfolk	VA	2,314	1,446	$4,779,123,294	2016, 2018, 2020, 2022
Sharp Healthcare	San Diego	CA	1,688	1,670	$2,889,486,264	2016, 2018, 2020, 2022
Sisters of Charity of Leavenworth Health System	Broomfield	CO	1,362	991	$2,504,123,156	2016, 2018, 2020

System Name	City	State	Beds	Physicians	Net Revenue[xxxvii]	Years
SSM Health	Saint Louis	MO	4,105	3,822	$5,874,308,882	2016, 2018, 2020, 2022
Stanford Health Care†	Stanford	CA	1,169	3,789	$8,757,608,979	2016, 2018, 2020, 2022
Steward Health Care System	Dallas	TX	4,143	2,902	$4,229,145,811	2016, 2018, 2020, 2022
Sutter Health	Sacramento	CA	3,543	7,400	$8,404,850,576	2016, 2018, 2020, 2022
Tenet Healthcare	Dallas	TX	12,690	6,514	$13,886,420,286	2016, 2018, 2020, 2022
Texas Health Resources	Arlington	TX	3,015	1,764	$4,583,377,670	2016, 2018, 2020, 2022
The Ohio State University Wexner Medical Center	Columbus	OH	1,264	2,414	$2,472,554,000	2016, 2018, 2020, 2022
The University of Kansas Health System	Kansas City	KS	1,197	2,522	$2,663,703,316	2016, 2018, 2020, 2022
The University of Texas System	Austin	TX	1,640	11,466	$3,338,003,303	2016, 2018, 2020, 2022
Trinity Health	Livonia	MI	14,706	12,026	$20,928,338,160	2016, 2018, 2020, 2022
UAB Health System	Birmingham	AL	1,462	2,497	$2,567,767,936	2016, 2018, 2020, 2022
UC Health†	Cincinnati	OH	667	1,538	$1,418,384,675	2016, 2018, 2020, 2022
UF Health	Gainesville	FL	2,051	3,047	$3,219,854,475	2016, 2018, 2020, 2022
UNC Health Care System	Chapel Hill	NC	3,185	3,863	$6,124,668,438	2016, 2018, 2020, 2022
Unitypoint Health	West Des Moines	IA	2,761	1,866	$4,214,371,099	2016, 2018, 2020, 2022
Universal Health Services	Norristown	PA	5,792	2,134	$6,765,862,781	2016, 2018, 2020, 2022
University Hospitals	Shaker Heights	OH	2,588	2,649	$6,829,265,234	2016, 2018, 2020, 2022
University of California Health	Oakland	CA	3,427	13,920	$16,235,329,905	2016, 2018, 2020, 2022
University of Colorado Health	Aurora	CO	1,808	3,889	$5,450,755,925	2016, 2018, 2020, 2022
University of Maryland Medical System	Baltimore	MD	2,295	2,813	$4,151,992,792	2016, 2018, 2020, 2022
University of Michigan Health System	Ann Arbor	MI	1,141	3,824	$4,746,885,567	2016, 2018, 2020, 2022

System Name	City	State	Beds	Physicians	Net Revenue[xxxvii]	Years
University of Pennsylvania Health System	Philadelphia	PA	2,915	4,244	$6,964,491,687	2016, 2018, 2020, 2022
University of Rochester Medical Center	Rochester	NY	1,262	2,394	$3,696,361,630	2016, 2018, 2020, 2022
UPMC	Pittsburgh	PA	6,047	6,896	$9,961,436,266	2016, 2018, 2020, 2022
UW Medicine	Seattle	WA	1,229	4,197	$3,635,146,463	2016, 2018, 2020, 2022
Vanderbilt Health	Nashville	TN	1,298	2,508	$5,268,969,303	2016, 2018, 2020, 2022
Wake Forest University Baptist Medical Center	Winston Salem	NC	1,285	1,387	—	2016, 2018
WellStar Health System	Marietta	GA	2,319	1,452	$3,572,838,003	2016, 2018, 2020, 2022
West Virginia University Health System	Morgantown	WV	2,163	2,163	$4,194,488,723	2016, 2018, 2020, 2022
Yale New Haven Health System	New Haven	CT	2,192	3,662	$5,224,144,055	2016, 2018, 2020, 2022

Abbreviations: IDS, integrated delivery system

* One of four systems added to the list of large IDSs based on being acquired by or consolidating with another health system that also was considered a large IDS in a subsequent year, and being in the top 20th percentile of system beds or physicians in 2016 or 2018 prior to merging.[xxxviii]

†One of 10 systems added to the list of large IDSs based on being among the highest-revenue health systems in 2023 based on information from *Hospitalogy*[xxxix] and being among the top 20th percentile of system beds or physicians based on the Compendium.

Source: AHRQ Compendium of U.S. Health Systems and CMS Medicare ACO Public Use Files (see "Data" section for full citations)

[xxxviii] Agency for Healthcare Research and Quality (AHRQ). Compendium of U.S. Health Systems. Accessed November 11, 2024, and December 3, 2024. https://www.ahrq.gov/chsp/data-resources/compendium.html

[xxxix] Madden B. 113 of the Largest Health Systems Ranked by Revenue as of 2023. Hospitalogy. April 11, 2024. https://hospitalogy.com/articles/2024-04-11/113-largest-health-systems-by-revenue-2023/

Exhibit A2 depicts the merger of Mercy Health with Bon Secours Health System in 2020, forming Bon Secours Mercy Health. Both Mercy Health and Bon Secours Mercy Health were among the 19 health systems that met the 20th percentile threshold of highest number of system beds and system physicians in at least one year but were not included in the Compendium in all four years of this study (2016, 2018, 2020, and 2022) due to the 2020 merger. Bon Secours Health System did not meet the 20th percentile threshold for both the system bed and physician criteria in either 2016 or 2018, but the system did meet the bed threshold in both years and so was one of four additional health systems categorized as a large IDS for this study.

Exhibit A2. Example of Merger to Form Bon Secours Mercy Health

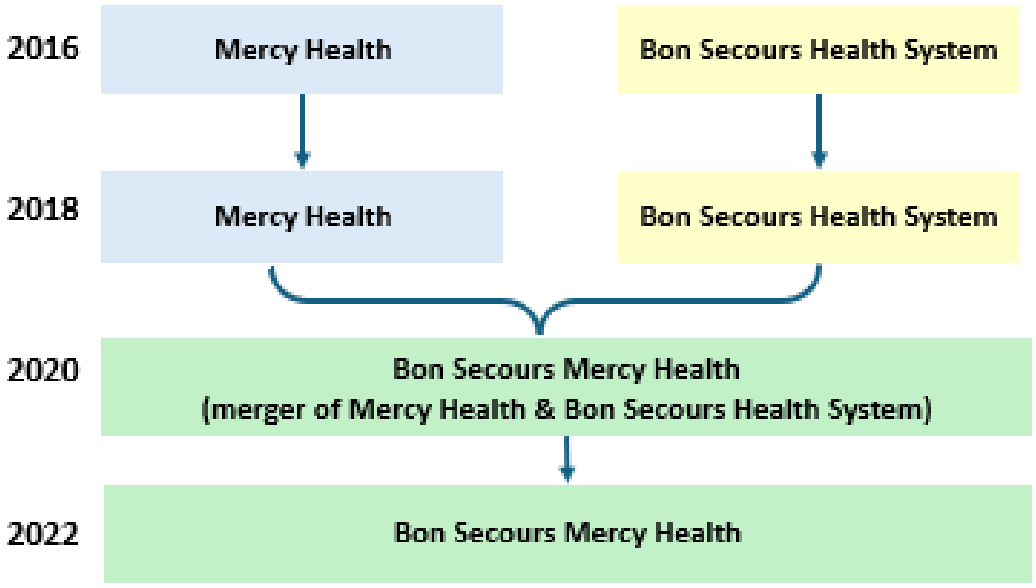


Exhibit A3 depicts the merger of Beth Israel Deaconess Medical Center with Lahey Health System in 2020, forming Beth Israel Lahey Health. Beth Israel Lahey Health was one of 19 health systems that met the 20th percentile threshold of highest number of system beds and system physicians in at least one year but was not included in the Compendium in all four years of this study (2016, 2018, 2020, and 2022) due to the 2020 merger. Neither Beth Israel Deaconess Medical Center nor Lahey Health System met the 20th percentile threshold for both the system bed and physician criteria in either 2016 or 2018, but both systems met the physician threshold in both years and so were two of four additional health systems categorized as a large IDS for this study.

Exhibit A3. Example of Merger to Form Beth Israel Lahey Health