



Report to the Ranking Member,  
Committee on Ways and Means, House  
of Representatives

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September 2023

# NURSING HOMES

## Limitations of Using CMS Data to Identify Private Equity and Other Ownership

# GAO Highlights

Highlights of [GAO-23-106163](#), a report to the Ranking Member, Committee on Ways and Means, House of Representatives

## Why GAO Did This Study

About 14,700 nursing homes enrolled in Medicare provided care to about 1.2 million elderly or disabled residents in 2021, for a total cost of about \$28.5 billion. CMS is the agency responsible for ensuring nursing homes enrolled in the Medicare program meet certain quality standards.

Nursing homes must report their owners that meet certain ownership thresholds to CMS. CMS has recently taken steps to improve the transparency of nursing home ownership by, for example, publicly releasing additional ownership data as of 2022. However, the extent to which CMS's ownership data can be used to identify private equity ownership is unclear.

GAO was asked to review CMS's nursing home ownership data for information about private equity owners. This report 1) estimates the percentage of Medicare-enrolled nursing homes in 2022 that were private equity-owned and 2) describes the limitations of using CMS's data to identify private equity and other owners of nursing homes. To do so, GAO reviewed data on nursing home ownership from CMS and other sources, reviewed documentation and relevant studies, and interviewed CMS officials, among other steps.

View [GAO-23-106163](#). For more information, contact Leslie V. Gordon at (202) 512-7114 or [GordonLV@gao.gov](mailto:GordonLV@gao.gov).

September 2023

## NURSING HOMES

### Limitations of Using CMS Data to Identify Private Equity and Other Ownership

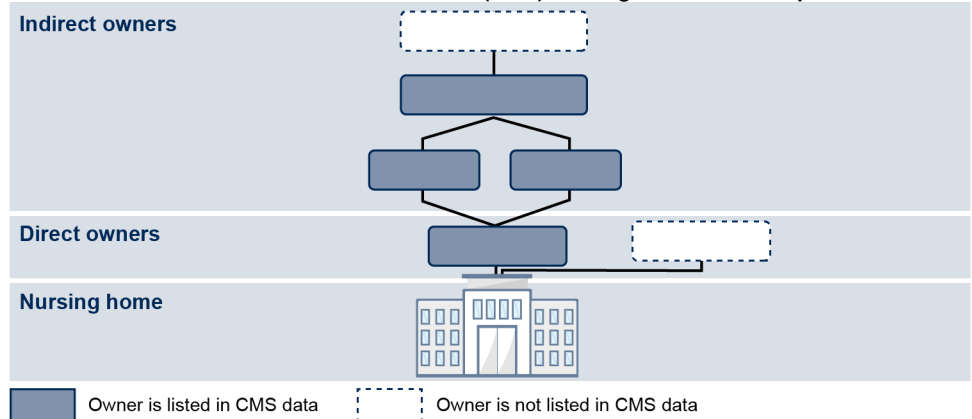
## What GAO Found

The Centers for Medicare & Medicaid Services (CMS) collects information on the ownership of nursing homes participating in Medicare as part of its enrollment process. Ownership structures of nursing homes can be complex, with nursing homes having one or more owners which, in turn, may have one or more owners. Firms that manage private equity funds—a type of fund that invests in companies that are often not publicly traded—have drawn attention by purchasing and modifying nursing homes' operations to realize a profit.

GAO estimated that 5 percent of nursing homes had private equity ownership in 2022, based on a review of CMS's data on nursing home ownership supplemented with other sources. Another recent study also reported that 4.7 percent of nursing homes were owned by private equity firms in 2020.

However, GAO identified two main limitations of using CMS's data alone to identify private equity and other ownership of nursing homes. First, many nursing homes—including those that were private equity-owned and those that were not—did not have all of their owners listed in CMS's data (see figure).

**Illustrative Example of a Nursing Home's Ownership Structure and Information Available in the Centers for Medicare & Medicaid Services' (CMS) Nursing Home Ownership Data**



Source: GAO analysis of nursing home data and documentation. | GAO-23-106163

In some cases, the owners may not have met the ownership threshold requiring reporting by the nursing home. In other cases, the nursing home may not have self-reported its eligible owners as required. By checking against other data sources, GAO identified examples of nursing homes for which not all owners were listed in CMS's data, including some whose unlisted owner appeared to be eligible for reporting. However, limitations in these other data sources made it difficult for GAO to determine whether an unlisted nursing home owner should have been reported. In addition, this can be a time- and resource-intensive effort because there is no single, authoritative data source with comprehensive information about nursing home owners. Second, CMS's data do not provide a means of readily identifying private equity firms and were not designed to do so. In February 2023, CMS proposed a regulatory definition of private equity companies for potential future disclosure requirements on the Medicare provider enrollment application. The comment period closed in April 2023.

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## Abbreviations

CMS	Centers for Medicare & Medicaid Services
PECOS	Provider Enrollment, Chain, and Ownership System
S&P	Standard & Poor's

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September 22, 2023

The Honorable Richard E. Neal  
Ranking Member  
Committee on Ways and Means  
House of Representatives

About 14,700 nursing homes enrolled in Medicare provided care to about 1.2 million elderly or disabled residents in 2021, for a total cost of about \$28.5 billion.<sup>1</sup> The Centers for Medicare & Medicaid Services (CMS) is the agency within the Department of Health and Human Services responsible for ensuring that nursing homes enrolled in Medicare meet certain quality standards.<sup>2</sup> As part of its oversight process, CMS collects ownership information when the nursing home enrolls in Medicare and when the nursing home's ownership changes.

Researchers have examined potential relationships between quality of care provided and nursing home ownership characteristics, though different studies have come to different conclusions. For example, several research studies have found that for-profit nursing homes had lower scores on quality ratings, as well as lower staffing levels, which in turn can be predictive of poor performance.<sup>3</sup> Some studies have also examined the quality of care provided in nursing homes with private equity ownership. According to Congressional Research Service, private equity is a type of private fund that generally pools money from institutional and individual investors and invests in companies that are

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<sup>1</sup>Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy* (Washington, D.C.: Mar. 15, 2023). The estimated count of residents served and cost reflects Medicare fee-for-service beneficiaries and does not include beneficiaries in Medicare Advantage, a private plan alternative.

<sup>2</sup>For the purpose of this report, we use the term "nursing homes" to refer to skilled nursing facilities. Medicare covers skilled nursing care provided at skilled nursing facilities, which are often part of nursing homes.

<sup>3</sup>See, for example, D.C. Grabowski et al., "Effect of Nursing Home Ownership on the Quality of Post-Acute Care: An Instrumental Variables Approach," *Journal of Health Economics*, vol. 32, no. 1 (2013): 12-21, and D.G. Stevenson et al., "Nursing Home Ownership Trends and Their Impact on Quality of Care: A Study Using Detailed Ownership Data from Texas," *Journal of Aging and Social Policy*, vol. 25, no. 1 (2013): 30-47.

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often not publicly traded.<sup>4</sup> For example, one 2021 study found that residents of for-profit nursing homes with private equity ownership had higher rates of emergency department use and re-hospitalization compared to other for-profit nursing homes, while another 2019 study found that private equity ownership did not lead to lower quality of care.<sup>5</sup> Firms that manage private equity investment funds have drawn attention by purchasing nursing homes and modifying their operations to increase revenues and sell them at a later time for a profit.<sup>6</sup> Clarifying any linkages between quality of nursing home care and ownership characteristics, including private equity ownership, is challenging in part because of the complexity and limitations of the transparency of nursing home ownership arrangements. In light of issues such as these, we and others have recommended that CMS improve the transparency of nursing home ownership.<sup>7</sup> That recommendation was part of our broader work that has identified longstanding issues with nursing home quality, such as infection control and resident abuse and gaps in CMS oversight.<sup>8</sup>

CMS has expressed its intention to improve the transparency of nursing home ownership information and has taken steps to do so. In 2022, CMS began publicly releasing monthly data on nursing home ownership and quarterly data on changes in ownership. Further, consistent with our previous recommendation, CMS modified its Care Compare website in June 2023 to identify and provide performance information on nursing

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<sup>4</sup>See Congressional Research Service, *Private Equity and Capital Markets Policy*, R47053 (Washington, D.C.: Mar. 28, 2022).

<sup>5</sup>See R.T. Braun et al., “Association of Private Equity Investment in U.S. Nursing Homes with the Quality and Cost of Care for Long-Stay Residents,” *JAMA Health Forum*, vol. 2, no. 11 (2021) and S.S. Huang and J.R. Bowlblis, “Private Equity Ownership and Nursing Home Quality: an Instrumental Variables Approach,” *Health Economics Management*, vol. 19 (2019).

<sup>6</sup>Medicare Payment Advisory Commission, *Medicare and the Health Care Delivery System* (Washington, D.C.: June 15, 2021).

<sup>7</sup>See GAO, *Nursing Homes: CMS Should Make Ownership Information More Transparent for Consumers*, [GAO-23-104813](#) (Washington, D.C.: Jan. 3, 2023) and National Academies of Sciences, Engineering, and Medicine, *The National Imperative to Improve Nursing Home Quality: Honoring our Commitment to Residents, Families, and Staff* (Washington, D.C.: The National Academies Press, 2022).

<sup>8</sup>See GAO, *COVID-19 in Nursing Homes: CMS Needs to Continue to Strengthen Oversight of Infection Prevention and Control*, [GAO-22-105133](#) (Washington, D.C.: Sept. 14, 2022); *Infection Control Deficiencies Were Widespread and Persistent in Nursing Homes Prior to COVID-19 Pandemic*, [GAO-20-576R](#) (Washington, D.C.: May 20, 2020); and *Nursing Homes: Improved Oversight Needed to Better Protect Residents from Abuse*, [GAO-19-433](#) (Washington, D.C.: June 13, 2019).

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homes under common ownership.<sup>9</sup> Although publicly releasing this ownership information has the potential to improve transparency, the extent to which these data can be used to identify nursing homes with private equity ownership is unclear.

You asked us to review CMS’s nursing home ownership data for information about private equity owners.<sup>10</sup> In this report, we

1. estimate the percentage of Medicare-enrolled nursing homes with private equity ownership in 2022 and
2. describe the limitations of using CMS’s data to identify private equity and other owners of nursing homes.

To address both objectives, we reviewed CMS data on nursing home ownership for a random sample of 200 of all 14,815 Medicare-enrolled nursing homes as of December 30, 2022. We supplemented these data with other sources, such as the Standard & Poor’s (S&P) Capital IQ database. We also reviewed CMS documentation and relevant studies on nursing home ownership. In addition, we interviewed CMS officials regarding CMS’s nursing home ownership information. Appendix I provides additional details on our scope and methodology, including the limitations of our analyses. To assess the reliability of CMS’s data on nursing home ownership, we reviewed related documentation, interviewed CMS officials about the data, and conducted checks for obviously missing or erroneous data. We determined that the data were sufficiently reliable for the purposes of our reporting objectives.

We conducted this performance audit from July 2022 through September 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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<sup>9</sup>Care Compare is a web-based tool for consumers—including potential and current residents, their families, and their advocates—to compare providers, including nursing homes, based on their quality of care and other factors.

<sup>10</sup>We use the term “owners” to refer to those with partial or complete direct or indirect ownership of, or a general or limited partnership interest in, a nursing home. Direct owners own the nursing home, whereas indirect owners are further removed, such as a company that owns the company that owns the nursing home.

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## Background

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### CMS Nursing Home Ownership Data

Nursing homes are required to enroll in the Medicare program in order to be paid for care provided to Medicare beneficiaries.<sup>11</sup> As part of the enrollment process, CMS collects information on the ownership of nursing homes.

To enroll in the Medicare program, a nursing home is required to submit an enrollment application, which includes ownership information, for review by CMS.<sup>12</sup> Among other information, a nursing home must report its owners—that is, any individual or organization with 5 percent or greater direct or indirect ownership of, or partnership interest in, the nursing home.<sup>13</sup> A nursing home must submit this application upon initial enrollment and every 5 years thereafter for enrollment revalidation.<sup>14</sup> In addition, if a nursing home undergoes a change of ownership—for example, when a nursing home has been purchased or leased by another organization or chain—the new nursing home owners are required to submit enrollment applications for CMS review.<sup>15</sup>

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<sup>11</sup>42 C.F.R. § 424.505 (2022).

<sup>12</sup>See 42 C.F.R. § 424.510(d) (2022). Since 2011, CMS has used authorities granted by the Patient Protection and Affordable Care Act to screen new and existing providers to determine if they are eligible to enroll, or remain enrolled, in and bill Medicare for items or services provided to beneficiaries. Pub. L. No. 111-148, § 6401(a), 124 Stat. 119, 747 (codified as amended at 42 U.S.C. § 1395cc(j)).

<sup>13</sup>Requirements for reporting partnership interests differ from requirements for direct and indirect ownership interests. All general partnerships must be reported, regardless of the percentage interest, but limited partnership interests must be disclosed at 10 percent or greater. Direct owners have an ownership interest in the nursing home, whereas indirect owners are further removed, such as an individual or company that has an ownership interest in the company that owns the nursing home.

<sup>14</sup>CMS may adjust the revalidation schedule to be more frequent due to complaints or evidence of noncompliance with statute or regulations. CMS may also adjust the revalidation schedule to be less frequent if it determines that less frequent validation is justified. See 42 C.F.R. § 424.515(d) (2022).

<sup>15</sup>A change of ownership generally includes 1) in the case of a partnership, the removal, addition, or substitution of a partner, unless the partners expressly agree otherwise; 2) transfer of title and property to another party; 3) a merger of the provider corporation into another corporation, or the consolidation of two or more corporations, resulting in the creation of a new corporation; or 4) a lease of all or part of a provider facility. See 42 C.F.R. § 489.18(a) (2022).

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Nursing homes are required to update their ownership information with CMS within 30 days of any ownership changes, even if the change is an addition or removal of an owner.<sup>16</sup> Nursing homes are required to attest to the accuracy of the information that they report through this application; however, because there is no single, authoritative data source with comprehensive information about nursing home owners, CMS has limited ability to independently verify the accuracy of reported information.

In November 2022, CMS also finalized a rule to require high-risk screening of nursing homes initially enrolling in Medicare and those reporting any new owner, in addition to requirements at the limited and moderate levels.<sup>17</sup> The high-risk screening category involves an additional screening requirement for individuals who maintain a 5 percent or greater interest in the nursing home to undergo a fingerprint-based criminal background check to identify any criminal convictions for which the individual may or must be excluded from participation in Medicare. The identification of any criminal convictions for these individuals could also result in the denial or revocation of the Medicare enrollment of a nursing home that they own.<sup>18</sup>

CMS collects and stores ownership information reported on enrollment applications in an electronic system called the Provider Enrollment, Chain, and Ownership System (PECOS).<sup>19</sup> CMS has used data from PECOS to make ownership information for nursing homes publicly available. For example, CMS uses analyses of PECOS data to report

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<sup>16</sup>See 42 C.F.R. § 424.516(e)(1) (2022).

<sup>17</sup>See Medicare and Medicaid Programs; CY 2023 Payment Policies Under the Physician Fee Schedule and Other Changes to Part B Payment and Coverage Policies; Medicare Shared Savings Program Requirements; Implementing Requirements for Manufacturers of Certain Single-dose Container or Single-use Package Drugs To Provide Refunds With Respect to Discarded Amounts; and COVID-19 Interim Final Rules, 87 Fed. Reg. 69,404, 70,231 (Nov. 18, 2022) (to be codified at 42 C.F.R. § 424.518(c)(1)(v),(vi)). Medicare providers face different enrollment requirements depending on the level of fraud, waste, and abuse posed by the type of provider. CMS places all providers into one of three risk categories: limited, moderate, or high. In general, the higher the risk that a provider type poses, the greater the scrutiny with which CMS will screen and review providers within that category.

<sup>18</sup>See 42 C.F.R. §§ 424.518, 424.530, 424.535. For more information on provider enrollment screening, see GAO, *Medicare: CMS Needs to Address Risks Posed by Provider Enrollment Waivers and Flexibilities*, [GAO-23-105494](#) (Washington, D.C.: Dec. 19, 2022).

<sup>19</sup>PECOS is the national enrollment system CMS uses to house all provider enrollment information—including ownership information—captured through the enrollment process.



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information about nursing homes in the 10 largest nursing home chains through the agency's Quality, Certification and Oversight Reports. Additionally, the nursing home ownership data that CMS began making publicly available in 2022 are derived from this system.

We previously reported challenges in using PECOS data to examine ownership of nursing homes. In 2010, we reported that the system did not provide any indication of the hierarchy or relationships among the numerous organizational owners listed for nursing homes that were owned by private investment firms. We also reported that private investment ownership was difficult to identify and that chain information was sometimes incomplete.<sup>20</sup>

The Department of Health and Human Services' Office of Inspector General and consumer advocates, among others, have also identified limitations in the accuracy of nursing home ownership information CMS collects.<sup>21</sup> In January 2023, we reported that CMS officials told us they planned to redesign PECOS in a way that would help mitigate inconsistencies in ownership information across nursing homes, such as those with common ownership.<sup>22</sup> Further, in February 2023, CMS proposed a regulatory definition of private equity companies that could be used with an anticipated future revision to the Medicare provider

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<sup>20</sup>GAO, *Nursing Homes: Complexity of Private Investment Purchases Demonstrates Need for CMS to Improve the Usability and Completeness of Ownership Data*, [GAO-10-710](#) (Washington, D.C.: Sept. 30, 2010). Private equity is a subclass of private investment.

<sup>21</sup>For example, see Ann Maxwell, Assistant Inspector General for Evaluation and Inspections, Office of Inspector General, U.S. Department of Health and Human Services, *Medicare and Medicaid Program Integrity: Combatting Improper Payments and Ineligible Providers*, testimony before the U.S. House of Representatives Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, 114th Cong., 2nd sess., May 24, 2016; and M.S. Adelberg, A.T. Dobosenski, and E.M. Prendergast, *The Need for Data Transparency in Skilled Nursing Facilities: Research, Analysis, and Recommendations*, Faegre Drinker Consulting (Feb. 2022).

<sup>22</sup>[GAO-23-104813](#).

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enrollment application to require nursing homes to disclose which of their owners, if any, are private equity companies.<sup>23</sup>

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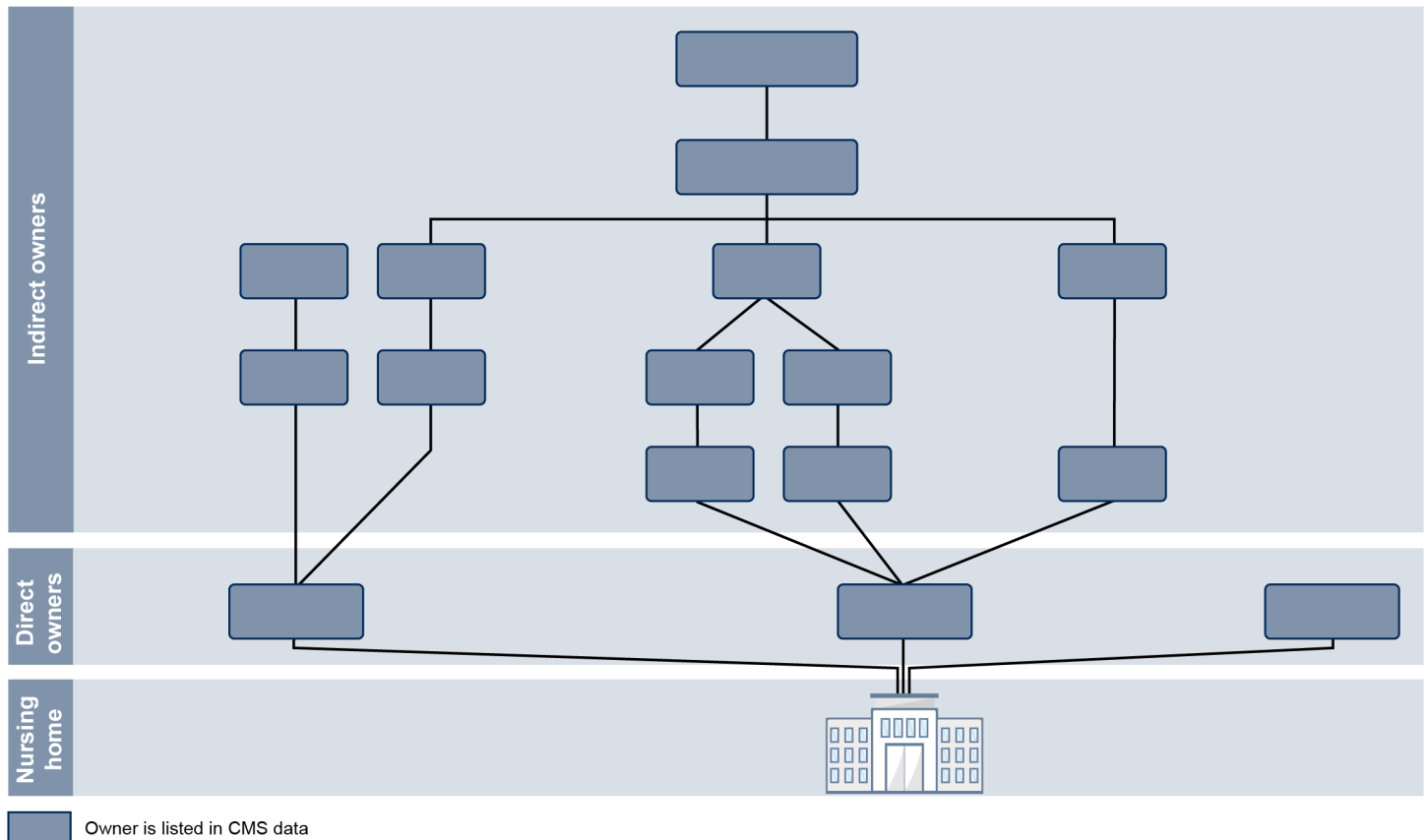
## Nursing Home Ownership Structures

Nursing home ownership structures can be complex. A nursing home can have one or more direct owners—those who own the nursing home—who, in turn, may have one or more owners. Additional layers of ownership beyond a direct owner are considered indirect ownership of the nursing home. Some nursing homes may have only one direct owner while others may have many direct and indirect owners. For an illustrative depiction of a nursing home’s ownership structure, see figure 1.

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<sup>23</sup>See Medicare and Medicaid Programs: Disclosures of Ownership and Additional Disclosable Parties Information for Skilled Nursing Facilities and Nursing Facilities, 88 Fed. Reg. 9,820, 9,829 (proposed Feb. 15, 2023). The proposed rule defines “private equity company” to mean “a publicly traded or non-publicly traded company that collects capital investments from individuals or entities and purchases an ownership share of a provider.” The comment period for this proposed rule closed April 14, 2023. CMS announced its intention to update the Medicare provider enrollment form in December 2022 as part of the Paperwork Reduction Act of 1995 review process. Agency Information Collection Activities: Proposed Collection; Comment Request, 87 Fed. Reg. 76,626 (Dec. 15, 2022).

**Figure 1: Illustrative Example of a Nursing Home’s Ownership Structure**



Source: GAO analysis of nursing home data and documentation. | GAO-23-106163

Notes: We use the term “owners” to refer to those with partial or complete direct or indirect ownership of, or a general or limited partnership interest in, a nursing home. Direct owners own the nursing home, whereas indirect owners are further removed, such as a company that owns the company that owns the nursing home.

Nursing homes can operate as for-profit, nonprofit, or government business types. Nursing home owners can be individuals or organizations. For-profit organizational owners—including companies that manage private equity funds, among others—can include a wide range of business types from sole proprietorships to large publicly traded corporations.

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## An Estimated 5 Percent of Nursing Homes Had Private Equity Ownership in 2022

We estimated that 5 percent of nursing homes had private equity ownership in 2022, based on CMS's data on nursing home ownership for our random sample of 200 nursing homes supplemented with other data sources.<sup>24</sup> Our analysis may understate the percentage of nursing homes with private equity ownership, because, for example, evidence of such ownership may not have been available through our data sources.<sup>25</sup> Our estimate is similar to another recent study, which used different data and methods to estimate that 4.7 percent of nursing homes were owned by private equity in 2020.<sup>26</sup>

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## CMS's Nursing Home Ownership Data Do Not List All Owners and Were Not Designed to Identify Private Equity Owners

We identified two main limitations of using CMS's data to identify private equity and other ownership of nursing homes. First, we found that many nursing homes did not have all of their owners listed, including those that had private equity ownership. We found that additional information was needed to identify nursing home owners that did not appear in CMS's data. Figure 2 provides a conceptual illustration how some owners of a nursing home may not be listed in CMS's data.

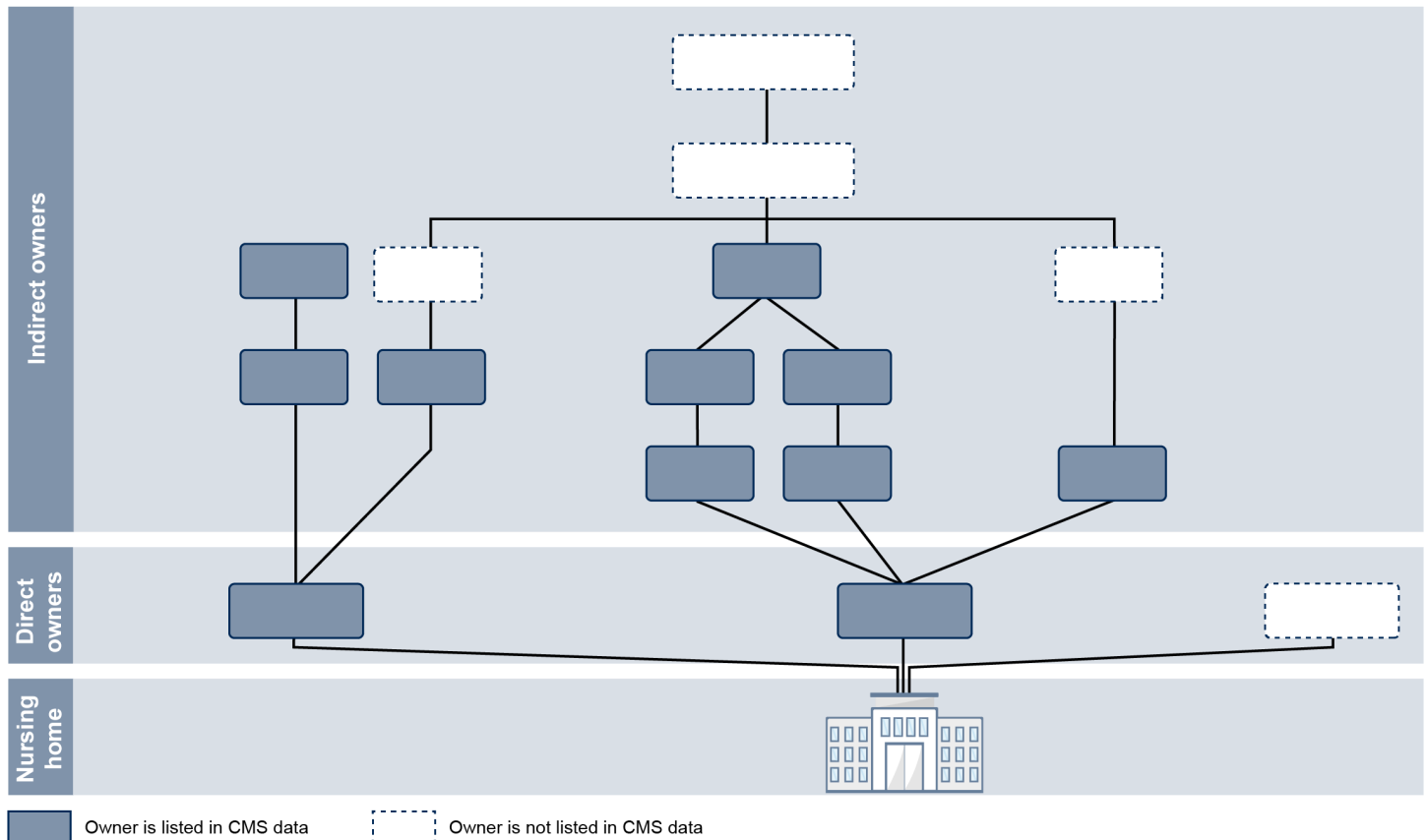
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<sup>24</sup>We counted nursing homes as having private equity ownership if a private equity owner was identified for the nursing home, regardless of whether the ownership was partial or complete. Details on our process for estimating private equity ownership of nursing homes are discussed in appendix I.

<sup>25</sup>See appendix I for more detail on the limitations of our analysis.

<sup>26</sup>R.T. Braun et al., "Comparative Performance of Private Equity-Owned US Nursing Homes during the COVID-19 Pandemic," *JAMA Network Open*, vol. 3, no. 10 (2020): <https://doi.org/10.1001/jamanetworkopen.2020.26702>. This study examined private equity acquisitions of nursing homes using data from 2010 through 2020. Another study, which also used data on private equity acquisitions of nursing homes, estimated that, as of 2015, about 8 percent of nursing homes were owned by private equity. See A. Gupta et al., *Does Private Equity Investment In Healthcare Benefit Patients? Evidence from Nursing Homes*, NBER Working Paper Series 28474 (Cambridge, MA: National Bureau of Economic Research, Feb. 2021). We previously reported that, as of 2008, about 12 percent of nursing homes that participated in the Medicare and Medicaid programs had been acquired by private investment firms, of which private equity is a subclass. [GAO-10-710](#).

**Figure 2: Illustrative Example of a Nursing Home’s Ownership Structure and Information Available in the Centers for Medicare & Medicaid Services’ (CMS) Nursing Home Ownership Data**



Source: GAO analysis of nursing home data and documentation. | GAO-23-106163

Notes: We use the term “owners” to refer to those with partial or complete direct or indirect ownership of, or a general or limited partnership interest in, a nursing home. Direct owners own the nursing home, whereas indirect owners are further removed, such as a company that owns the company that owns the nursing home.

There are two reasons why nursing homes may not have all of their owners listed in CMS’s data. First, not all nursing home owners are required to be reported. As noted above, nursing homes are required to report direct or indirect owners with a 5 percent or greater ownership interest.<sup>27</sup> Second, in some cases, the nursing home may not have self-

<sup>27</sup>Requirements for reporting partnership interests differ from requirements for direct and indirect ownership interests. All general partners must be reported, regardless of the percentage of interest in the partnership. Limited partners must be reported if their interest in the partnership is at least 10 percent.

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reported its owners as required on the Medicare enrollment form. Among the random sample of 200 nursing homes we reviewed, the number of owners listed in CMS's data ranged from one to 16. By checking against other data sources, we estimated at least 33 nursing homes in our sample had an organizational owner that was not reported as an owner in CMS's data, including some whose unlisted owner appeared to be eligible for reporting.<sup>28</sup> For example, we found several examples of nursing homes—both those owned by private equity firms and those not—for which a holding company was listed, but the holding company's owner was not.<sup>29</sup> However, it was difficult to determine whether an unlisted nursing home owner should have been reported because the percentage of a nursing home owned by a given owner could not always be determined. We therefore did not attempt to estimate the percentage of nursing homes that did not have all eligible owners listed in CMS's data. In addition, because there is no single, authoritative data source with comprehensive information about nursing home owners, identifying owners not listed in CMS's data can be a time- and resource-intensive effort.

The second limitation we identified is that CMS's data do not provide a means of readily identifying private equity firms and were not designed to do so. Therefore, additional data sources are required to determine whether each nursing home owner was a private equity firm. Various studies—including ours—used other sources, such as proprietary datasets, to determine which owners were private equity firms. However, just as there is no single, authoritative data source for identifying nursing home owners, there is also no single, authoritative data source for determining which owners are private equity firms. While proprietary databases can offer considerable information about public and private company ownership, they have limitations and may not have comprehensive ownership information available for every nursing home. Further, CMS's system for collecting information on nursing home

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<sup>28</sup>We also identified nursing homes for which not all individual owners were reported but did not attempt to quantify how often that occurred. Our finding that some owners were not listed is consistent with findings from other studies. For example, see Ann Maxwell, Assistant Inspector General for Evaluation and Inspections, Office of Inspector General, U.S. Department of Health and Human Services, *Medicare and Medicaid Program Integrity: Combatting Improper Payments and Ineligible Providers*, testimony before the U.S. House of Representatives Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, 114th Cong., 2nd sess., May 24, 2016; and Adelberg, Dobosenski, and Prendergast, *Need for Data Transparency*.

<sup>29</sup>A holding company is a company that holds and controls the ownership interests of other companies, but generally does not provide services itself.

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ownership, which is part of the Medicare provider enrollment process, was not designed to collect information on private equity ownership. If finalized, CMS's February 2023 proposed rule would define private equity companies for the purpose of requiring nursing homes to disclose which of their owners are private equity companies on a revised Medicare provider enrollment application.<sup>30</sup>

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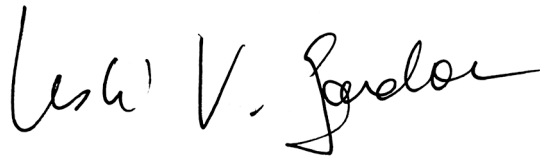
## Agency Comments

We provided a draft of this report to the Department of Health and Human Services for review and comment. The Department provided technical comments, which we incorporated, as appropriate.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the Secretary of Health and Human Services, the Administrator of CMS, and other interested parties. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-7114 or [gordonlv@gao.gov](mailto:gordonlv@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.

Sincerely yours,



Leslie V. Gordon  
Director, Health Care

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<sup>30</sup>See 88 Fed. Reg. at 9,824; 87 Fed. Reg. at 76,628.

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# Appendix I: Scope and Methodology

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This appendix provides further details on our scope and methodology in addressing our reporting objectives, which were to 1) estimate the percentage of Medicare-enrolled nursing homes with private equity ownership in 2022 and 2) describe the limitations of using the Centers for Medicare & Medicaid Services' (CMS) data to identify private equity and other owners of nursing homes.<sup>1</sup> To assess the reliability of CMS's data on nursing home ownership, we reviewed related documentation, interviewed CMS officials about the data, and conducted checks for obviously missing or erroneous data. For contextual background, we reviewed relevant studies and interviewed one private investment trade group and four researchers who have published work on private equity investment in nursing homes.

To address both objectives, we reviewed data from CMS's Provider Enrollment, Chain, and Ownership System (PECOS)—an electronic Medicare enrollment system and national data repository for individual and organizational providers who have enrolled or are enrolling in Medicare. We used a multi-step process to determine which nursing homes were owned, in part or in whole, directly or indirectly, by one or more private equity firms. First, we examined the ownership information in PECOS that was associated with those facilities. Because PECOS may not reflect all of the direct or indirect owners of a nursing home, we then used other data sources to search for additional organizational owners. Specifically, we searched for each organizational owner's name or address in the Standard & Poor's (S&P) Capital IQ or Capital IQ Pro databases for information on each organizational owner's investors and parent companies.<sup>2</sup> We also searched for the names or addresses of nursing homes or their organizational owners in Westlaw Edge and through web searches. We did not attempt to estimate the percentage of nursing homes that did not have all eligible owners listed in CMS's data.

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<sup>1</sup>In this report, we use the term "nursing home" to refer to skilled nursing facilities. We use the term "owners" to refer to those with partial or complete direct or indirect ownership of, or a general or limited partnership interest in, a nursing home. Direct owners own the nursing home, whereas indirect owners are further removed, such as a company that owns the company that owns the nursing home. We did not include those listed in CMS's data as having only mortgage or security interests, nor did we count those who had operational or managerial control but were not otherwise listed as owners of the nursing home.

<sup>2</sup>S&P Capital IQ and Capital IQ Pro are data products of S&P. These products contain information about companies based on regulatory filings, annual reports, company websites, press releases, and news stories, among other sources.



We considered organizational owners to be private equity firms if S&P Capital IQ or Capital IQ Pro characterized them as such, or if they were on a supplemental list we developed based on other sources. Specifically, because there is no single, authoritative list of entities that should be considered private equity firms, we developed a supplemental list of private equity companies based on relevant studies, trade publications, web searches, and company websites.

To estimate the percentage of nursing homes with private equity ownership in 2022, we randomly sampled 200 nursing homes that were enrolled in Medicare on December 30, 2022. We used the process described above to review the ownership for nursing homes included in our sample. Based on our sample size, we estimated that private equity firms had partial or complete ownership of 5 percent of nursing homes in 2022, with a 95 percent chance that we would have found between 2 and 8 percent of nursing homes owned by private equity companies if, using our methodology, we had reviewed all 14,815 nursing homes that were enrolled in Medicare on December 30, 2022. We compared our estimate to other estimates reported in relevant studies on this topic.<sup>3</sup>

There are four key limitations to our estimate of private equity ownership.

1. PECOS nursing home ownership data may not have been entirely complete or entirely accurate because they are self-reported and are not independently verified by CMS.<sup>4</sup>

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<sup>3</sup>R.T. Braun et al., “Comparative Performance of Private Equity-Owned US Nursing Homes during the COVID-19 Pandemic,” *JAMA Network Open*, vol. 3, no. 10 (2020): <https://doi.org/10.1001/jamanetworkopen.2020.26702>. This study examined private equity acquisitions of nursing homes using data from 2010 through 2020. Another study, which also used data on private equity acquisitions of nursing homes, estimated that, as of 2015, about 8 percent of nursing homes were owned by private equity. See A. Gupta et al., *Does Private Equity Investment In Healthcare Benefit Patients? Evidence from Nursing Homes*, NBER Working Paper Series 28474 (Cambridge, MA: National Bureau of Economic Research, Feb. 2021). We previously reported that, as of 2008, about 12 percent of nursing homes that participated in the Medicare and Medicaid programs had been acquired by private investment firms, of which private equity is a subclass. [GAO-10-710](#).

<sup>4</sup>By regulation, nursing home changes of ownership must be reported within 30 days of the effective date of the change. 42 C.F.R. § 424.516(e)(1) (2022). If a nursing home included in our sample experienced a change of ownership and the change had not yet been reported to CMS, the nursing home’s ownership information reflected in PECOS may have been outdated.

2. The data sources we used to supplement PECOS data may also not have had entirely complete or entirely accurate information about nursing home ownership.
3. Our estimate may have understated the percentage of nursing homes with private equity ownership to the extent that individuals listed as owners in PECOS were acting as proxies for private equity firms. Some published work has treated individuals who own nursing homes and work for private equity firms as being proxies for their employers' ownership.<sup>5</sup> Because individuals can personally invest in and own nursing homes regardless of who their employers are, we did not treat individual owners as being proxies for unlisted organizational owners. If some nursing homes with private equity ownership reported employees of the private equity firms as owners instead of the private equity firms themselves, the percentage of private equity-owned nursing homes could have been higher than we identified.
4. Other sources could have come to different conclusions about which nursing home owners should be considered private equity. As noted above, we relied primarily on S&P Capital IQ and Capital IQ Pro to determine which nursing home owners should be considered private equity. Our supplemental list was intended to mitigate this limitation by taking into consideration the conclusions of a broader range of sources; nevertheless, the accuracy of our identification of private equity ownership was contingent on the information available to us.

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We and others have previously reported inaccuracies in the data contained in PECOS. See, for example, GAO, *Nursing Homes: Complexity of Private Investment Purchases Demonstrates Need for CMS to Improve the Usability and Completeness of Ownership Data*, [GAO-10-710](#) (Washington, D.C.: Sept. 30, 2010); Ann Maxwell, Assistant Inspector General for Evaluation and Inspections, Office of Inspector General, U.S. Department of Health and Human Services, *Medicare and Medicaid Program Integrity: Combatting Improper Payments and Ineligible Providers*, testimony before the U.S. House of Representatives Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, 114th Cong., 2nd sess., May 24, 2016; and M.S. Adelberg, A.T. Dobosenski, and E.M. Prendergast, *The Need for Data Transparency in Skilled Nursing Facilities: Research, Analysis, and Recommendations*, Faegre Drinker Consulting (Feb. 2022).

<sup>5</sup>Taylor Lincoln. *Is It Private Equity? We Can't See: Federal Database on Owners of Nursing Homes Is Incomplete and Out-of-Compliance with the Law* (Washington, D.C.: Public Citizen, 2022).

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We conducted this performance audit from July 2022 through September 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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# Appendix II: GAO Contact and Staff Acknowledgments

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## GAO Contact

Leslie V. Gordon, (202) 512-7114 or [gordonlv@gao.gov](mailto:gordonlv@gao.gov)

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## Staff Acknowledgments

In addition to the contact named above, William Black (Assistant Director), Brandon Nakawaki (Analyst-in-Charge), Lingrong Guo, Madison Herin, Rich Lipinski, Melissa Ostergard, Laurie Pachter, Dan Ries, and Ravi Sharma made key contributions to this report. Also contributing were Roxanna Sun and Jennifer Whitworth.

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