

The Need for Data Transparency in Skilled Nursing Facilities

Research, Analysis, and Recommendations

A White Paper

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February 2022



Skilled Nursing Facility Data Transparency

The nursing home industry is at a crossroads. Too many Americans have died in nursing homes, including the nearly 15,000 skilled nursing facilities (SNFs) in the United States, due to the COVID-19 virus—nearly 140,000 according to the latest CDC National Healthcare Safety Network data.¹ Nearly every SNF in the nation has had a COVID-19 case, and more than 85% of them have had a resident death attributed to the virus.² But while that data is readily accessible and widely reported, valuable data necessary for conducting root cause analysis, improving oversight, and informing solutions regarding the industry's performance over the last two years has long been lacking.

Despite the fact the SNFs are highly regulated facilities, there is currently no central repository of SNF regulatory information from which meaningful transparency can be derived. At the federal level, SNF data resides in disparate IT systems and datasets, including PECOS (the Medicare enrollment system), CASPER/QIES (a system for facility inspections), the Payroll-Based Journal (PBJ) dataset (staffing information from SNF payroll systems), and the Minimum Data Set (MDS) (facility submission of resident clinical assessments). Program integrity information resides in yet additional Centers for Medicare & Medicaid Services (CMS) and U.S. Department of Health & Human Services (HHS) Office of Inspector General (OIG) systems. SNF cost reports separately contain important information to assess SNF financial well-being, but that data is limited in scope and widely regarded as inaccurate and incomplete. A smorgasbord of data files informs CMS's Care Compare quality reporting tool and Five-Star Rating System (including several of those listed above), but that tool remains underutilized by the public and dogged by methodological questions. Beyond this, states maintain their own state-

specific systems with respect to Medicaid enrollments, long-term care ombudsmen, and SNF licensure.

While there is no shortage of recent studies attempting to isolate the drivers of nursing home performance during the pandemic—we easily identified more than 20 such studies—the existing literature primarily focuses on traditional indicators of performance. It is well-accepted, for example, that a critical component to SNF quality of care is nurse staffing (which was the impetus behind CMS's development of the staffing data submission of Payroll Based Journal (PBJ)). Therefore, most recent studies have focused on the link between nursing staffing ratios and COVID-19 cases and deaths. Other studies have evaluated whether CMS Five-Star Ratings are an indicator of a SNF's ability to protect residents from COVID-19. Yet other studies focus on SNFs in an individual state, comparing state licensure databases against federal metrics (again, often Five-Star Ratings). A few studies have compared for-profit SNFs versus not-for-profit SNFs. But while many of these studies have uncovered important correlations in the data, few have purported to uncover true root causes of performance failures in the industry, and they all have blind spots resulting from the data challenges briefly noted above and described in greater detail later in this report.

Over the last decade, private equity firms have invested in various health care settings and health insurance companies.³ The full impact of these investments across the health care system have yet to fully understood and importantly has raised questions and concerns by policymakers, researchers and patients of the impact to quality of care. In March 2021, the House Ways & Means, Oversight subcommittee held a hearing titled "Examining Private Equity's Expanded Role in the U.S. Health Care System" and in October of 2021 the Senate Committee on Banking, Housing and Urban Affairs subcommittee on Economic Policy also held a hearing titled "Protecting Companies and Communities from Private Equity

1 See <https://data.cms.gov/covid-19/covid-19-nursing-home-data> (last accessed November 29, 2021).

2 See https://download.cms.gov/covid_nhsn/covid-19%20nursing%20home%20resident%20and%20staff%20vaccination%20rates.xlsx (last accessed November 29, 2021).

3 Gustafsson, L., Seervai, S., & Blumenthal, D. (2021, September 17). The Role of Private Equity in Driving Up Health Care Prices. Harvard Business Review. <https://hbr.org/2019/10/the-role-of-private-equity-in-driving-up-health-care-prices>



Abuse” on the issue. Prior to the pandemic, a few studies examined ownership trends in assessing SNF performance, specifically private equity (PE) investment. Those studies tended to be longitudinal analysis of known PE firms. The reason these studies focused on known PE firms is that, as it turns out, one of the deficiencies of publicly available (federal) SNF data sources is that it is nearly impossible to identify PE ownership in them. Understanding PE ownership in SNFs is a starting point to dissecting the impact to access and quality of care from these investments.

With funding from Arnold Ventures, Faegre Drinker Consulting (Faegre) set out to research how to improve federal data sources, particularly with regard to ownership information, in order to facilitate greater SNF transparency. The federal systems that collect SNF data were established at different times for different purposes. This leads to datasets that are not integrated and hampered by varying data integrity and completeness concerns. While the systems provide a wealth of information on the SNF industry, the information is not equal to the sum of its parts because of its heterogeneity. With over 1.4 million Americans receiving care in nursing homes amidst a continued COVID-19 public health emergency that preys on nursing home residents,⁴ it is critical now more than ever to ensure that SNF data is aligned to meet the needs of policymakers and researchers.

We approached our research in three phases. In the first phase, we conducted subject matter expert virtual convenings and individual interviews to identify key challenges and potential levers for improving SNF data robustness, completeness, and access. In the second phase, we conducted a review of germane federal systems and a small sample of state systems in order to analyze divergences between purported capabilities, actual capabilities, and desired capabilities. In this third and final phase, we’ve summarized our findings and generated options/ recommendations to improving the analyzed systems.

Phase I: Expert Convenings

Subject matter experts were identified by Faegre with assistance from Arnold Ventures. The full list of subject matter experts interviewed can be found in Appendix B. Interviews took place via Webex in August and September of 2021 with two staff members from Faegre facilitating discussion. Each interview was conducted pursuant to an interview protocol with several preset questions posed related to SNF data sources and systems, SNF ownership and PE. The interview protocol provided a semi- structured interview process while still allowing experts to elaborate on their experiences as appropriate. The full list of interview protocol questions can be found in Appendix A. All interviews were conducted in one hour or less and ranged from a group setting of three or four experts to individual expert interviews.

No quotes or comments mentioned in this report are attributed to any individual expert, as promised to experts pursuant to the protocol. A number of experts explicitly stated that they were speaking as individuals and not as representatives of any organization (including their employer). Faegre and Arnold Ventures are grateful to the experts for sharing their time, insights and experiences.

Through the interviews, experts identified a number of common concerns and desired improvements regarding SNF data sources and systems. The desired improvements include:

- (1) Increasing the integrity of SNF data, including ownership information;
- (2) Collecting more SNF data and improving SNF data interoperability across systems; and
- (3) Improving SNF owner accountability for reporting deficiencies, including deliberate obfuscation when it occurs.

⁴ United States Government Accountability Office. (2022, January 14). Health Care Capsule: Improving Nursing Home Quality and Information. (GAO-22-105422). <https://www.gao.gov/products/gao-22-105422>



Experts Expressed a Need for Increased Integrity of SNF Data, including Ownership Information

Interviews revealed that some of the federal and state systems that house SNF data are more reliable than others. For example, most experts believed the PBJ dataset to be a relatively reliable data source due to the source of that information coming from SNF payroll systems (although some experts expressed frustration that CMS does not release all of the PBJ data).

On the other hand, PECOS was mentioned as a relatively unreliable data source, particularly as ownership changes, to the extent experts were even able to access PECOS data. Experts who were able to access PECOS explained the only way to link chains of facilities together by ownership is by manually comparing the name of the owner from text fields. The trouble with this, experts explained, is that names are inconsistent in PECOS, likely due to the information being self-reported with no consequence for inconsistency. For example, a researcher will need to infer whether three SNFs listed as owned by John Smith, J. Smith, and J. Smith, LLC are, in fact, commonly owned. One expert stated,

“CMS needs to make PECOS public data, and assign a team to ensure that PECOS data is accurate, clean and usable, and consistent with data available elsewhere. At this point, PECOS data is not readily accessible or useful.”

Another expert described the ownership complexity interestingly,

“There seems to be a lot of hiding behind layers of LLCs in the skilled nursing world that we don’t see in other areas, and that makes it difficult not only to analyze SNF data but also to trust what has been reported.”

Experts also explained that the federal survey and certification data available from CASPER / QIES can be very subjective, particularly across state survey agencies. For example, an expert explained, one survey team may determine a single hallway lacking a handrail to be a serious safety risk, while

another survey team in a different jurisdiction might consider the same deficiency less serious or not a deficiency at all.

Experts also called into question the accuracy of the MDS. They explained the MDS is self-reported, and some measures appear to be manipulated. One expert shared,

“The strength of MDS is its comprehensiveness. The weakness is its accuracy. There is a lot of skepticism out there that some of the measures are being topped or bottomed out intentionally. It’s just hard to believe nursing homes are all doing that well in some areas.”

Experts also pointed to CMS cost reports as being inaccurate and incomplete, and the need to audit them far more thoroughly. Experts suggested that another agency, for example the Office of Inspector General (OIG), could be tasked with auditing them, or SNFs could be required to have certified independent accounting firms audit them prior to submission. Experts also suggested that costs on cost reports can be inflated due to related party transactions, causing SNFs to appear to be financially struggling while expense are being paid to a company owned by the same parent or individual owner or board member.

Gathering information about related parties would provide a deeper understanding of the SNF financial landscape. One expert provided the following example,

“Let’s say that a SNF is owned by a parent company. The SNF engages a staffing firm but the staffing firm is also owned by the same parent company. The payment to the staffing firm is recorded as a cost to the SNF on its cost report, yet it’s also revenue to the staffing firm and indirectly to the parent company. These transactions inflate costs to the SNF, which potentially inflate reimbursement since many states pay SNFs based on their costs (which of course is the point of cost reports).”

Experts noted that some states have developed consolidated cost reports to address related party transactions, though consolidated cost reports are not public facing.



Experts noted that SNF medical claims data is generally thought to be reliable because it has gone through payment processes by the time outside stakeholders have access to that data. However, experts also noted that claims data is generally limited to Medicare and Medicaid fee-for-service, and since more and more long-term care is being financed through capitated arrangements, fee-for-service claims are becoming less and less useful.

Experts Expressed a Need to Collect More SNF Data, including Ownership, and/or To Improve SNF Data Interoperability

Many of our experts focused on the need for a unique identification number for SNF parent companies in order to track SNF ownership across facilities and data systems (in order to sift through the “layers of LLCs”). Tax IDs or CMS certification numbers were cited as potential solutions, though other experts believed tax IDs and CMS certification numbers could be manipulated as well.

Multiple experts noted that there is no simple way to determine that an owner is a PE owner in the current datasets. That information needs to be pieced together using secondary sources such as news articles, press releases, or proprietary business-focused datasets, such as S&P market trackers. Therefore, experts noted a need for a PE indicator.

Experts also explained that it is difficult to determine when a SNF closes versus taking some other administrative action, such as a name change. If a facility closes, it simply ceases to exist in the datasets. Hence, experts noted a need for an indicator of SNF closure.

One expert suggested that there is a need to consider what data is being reported to and by state agencies. In comparison to the federal government, states have broad oversight over state-licensed entities (such as SNFs), and often report some of that data publicly. The California state legislature, for example, recently passed Senate

Bill 650, which requires SNFs to report five percent or greater ownership interest to the State, to prepare and file annual consolidated financial reports, for an official of the organization to certify the financial reports are accurate, and for those financial reports to be made public.⁵ Experts noted that understanding and organizing data collected at the state level might inform both state and national policy. Another expert countered,

“It’s one thing for a single state to be able to do this due diligence and deep dive, but it’s also something that we want to know if there’s a bad actor in another state who is coming into our state... I think it’s something we’ve always talked about. A single state can do it, but it’s going to require that interstate collaboration.”

Experts Expressed a Need to Improve SNF Owner Accountability for Reporting Deficiencies, Including Deliberate Obfuscation when it Occurs

Many experts expressed concern that SNF owners feel little obligation to ensure that the information reported about their facilities is complete, accurate, and current. To the contrary, some experts felt strongly that some SNFs deliberately submit incomplete or inconsistent information in order to decrease transparency.

As noted above, the perceived problems of SNF data obfuscation are especially acute in systems like PECOS where the data is not regularly audited and where there is little or no incentive for a facility to keep the system current. Also as noted above, experts cited cost reports as a data source thought to be regularly manipulated. Experts cited increased auditing and personal liability for officers who attest to inaccurate data as low-hanging fruit to improve accountability.

On the subject of PE accountability, one expert highlighted an important complexity. There are facilities with a history of

5 SB-650 Skilled nursing facilities. (2021-2022)



serious quality issues caused by systemic financial or quality of care problems. The expert noted that PE might correlate with these troubled SNFs without being the cause of the underlying quality of care issues. At the same time, the SNF industry is rife with distressed assets. Therefore, the expert noted,

“If you limit the sale, the SNF may close, and in a lot of places that’s going to create an access issue.”

Consequently, the expert explained, our goal should be to improve accountability and increase quality, but not, as a general matter, to limit ownership of SNFs to certain types of organizations.

Phase II: SNF Data Systems Review

In the second phase of our project, we conducted an analysis of federal data systems along with a few select state systems. On the federal side, we reviewed PECOS, CASPER / QIES (previously OSCAR), Care Compare, OIG exclusion and enforcement action lists, CMS cost reports, and a dataset from Brown University entitled LTCfocus.org. Below we analyze each of these datasets, their purported capabilities, actual capabilities, and desired capabilities (based on expert feedback).

PECOS (Provider Enrollment Chain and Ownership System)

Experts cited PECOS as an inaccessible dataset, and our review supports this assessment. We could find only one discrete PECOS dataset available to the public, the Medicare Fee-For-Service Public Provider Enrollment Files (PPEF). The PPEF dataset and data dictionary are available at this [link](#). The CMS summary of the PPEF notes:

These files are populated from PECOS and contain basic enrollment and provider information, reassignment of benefits information and practice location city, state and zip. These files are not

intended to be used as real time reporting as the data changes from day to day and the files are updated only on a quarterly basis.

Our review indicates PPEF contains 15 of the most basic enrollment variables, including enrollment IDs, enrollment type, name or business name, gender, National Provider Identifier (NPI), provider or supplier specialty, re-assignment of benefits information and provider address. No ownership or chain information is available from this file, a striking omission considering the purpose of PECOS and data collected through the Medicare enrollment process. Consequently, the PPEF has limited utility other than to assess whether a provider is in fact enrolled in Medicare.

Moreover, per federal regulation, Medicare providers are required to keep their enrollment information current or face potential revocation of their Medicare billing privileges. Specifically, changes of ownership must be reported within 30 days of the change, and all other enrollment information changes must be reported within 90 days of the change. (42 CFR §424.516(e).) Therefore, PECOS data *should* be current. That noted, CMS generally enforces the requirement to keep enrollment information current through a process called revalidation (i.e., renewal of enrollment), which for SNFs is required only every five years.

Per federal regulations, facilities must disclose certain ownership information to Medicare (and Medicaid agencies). Specifically, the name and address of each person with an ownership or control interest in the entity or in any “subcontractor” in which the entity has direct or indirect ownership interest totaling 5 percent or more must be reported. A subcontractor is an “individual, agency, or organization to which a disclosing entity has contracted or delegated some of its management functions or responsibilities of providing medical care to its patient.” Likewise, a disclosing entity must furnish “the name of any other disclosing entity in which any person with an ownership or control interest, or who is a managing employee in the reporting disclosing entity, has, or has had in the previous three-year period, an ownership or control interest or position as managing employee, and the nature of the relationship with the other disclosing entity.” These disclosures typically happen



on the Medicare enrollment application (CMS-855A) through PECOS. An excerpt of the federal regulations regarding disclosures of ownership can be found in Appendix D.

CASPER / QIES (Federal survey and certification systems)

The Federal survey and certification system datasets available through the CASPER / QIES systems (previously known as OSCAR) are likely the most robust single source of data on SNFs available from CMS. These datasets contain thousands of variables related to certification and annual health and life safety code inspections of SNFs by state agencies and CMS.

Obtaining data directly from CASPER / QIES is challenging. We found no easy way to access CASPER / QIES datasets directly. We could order datasets, either from the QIES Technical Support Office (at qtso.cms.gov) or from independent research companies for a fee. However, instead of obtaining data directly from CASPER / QIES directly, substantial survey and certification information is made available via the Care Compare site (and its related dataset, the Provider Data Catalog), and LTCfocus.org, as further discussed below.

CMS does make one dataset from CASPER / QIES available on its website, the Provider of Services (POS) file. The POS file and data dictionary are available at this [link](#). The CMS description of the POS file is limited:

This data is gathered as part of the CMS Provider Certification process and is updated each time a provider is recertified. The specific timetable for each provider type's recertification process does vary.

SNFs are surveyed every 9 to 15 months (and sometimes more often), so compared to other institutional providers, the SNF POS file should be relatively current. The date of the last survey is provided in the POS file. New POS files are uploaded to the CMS website(s) annually.

The POS file contains more than 200 different variables related to institutional certifications that apply to SNFs. These

variables generally pertain to facility level characteristics, including bed count by bed type (e.g., Alzheimer patient beds, hospice patient beds, and rehab beds), availability of on-site and off-site health care services, and staffing headcounts by various provider types.

The POS file also provides SNF ownership information. The variables related to ownership include, ownership type (e.g., for profit, not-for-profit, government owned, and related subtypes), whether the facility is hospital-based, the number of times the facility has changed owners, the date of the most recent change of ownership and the one before that, whether the facility is part of a multi-facility organization (defined as a "facility owned by an organization that owns (or leases) two or more [similar] facilities"), and the name of the multi-facility organization. Note that the name of the multi-facility organization is not necessarily consistent across all facilities owned by the multi-facility organization in this dataset. For example, a single holding company of a major SNF chain that owns and operates many SNFs, is listed more than 40 different ways in the POS file. Therefore, linking facilities by their multi-facility organization name using this dataset may be challenging without significant data scrubbing, and the reliance on individual researchers to make judgment calls on ownership based on similar but not identical names may result in some inaccurate assumptions.

CMS Care Compare (formerly known as Nursing Home Compare)

Care Compare is a website developed by CMS that allows health care consumers and practitioners to quickly compare health care providers to each other based on a rating system known as the Five-Star Rating System. The comparisons include various aspects of the health care experience, including cost of care, health care facility inspections, facility staffing levels, quality of care, COVID-19 vaccination rates, etc. Recently, CMS announced that the agency will begin posted details on staff turnover on the Care Compare website. The data will include information on nurse staffing on weekends and turnover rates for nurses and administrators for facilities. Care Compare can be accessed at this [link](#).



The dataset behind Care Compare is made available by CMS in a separate web location called the Provider Data Catalog (PDC). The PDC for nursing homes and data dictionary are available at this [link](#). CMS describes the four raw data sources behind Care Compare and the PDC as follows:

- (1) **CMS's health inspection database** [i.e., CASPER / QIES] - Includes the nursing home characteristics and health deficiencies issued during the 3 most recent standard inspections and any complaint investigations or infection control inspections in the past 3 years. Data about penalties made against nursing homes also come from this database. Additional inspection data may be added to the database at any time because of complaint or facility reported incident investigations, outcomes of revisits, Informal Dispute Resolutions (IDR), or Independent Informal Dispute Resolutions (IIDR). These data may not be added in the same cycle as the standard inspection data. The following measures on Care Compare – Nursing homes including rehab services, and Provider Data Catalog come from this data source:

- Health inspections data
- Fire Safety inspections & emergency preparedness data
- Penalties

- (2) **Payroll-Based Journal (PBJ) system** - The PBJ system allows nursing homes to electronically submit the number of hours facility staff are paid to work each day. The information is submitted quarterly, and is auditable to ensure accuracy.⁶ Staffing data are collected on the director of nursing, registered nurses (RNs) with administrative duties, RNs, licensed practical nurses (LPNs) with administrative duties, LPNs,

certified nurse aides (CNAs), medication aides, and nurse aides in training. More information on this program is available here. The following measures on Care Compare – Nursing homes including rehab services, and Provider Data Catalog come from this data source:

- Total staffing (RN, LPN, CNA)
- RN staffing
- Physical Therapist hours

- (3) **The Minimum Data Set (MDS) national database** - Data for quality of resident care measures come from the MDS database. The MDS is an assessment done by the nursing home at regular intervals on every resident in a Medicare- or Medicaid-certified nursing home. Information is collected about the resident's health, physical functioning, mental status, and general well-being. These data are used by the nursing home to assess each resident's needs and develop a plan of care. The following measures on Care Compare – Nursing homes including rehab services, and Provider Data Catalog come from this data source:

- Quality of resident care
- Staffing (resident characteristics used to estimate the amount of staffing needed)
- Resident census (used in calculating staffing hours per resident day)

- (4) **Medicare claims data** - CMS uses bills that nursing homes and hospitals submit to Medicare for payment purposes to identify when hospitalizations and nursing home admissions take place. These are used to calculate hospital

6 This is CMS' claim. In our view, the fact that a dataset is "auditable" (in contrast to "audited") does not ensure accuracy.



readmission rates, emergency room visits, and discharges. The following measures on Care Compare – Nursing homes including rehab services, and Provider Data Catalog come from this data source:

- Quality of resident care

This information changes often, as residents are discharged and admitted, or residents' conditions change. The data on Care Compare – Nursing homes including rehab services, and Provider Data Catalog should be used along with information from the Long-Term Care Ombudsman's office, the State Survey Agency, or other sources.

CMS also provides a Technical Users' Guide to the data provided on Care Compare and in the PDC that describes in detail how the "star" ratings are determined using the raw data sources above. The Technical Users' Guide can be accessed at this [link](#).

Per our review, the datasets available on the PDC include detailed information at the facility level, including health and fire safety inspection deficiencies and corrections, fines and penalties issued and whether reimbursement was suspended, complaint information, average resident census, and nurse staffing levels by hours-per-resident. No facility level information regarding resident health and well-being or claims level data is available in the PDC dataset. (Note that state-level MDS data and de-identified Medicare claims data is available on the CMS website. CMS also makes detailed MDS data, Medicare claims data, and Medicaid data (beneficiary demographics, claims data, and provider enrollment information) available to researchers—subject to a data use agreement—through the Research Data Assistance Center and the Chronic Conditions Data Warehouse.)

The PDC contains the most detailed information we could find regarding SNF ownership in the datasets we reviewed. The PDC indicates the name and percentage of ownership interest for owners or controllers in each of the following categories: 5% or greater direct ownership interest, 5% or greater indirect

ownership interest, 5% or greater mortgage interest, 5% or greater security interest, director, managing employee, officer, operational/managerial control, and partnership interest. Consequently, for each facility, generally several owners and controllers are listed, including both individuals and organizational owners and controllers. Additionally, the name of a multi-facility organization owner appears to be more consistent in this dataset across facilities in contrast to the POS file (the same major SNF chain that was listed more than 40 different ways in the POS file is listed only three different ways across its facilities in this dataset).

However, we found a few problems with the ownership information in the PDC. The first issue we found is that for more than 60% of the direct or indirect owners listed for SNFs, the percentage of ownership indicates "No Percentage Provided." We have asked CMS why more than half of the owners have reported no percent ownership, since that seemingly contradicts submission requirements. The second issue we found is that for an individual SNF, it is nearly impossible to determine how the direct and indirect owners are linked to each other (our experts referred to this issue as the "layers of LLCs").

Note that our experts cited several other deficiencies with the raw data sources used to produce Care Compare. CASPER / QIES is a significant component of the Five Star Rating System, particularly survey deficiencies. But, as discussed previously, survey deficiencies can be subjective, particularly across regulator jurisdictions. Additionally, the accuracy of the MDS is uncertain and researchers are suspicious of it since MDS is self-reported by facilities, and, therefore, may be misreported or even manipulated.

Although our experts believed the PBJ dataset is more accurate than others, since it derives from payroll systems instead of being self-reported, our experts noted that CMS does not fully report PBJ data publicly. Finally, although claims data is generally thought to be reliable, that data is limited to a subset of SNF patients and services, namely Medicare fee-for-service claims.



OIG exclusion and enforcement action lists, and CMS Preclusion List

The US Department of Health and Human Services, Office of Inspector General (HHS OIG) has the authority to exclude individuals and entities from participating under Medicare and Medicaid. The HHS OIG's exclusion authority is mandated for individuals and entities convicted of certain crimes and is permissive for individuals and entities in certain other circumstances. (Social Security Act § 1128(a) and (b).) One of the circumstances for which HHS OIG has permissive exclusion authority over an entity is if (in relevant part) a person who has a direct or indirect ownership of 5 percent or more in the entity, or who is an officer, director, agent, or managing employee of that entity, is a person who has been excluded from participation under Medicare or Medicaid. Hence, it is critically important for health care entities including SNFs to ensure they are not owned or controlled by excluded persons.

OIG maintains a list of all currently excluded individuals and entities entitled the List of Excluded Individuals/Entities (LEIE). The LEIE is available at this [link](#). The OIG's Exclusions FAQ notes:

The LEIE is available in two formats:

The Online Searchable Database [OSD] enables users to enter the name of an individual or entity and determine whether they are currently excluded. If a match is made on an individual, the database can verify with an individual's Social Security Number (SSN) that the match is unique. Employer Identification Numbers (EINs) are available for verification of excluded entities.

The Downloadable Database [DD] enables users to download the entire LEIE to a personal computer. Supplemental exclusion and reinstatement files are posted monthly to the OIG's website, and these files can be merged with the previously downloaded data file to update the list. Users who do not wish to rely on the supplements to keep the information

updated can download the Downloadable Data File each month.

Profile updates (changes to information on specific excluded individuals and entities) are also available on the Downloadable Database file web page.

Note: The Downloadable Database does not contain SSNs or EINs. Therefore, verification of specific individuals or entities through the use of the SSN or EIN must be done via the Online Searchable Database.

The LEIE DD contains a list of more than 3,000 currently excluded entities and more than 70,000 currently excluded individuals across all provider types and health care settings. Only excluded entities and individuals are listed, so this dataset should not be mistaken for a census of all providers. The dataset includes name, business type, specialty, NPI, address, the section of the Social Security Act upon which the exclusion is based, and the exclusion start date.

As noted above, SSNs and EINs can be used to identify specific individuals and entities via the OSD, but that data is not reported on the LEIE DD. Consequently, if the excluded individual or entity is not a provider with an NPI, the only identifying variable on the LEIE DD that can be used to link the individual or entity to another dataset is the individual's or entity's name. This is a shortcoming because: (a) the same name may be recorded differently in different datasets; (b) names may be changed over time without the original entries of the names being cleaned, and (c) names may be deliberately fudged / tweaked to make it harder to establish the chain of ownership / control (e.g., John Smith, John W. Smith, J. Smith).

In addition to exclusion, the OIG and the Department of Justice has the authority to take enforcement action with respect to fraud and other alleged violations of the law. These enforcement actions may lead to corporate integrity agreements (CIA), civil monetary penalties and even criminal prosecution. The results of these enforcement actions are provided on the OIG website, which is available at this [link](#).



However, enforcement actions are not listed in any downloadable dataset we could find / access.

More recently, CMS developed a list of providers “precluded” from receiving payment under Medicare Advantage (MA) and Part D plans. The dataset is entitled the “CMS Preclusion List” and includes all OIG excluded individuals and entities as well as certain other individuals and entities that have been convicted of other crimes or that have engaged in conduct that could have resulted in exclusion had the provider been enrolled in Medicare at the time, or if the individual or entity recently dropped from the LEIE because it is no longer excluded (but is still precluded). The list was developed to ease enrollment burdens on MA and Part D plans. However, the dataset is not currently available to the public. The sample dataset available on the CMS website (available at this [link](#)) indicates this dataset is nearly identical to the LEIE DD in content.

In addition to the LEIE and CMS Preclusion List, most states have Medicaid program exclusion or preclusion lists. For example, Pennsylvania’s Medichex List (available at this [link](#)) identifies providers, individuals, and other entities who are precluded from participation in Pennsylvania’s Medicaid Program.

Perhaps one of the most significant weaknesses of the exclusion / preclusion / enforcement lists described above is the fact that there is no single list to find problem individuals and entities. Some experts have noted that a health care provider would need to search upwards of 50 disparate lists to ensure that it isn’t engaging an individual or entity that has been excluded / precluded by the government pursuant to a health care law or regulation. Moreover, most lists drop individuals and entities over time, and do not report individuals or entities who were investigated and who settled by way of some other form of discipline (e.g., CIA). Therefore, understanding whether an owner / controller / entity / individual has been disciplined by any government agency for bad acts is nearly impossible to do in an automated and accurate way.

CMS Cost Reports

Most institutional providers including SNFs report their expenditures related to items and services provided to Medicare (or Medicaid) beneficiaries on cost reports. CMS uses cost reports to determine payments to facilities, either retrospectively or prospectively, for items and services covered by Medicare. The cost report template for SNFs is complex and requests substantial financial data, facility characteristics and staffing level information, most of which is not publicly reported anywhere else. The cost report template for SNFs is available at this [link](#).

Nearly all of our experts cited SNF cost reports as a source of data with great potential. However, two major problems persist with cost reports: (1) cost report data is difficult to access and interpret, and (2) cost report data is known to be inaccurate and incomplete. Both of these issues were documented in a GAO report to HHS in 2016 (available at this [link](#)). HHS responded to the GAO report that the costs to improving accessibility and reliability of cost report data outweighed the benefits.

We were able to locate the cost report datasets for SNFs on the CMS website, which are available at this [link](#). The numeric dataset at the facility level (the largest dataset available), however, can only be downloaded into a statistical software platform (CMS recommends the use of Oracle, SAS, SPSS Statistical Package, Microsoft SQL Server, or DB2; the National Bureau of Economic Research has produced SAS and STATA files of the SNF cost report CSV data, which is available at this [link](#)).

Moreover, analyzing the data requires significant familiarity with CMS’ coding of the data, which is documented in CMS’s provider reimbursement manual (available at this [link](#)).

Note also that some state Medicaid programs require institutional providers including SNFs to file cost reports related to Medicaid expenditures. We did not evaluate state cost report data for this report.



LTCfocus.org

One source of SNF data that several of our experts cited as being particularly useful is a dataset from the Brown University Center for Gerontology & Healthcare Research, sponsored by the National Institute on Aging, entitled LTCfocus.org (available at this [link](#)). LTCfocus.org notes for users,

The website hosts data regarding the health and functional status of nursing home residents, characteristics of care facilities, state policies relevant to long term care services and financing, and data characterizing the markets in which facilities exist and, in the future, we plan to expand to include information about other sectors of the long-term care system. These data will allow researchers to examine the relationship between state policies and local market forces and the quality of long-term care. ... The website brings together data gathered from a variety of primary and secondary sources, including MDS, OSCAR [CASPER / QIES], and a variety of other sources that characterize the policy environment and local market forces affecting nursing home providers.

The datasets on LTCfocus.org are readily available for download. Data is provided at the state, county, and facility level, and is available for the years 2000 to 2019 (although note that the data for 2019 is currently incomplete). Around 80 variables are provided at the facility level, mostly based on data from MDS and CASPER, but also from the Residential History File (a dataset produced based on an algorithm that combines MDS assessments with Medicare claims data) and a few other sources.

The LTCfocus.org dataset is by far the most robust of the ones we reviewed regarding facility resident health and well-being. About half of the facility level variables derive from the MDS (presumably accessed by LTCfocus.org by way of a data use agreement). The only ownership information we found in this file is a “yes/no” variable regarding whether the facility is part of a multi-facility organization, which is derived from the CASPER / QIES data. While that is not optimal other than to analyze the data by whether the facility is part of a chain or not, the LTCfocus.org data could be linked to the PDC

ownership dataset in order to analyze the LTCfocus.org data by specific owner / controller names (although see the issues we identified with the PDC ownership dataset above).

Since the data from LTCfocus.org is primarily derived from MDS and CASPER / QIES, the same issues noted above with respect to those datasets in relation to Care Compare and the PDC exist for LTCfocus.org.

Select State Systems Analysis

Although CMS plays a major role in regulating SNFs through laws and regulations connected to Medicare and Medicaid reimbursement, states have a more expansive role in regulating SNFs from a licensing and state Medicaid reimbursement perspective. While it is beyond the scope of this report to evaluate licensure and certification related databases available in every state, below we evaluate two states where our experts noted that databases were publicly available.

California

California’s Center for Health Care Quality produces the Health Facility Information Database (Cal Health Find), which provides consumers and practitioners with information about licensed and certified facilities in California. The data from Cal Health Find derives from CASPER / QIES and California’s Electronic Licensing Management System. Cal Health Find is a searchable database (available at this [link](#)) but does not appear to be downloadable as a standalone dataset.

California Health and Human Services makes available an Open Data Portal (available at this [link](#)), which provides numerous datasets related to regulated health care facilities in California. One of the datasets available on the Open Data Portal is the Long-term Care Facility Integrated Disclosure and Medi-Cal Cost Report Data (LTC Integrated Disclosure) produced by the California Office of Statewide Health Planning and Development (COSHPD). The LTC Integrated Disclosure datasets and file specifications are available at this [link](#) (the most recent year is 2019). The description of this dataset on the Open Data Portal is as follows:



On an annual basis (based on individual Long-Term Care (LTC) facility fiscal year end), California licensed LTC facilities report detailed financial data on facility information, ownership information, patient days & discharges, Balance Sheet, Equity Statement, Cash Flows, Income Statement, Revenue by type and payer, Expense Detail, and Labor Detail. Based on the selected data set, the pivot tables display summarized data on a Profile page and also provides charts on various data items such as Patient Days, Revenue & Expense, and Revenue.

The LTC Integrated Disclosure dataset contains more than 4,000 variables related to LTC facilities (including SNFs) that run the gamut from facility characteristics to detailed financial data to staffing information to service utilization. Moreover, the data submitted by each facility is desk-audited by the COSHPD and run through an algorithm to identify outlier responses that are then submitted back to the facility for revision. In terms of ownership, the LTC Integrated Disclosure dataset lists whether the facility is part of an organization owning multiple facilities; the type of multiple-ownership relationship; the parent organization name and address; names and addresses of related facilities under common ownership/control; names and percent ownership interests of owners with 5% or more equity; names of members of the board of directors; names and ownership information of management companies; and several other related variables.

Pennsylvania

Pennsylvania's Department of Health (PDH) produces the Nursing Care Facility Locator Page (NH Locator), which provides consumers and practitioners with information about licensed and certified facilities in Pennsylvania (by county, city or zip code) (available at this [link](#)). Users can click on any county in Pennsylvania and compare all of the nursing facilities in the county based on high level characteristics like type of ownership, licensure status, last inspection, number of beds, payment options, and nursing hours per resident per day. The NH Locator also allows users to view health and building safety inspection results.

PDH also makes certain "Nursing Home Reports" publicly available on its website, which are available at this [link](#). The description of this datasets is as follows:

Data found in the reports [listed on the website] were obtained from the annual Long Term Care Facility questionnaires.

We could not find the questionnaires referred to above available for download but were able to obtain them from the state. The reports provide facility level information on utilization (including licensed beds, bed days available and occupancy rates), reimbursement (daily charges and per diem reimbursement rates), facility characteristics (including set up and staffed beds, Medicare and Medicaid certified beds, admissions, discharges, deaths, total length of stay, and average length of stay), staffing (including 23 categories of full-time and part-time workers at the facility) and resident census. No ownership information was found in these files.

Recommendations

In summary, while substantial data exist on SNFs and other institutional providers in these government databases, information gathered from experts and our own analyses conclude that the datasets available from these systems have several shortcomings:

- (1) **No Source of Truth.** The data systems that should contain significant base-level information on SNFs and other institutional providers including their corporate entity structures are not made publicly available and/or the integrity of that information is not maintained by regulators, particularly PECOS. In effect, there is no "source of truth" for understanding corporate and ownership structures of SNFs or other institutional providers. Additionally, although some of the state-level data available to the public may be even more reliable and complete than federal datasets, that data only accommodates analyzing providers in a single state, which is problematic with respect to tracking bad actors across state lines. Hence, our experts at the state level endorsed the idea of a federal "source of truth."



Recommendation: Congress or the Biden administration should charge a federal entity with responsibility for examining existing federal and state systems discussed above and producing a publicly available SNF ownership file from information that is already required and reported in PECOS. The new PECOS file should include frank guidance with respect to known concerns with data quality and efforts underway to improve it. Both the data file and guidance should be first published as a draft subject to public comment and finalization based on public comments. Appropriate funds need to be allocated for this activity to succeed.

- (2) **Linking Information Across Datasets.** While some datasets noted above can be linked together with other datasets using facility level provider numbers (and some of the datasets already are a combination of datasets), other important datasets, like disciplinary action lists, cannot be linked by numeric values tied to the facility or tied to owners, controllers, or managers. Linkages can only be made by name, which is a problem because names: (a) can vary from system to system, (b) can be changed, and (c) can be deliberately fudged to obfuscate linkages.

Recommendation: Guidance for each system must discuss the need to report organizational and individual names in a uniform manner. For example, guidance could specify that entered names must comply exactly with the name on the corresponding state license. This will not solve all problems, as an owner interested in preventing transparency could create several LLCs or make frequent legal entity name changes. But explicit naming guidance is a step in the right direction and it can be strengthened via low-cost IT solutions such as auto-populated fields or suggested name flags when a SNF operator offers ownership information this is similar but not-identical to prior information. Additionally, TINs, NPIs, license numbers, and certification numbers must be added as standard fields to government forms and system portals that do not already collect / report this

data. Again, this will not solve all problems, but it will make it easier to identify SNFs across datasets.

- (3) **Data Integrity.** Potential significant data integrity problems exist with nearly all of the datasets we reviewed, but particularly those datasets that are self-reported and are poorly, or not, audited. Notably, CMS cost reports and the MDS datasets, key sources of information on facility financials and resident health and well-being, may be untrustworthy.

Low-cost, low administrative burden data-integrity checks could be built into several of the systems discussed in this report. The State of California, for example, deploys auto-edits that flag outlier data as it is being entered into the state cost report. A SNF operator can over-ride these outlier flags, but it must affirmatively do so. Simple solutions like this should increase data integrity. CMS or another agency also should be charged and funded with regular data integrity oversight of each federal system. This approach need not be punitive. For example, a 1% sample of SNF cost reports, PECOS, and MDS records could be audited annually and with findings offered publicly to SNFs and researchers as a technical assistance tool. If errors and omissions gradually decrease over time, as SNFs better understand data integrity problems, no punitive action would be necessary. Regulators should assume that the large majority of SNFs are acting in good faith with regard to their submitted data and only assume punitive posture when it becomes clear that some (presumably small) number of SNF operators are not acting in good faith.

- (4) **Ease of Access.** Though the PDC, Care Compare, and LTCfocus.org are significant steps in the right direction for collecting data on SNFs and other institutional providers in one easy-to-access location, several of the other datasets noted above were hard to find and some were difficult to access or interpret. A list of each data source reviewed and the barriers to researchers can be found in Appendix E.



We are not aware of an initiative to integrate SNF data across the systems discussed in this paper. We recognize that such an effort would be a complex undertaking but believe the public benefit would be considerable. Congress or the Biden administration should charge CMS or another agency with responsibility for establishing a SNF data transparency strategic plan with an appropriation to do so. The goal of strategic plan would be system integration and easy public access to the resulting data. This can best be done by building on the PDC (and Care Compare) with more information from PECOS regarding ownership, including private equity, and SNF cost report information, including related party transactions. An annual public report on progress against the strategic plan should be established. A technical expert

panel, including both industry and researchers, should be established to advise the government on this undertaking. Necessary funds will need to be allocated.

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This report is published with support and direction from Arnold Ventures.



Appendices

Appendix A: Arnold Ventures – SNF Data Transparency Interview Guide

Lead-in:

Interviewer introduces her/himself; introduces notetaker.

Faegre Drinker, with funding from the Arnold Ventures, is conducting research into the transparency of data on Skilled Nursing Facilities (“SNFs”). As part of this project, we’re interviewing experts on SNFs and SNF data. We’re particularly interested in learning about the federal and state systems that house SNF data and the strengths and shortcomings of those systems, particularly as they relate to SNF ownership.

We appreciate your candid feedback on this topic. While the collective feedback from these interviews will be included in a public-facing report, no comments will be attributed to any individual interviewee. We will record interviews for notetaking purposes only and will destroy the interviews at the conclusion of the project.

Do you have any questions before we begin?

Background

Please list/confirm:

Name: _____

Title: _____

Organization: _____

Email: _____

Questions

1. What data informs your opinions about SNFs, and what data sources are most helpful to understanding that state of the nursing home industry?
2. What SNF data systems have you used?
 - a. PECOS
 - b. Care Compare (combines PBJ, MDS, CASPER/QIES, and Medicare claims)
 - c. Payroll-Based Journal (PBJ) system
 - d. Minimum Data Set (MDS) national database
 - e. SNF Quality Reporting Program (combines MDS and Medicare claims)
 - f. SNF Value-Based Purchasing Program (measures based on Medicare claims)
 - g. Federal Survey and Certification/Inspection database (CASPER/QIES)
 - h. State licensure databases
 - i. State Survey and Certification/Inspection databases
 - j. Other:
3. For the data sources you mentioned, what are strengths and challenges of each?



4. What unavailable SNF data would be most helpful to consumers, policy makers, and regulators if it was available?
5. Have you sought information on SNF ownership and private equity investment in SNFs? If so, were you able to find the information you were looking for, what information did you find, and where did you find information on ownership and investor activity in the industry?
6. If you could change or improve SNF data, what would you do to ensure that the performance of different nursing homes across a variety of metrics can be tracked and connected to the SNF ownership?
7. What else do you think we should know about the transparency and quality of SNF data?



Appendix B: Subject Matter Experts

Faegre Drinker interviewed the following stakeholders. As promised to subject matter experts, quotes and comments mentioned in this report are not individually attributed. A number of subject matter experts explicitly stated that they were speaking as individuals and not as representatives of their employing organization. Faegre Drinker and Arnold Ventures are grateful to the participants for their time and sharing their insights and experience during the interview.

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Appendix C: Bibliography

Although not an explicit part of the project, Faegre Drinker proactively surveyed new literature throughout the project in order to keep informed about SNF data and concerns with ownership trends in health care. In total, the authors identified and digested 35 publications as part of this project. They are listed below.

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Appendix D: SNF Ownership Regulations

The following are the current regulations for SNF providers and the Medicare program regarding reporting ownership. Regulatory text below is taken from the Cornell Law School, Legal Information Institute [LII].

42 CFR § 483.70 - Administration.

(k) Disclosure of ownership.

- (a) The facility must comply with the disclosure [requirements](#) of §§ [420.206](#) and [455.104](#) of this chapter.
- (b) The facility must provide written notice to the State agency responsible for licensing the facility at the time of change, if a change occurs in -
 - (i) [Persons](#) with an ownership or control interest, as defined in §§ 420.201 and 455.101 of this chapter;
 - (ii) The officers, directors, agents, or managing employees;
 - (iii) The corporation, association, or other company responsible for the management of the facility;
or
 - (iv) The facility's [administrator](#) or director of nursing.
- (c) The notice specified in [paragraph \(k\)\(2\)](#) of this section must include the identity of each new individual or company.

42 CFR § 420.206 - Disclosure of persons having ownership, financial, or control interest.

(a) Information that must be disclosed. A [disclosing entity](#) must submit the following information in the manner specified in [paragraph \(b\)](#) of this section:

- (1) The name and address of each [person with an ownership or control interest](#) in the entity or in any [subcontractor](#) in which the entity has direct or [indirect ownership interest](#) totaling 5 percent or more. In the case of a part B supplier that is a joint venture, ownership of 5 percent or more of any company participating in the joint venture should be reported. Any [physician](#) who has been issued a Unique [Physician](#) Identification Number by the Medicare program must provide this number.
- (2) Whether any of the persons named, in compliance with [paragraph \(a\)\(1\)](#) of this section, is related to another as spouse, parent, child, or sibling.
- (3) The name of any [other disclosing entity](#) in which any [person with an ownership or control interest](#), or who is a [managing employee](#) in the reporting [disclosing entity](#), has, or has had in the previous three-year period, an ownership or control interest or position as [managing employee](#), and the nature of the relationship with the [other disclosing entity](#). If any of these other disclosing entities has been convicted of a criminal offense or received a civil monetary or other administrative sanction related to participation in Medicare, [Medicaid](#), title V (Maternal and Child Health) or title XX (Social Services) programs, such as penalties assessments and exclusions under sections 1128, 1128A or 1128B of the [Act](#), the [disclosing entity](#) must also provide that information.



(b) Time and manner of disclosure.

- (1) Any [disclosing entity](#) that is subject to periodic survey and certification of its compliance with Medicare standards must supply the information specified in [paragraph \(a\)](#) of this section to the [State](#) survey agency at the time it is surveyed. The survey agency will promptly furnish the information to the [Secretary](#).
- (2) Any [disclosing entity](#) that is not subject to periodic survey and certification must supply the information specified in [paragraph \(a\)](#) of this section to [CMS](#) before entering into a contract or agreement with Medicare or before being issued or reissued a billing number as a part B supplier.
- (3) A [disclosing entity](#) must furnish updated information to [CMS](#) at intervals between recertification, or re-enrollment, or contract renewals, within 35 days of a written request. In the case of a part B supplier, the supplier must report also within 35 days, on its own initiative, any changes in the information it previously supplied.

(c) Consequences of failure to disclose.

- (1) [CMS](#) does not approve an agreement or contract with, or make a determination of [eligibility](#) for, or (in the case of a part B supplier) issue or reissue a billing number to, any [disclosing entity](#) that fails to comply with [paragraph \(b\)](#) of this section.
- (2) [CMS](#) terminates any existing agreement or contract with, or withdraws a determination of [eligibility](#) for or (in the case of a part B supplier) revokes the billing number of, any [disclosing entity](#) that fails to comply with [paragraph \(b\)](#) of this section.

(d) Public disclosure. Information furnished to the [Secretary](#) under the provisions of this section shall be subject to public disclosure as specified in [20 CFR part 422](#).

[[44 FR 41642](#), July 17, 1979, as amended at [57 FR 27306](#), June 18, 1992]



Appendix E: Data Barriers

Below is a table of the data sets and systems reviewed and barriers identified by researchers.

Data System	Barriers
Provider Enrollment Chain and Ownership System (PECOS)	<ul style="list-style-type: none"> ▪ Inaccessible to public and believed to be inaccurate. ▪ Researchers may order or request data; there are not PECOS public use files.
Certification and Survey Provider Enhanced Reports (CASPER)	<ul style="list-style-type: none"> ▪ Lag times between the date of the survey and the date the data from that survey is reported. ▪ Survey deficiencies can be subjective and vary from jurisdiction to jurisdiction. ▪ Data can be ordered from the QIES Technical Support Office (or obtained from Care Compare, LTC Focus or on the S&C QCOR online reporting system website.)
CMS Care Compare	<ul style="list-style-type: none"> ▪ Developed from other raw data sources (CASPER, Payroll-Based Journal (PBJ), Minimum Data Set (MDS) and Medicare claims data. ▪ PBJ data is derived from payroll systems instead of being self-reported, but CMS does not fully report PBJ data publicly. ▪ MDS data is self-reported and believed to be inaccurate. ▪ Detailed MDS data, Medicare claims data, and Medicaid data are only available to researchers via a data use agreement with CMS.
CMS Cost Reports	<ul style="list-style-type: none"> ▪ Data is available to the public but can only be downloaded into a statistical software platform (CMS recommends the use of Oracle, SAS, SPSS Statistical Package, Microsoft SQL Server, or DB2). ▪ Data is difficult to interpret and known to be inaccurate and incomplete.
OIG exclusion and enforcement action lists and CMS Preclusion List	<ul style="list-style-type: none"> ▪ There is no single list to find problem individuals and entities. ▪ Enforcement actions are not listed in any downloadable dataset. ▪ CMS Preclusion List is not available to the public. Only CMS approved healthcare plans, with a valid Health Plan ID, can gain access to the Preclusion List.
LTCfocus.org	<ul style="list-style-type: none"> ▪ Brings together data gathered from a variety of primary and secondary sources, including MDS, CASPER and other sources. ▪ Easily accessible by the public, but the same concerns about the underlying data sources exist. ▪ Non-government resource that is not known to all who might want to use it.