The State of Nursing Facilities in Oregon, 2014

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Background

Between 1998 and 2009, the Office for Oregon Health Policy and Research (OHPR) conducted annual surveys of the state's nursing facilities, in collaboration with the Seniors and People with Disabilities Division[1] of the Department of Human Services. The data from these surveys were used for reports that examined admissions, discharges, and resident characteristics of Oregon nursing facilities. In response to requests from industry and other stakeholders, the Oregon legislature renewed funding in 2014 for an annual report to assist in local and statewide planning and policy-making efforts in long-term care services. The Oregon Department of Human Services (DHS) as the licensing authority for nursing facilities in the state, collaborated with Oregon State University, LeadingAge Oregon, the Oregon Health Care Association, and SEIU Local 503 to produce this report on the characteristics of Oregon nursing facilities.

Introduction

Oregonians 65 years and older comprised 16% of the state's population in 2013, higher than the national average of 14% (U.S. Census Bureau, n.d.). According to the Oregon Office of Economic Analysis, the population of adults 65 years and older will grow at a pace of 4% annually, and will comprise 22% of all Oregonians by 2040 (Office of Economic Analysis, 2013). The need for long-term care increases with age because of normal age-related declines and the accumulation of health problems from preventable causes. Long-term services and supports (LTSS) provide an array of medical, social, and support services for individuals, who for an extended period of time, are dependent on others for assistance. The goals of LTSS are to promote and maintain health, independent functioning, and quality of life for individuals who utilize long-term care services.

Nursing facilities are an important part of LTSS in Oregon. Nursing facilities provide 24-hour medical care and monitoring for people who need it due to physical disability or after being discharged from the hospital but not yet able to return to the community. Thus, nursing facilities serve two different populations—individuals with post-acute care needs, which are characterized by a short stay ($\leq$ 90 days), and individuals with ongoing and indefinite needs, which are characterized by a longer or indefinite stay (>90 days). While nursing facilities are the most intensive setting in Oregon's long-term care continuum, they are critical for both short-stay and long-stay individuals with a high need of skilled care. The services offered in nursing facilities are often comprehensive, and include medical treatment, physical, speech and occupational therapy, assistance with the Activities of Daily Living,[2] case management, and social services.

[1] Now called the Aging and People with Disabilities Program. Prior to 1998, the Office of Health Policy also conducted surveys of nursing facilities.

[2] The Activities of Daily Living (ADLs; Katz, 1983) measure the functional impairment of individuals (National Center for Health Statistics, 2006). ADLs commonly refer to assistance with bathing, eating, dressing, mobility, transferring, grooming, and toileting.

Oregon has been a national leader in LTSS for over 30 years (Oregon Department of Human Services, 2015). A hallmark of Oregon's LTSS has been the emphasis on home and community-based care and the shift away from more costly institutional care. Nonetheless, the highly specialized and comprehensive care nursing facilities provide will continue to be a necessary option for some Oregonians. The data highlighted in this report will help inform state policymaking efforts on the supply and financing of institutional long-term care services in Oregon, in this era of health care transformation.

Using data from the Centers for Medicare & Medicaid Services' Minimum Data Set (MDS) and Certification and Survey Provider Enhanced Reports (CASPER), and Oregon provider tax and revenue reports, this report paints a portrait of Oregon's 138 nursing facilities that were in operation in the 2014 state fiscal year. In this report, we examine licensed capacity, bed availability, occupancy, admissions, discharges, readmissions, resident characteristics, length of stay, payer sources, and quality metrics.

Research Highlights

This report provides a comprehensive and current look at the state's 138 certified nursing facilities in Oregon Fiscal Year 2014 (OR FY), which covers the period of July 1, 2013 to June 30, 2014.[3] In OR FY 2014, there were 12,068 licensed beds in nursing facilities across the state (Exhibit 1.0). The number of facilities ranged widely, from none in six counties to 34 in Multnomah County, for an average of 4 facilities per county statewide. In 2014, 31,033 individuals required services in an Oregon nursing facility for at least one day. Compared to the national average, full-year residents of Oregon nursing facilities were more likely to be under age 85, white or male, and had greater dependency on 3 of 5 Activities of Daily Living. These results suggest that the oldest Oregonians are less likely to reside in nursing facilities than their counterparts in other states. Other notable findings in this report are highlighted below.

Exhibit 1.0. Characteristics of Oregon Nursing Facilities, OR Fiscal Year 2014

Characteristic	
Total number of facilities	138
Total number of licensed beds	12,068
Average licensed capacity per facility	87
Minimum number of licensed beds	5
Maximum number of licensed beds	214
Average number of facilities per county	4

Sources: Cost Reports, Revenue Statements, and CASPER

Facilities

- The number of facilities ranged widely across geographic regions, with an average of 4 per county.
- Almost two-thirds of all facilities (64%) were small to medium sized facilities with fewer than 100 beds, accounting for less than half (48%) of all beds statewide.

Licensed Capacity & Bed Availability

- The total number of licensed beds declined 8% in the last 15 years to 12,068 in 2014.
- The average number of licensed beds was 87, compared to the national average of 106 in 2012.
- The number of licensed beds by facility ranged from five to 214.
- The number of licensed beds per 1,000 population 75 years and older declined by 25% in the last 15 years to 45 in 2014.
- 80% of licensed beds statewide were staffed and ready for use (i.e., set-up), however, the percentage of set-up beds ranged widely across the state, from a low of 60% and 58% in Regions 6 and 7, respectively, to a high of 94% in Region 1.

[3] Unless otherwise noted, all references to 2014 refer to the Oregon Fiscal Year.

Occupancy

- Average occupancy rates decreased from 72% in 2000 to 64% in 2014. Oregon continues to have the lowest occupancy rate in the nation.
- Average occupancy rates across eight geographic regions ranged from 43 to 70%.
- Oregon nursing facilities with less than 50 beds had an average occupancy rate between 12 to 18 percentage points higher than larger facilities of any other size. Facilities with at least 150 beds had the lowest occupancy rate (57%) compared to facilities of other sizes.
- Over the last five years, the number of resident days has remained relatively stable, decreasing slightly (3%) to 3.0 million in 2014.
- Facilities with 50-99 beds accounted for the greatest share of resident days (43%) among all facilities.
- The most populous regions (Regions 2, 3, and 4) had the highest numbers of total resident days, accounting for 86% of all resident days statewide.

Admissions, Discharges and Readmissions

- 93.2% of all admissions came from acute care hospitals.
- Facilities with less than 50 beds had the lowest average numbers of admissions and discharges (111 and 116, respectively), whereas facilities with 150 or more beds had the highest average numbers of admissions and discharges (415 and 391, respectively).
- 24.5% of all discharges were to an acute care hospital and 69.1% of these discharges were readmitted back to a nursing facility within a 30-day period.
- 71% of all discharges return to the community.

Length of Stay

- 82.1% of all nursing facility stays were less than or equal to 90 days, commonly referred to as a “short stay.”
- Over half of Oregon nursing facility residents had a length of stay of 30 days or less.
- Lengths of stay were highest for the under 18 and 85 and older age groups.

Acuity: Activities of Daily Living

- 30% of all residents were somewhat or completely dependent on five ADLs, compared to 23% of all nursing facility residents in the U.S.
- 66% of long-stay residents required help with at least five ADLs, indicating significant frailty in this group.
- Those under 18 years of age had higher levels of complete dependence than any of the other age groups.

Payers

- Medicaid was the primary payer for more than half (59%) of resident days in Oregon nursing facilities during 2014.
- The share of nursing facility resident days paid for by Medicaid declined slightly from 62% in 2010 to 59% in 2014.
- The proportion of days paid for by Medicare Fee-For-Service increased slightly from 13% in 2010 to 16% in 2014.

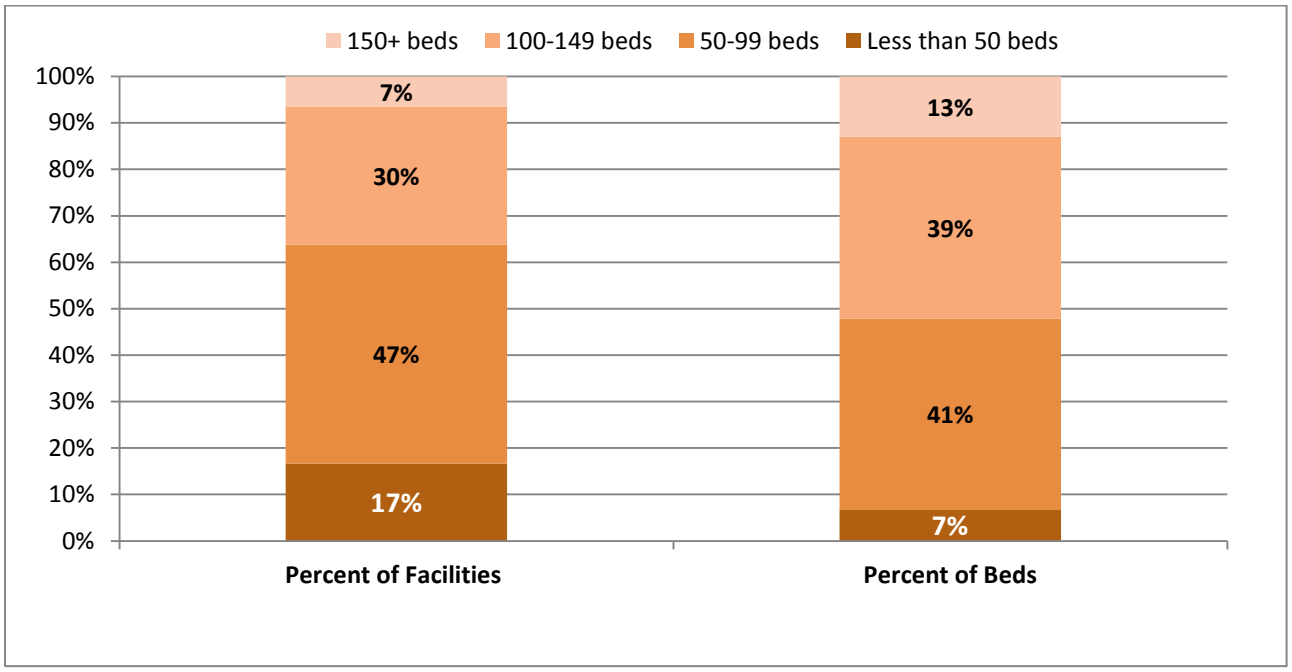
Quality Measures

- Over 80% of short-stay residents, and over 90% of long-stay residents, were assessed for, and when appropriate, given pneumococcal pneumonia and seasonal influenza vaccines. Variation between the highest and lowest vaccination rates was greater for short-stay than for long-stay residents.
- Moderate to severe pain was reported by 24% of short-stay residents, but only 13% of long-stay residents.
- The adverse outcomes of physical restraint, falls with injury, and ongoing catheter use were reported for 5% or less of long-stay residents.
- Depressive symptoms, pressure ulcers among high-risk residents, and urinary tract infections were present among 6% of long-stay residents.

Section 1. Licensed Capacity

Oregon had 138 nursing facilities in 2014, with a total of 12,068 licensed beds (Exhibit 1.1). Sixty-four percent of all facilities had fewer than 100 beds, accounting for less than half (48%) of all beds statewide. The average number of licensed beds was 87, compared to 106 nationally in 2012, the most recent data available (Harris-Kojetin et al., 2013).

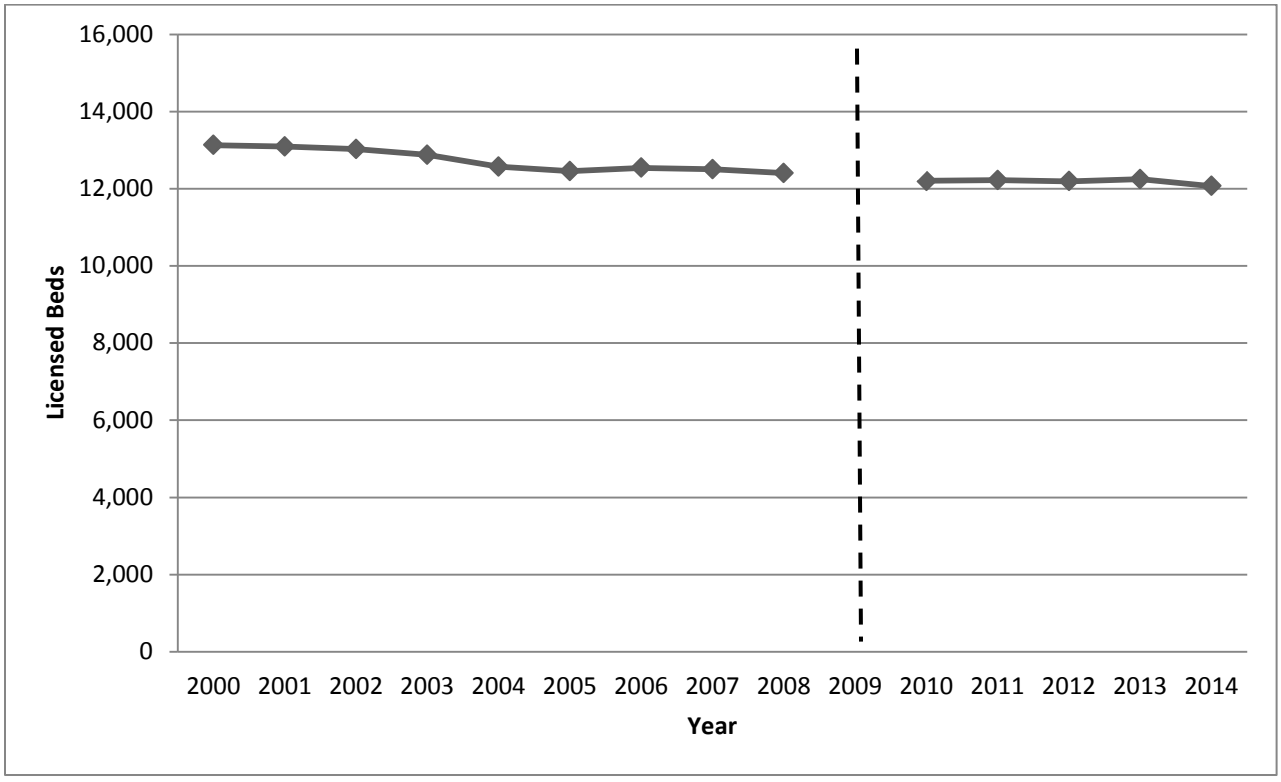
Exhibit 1.1 Licensed Capacity by Facility Size, Oregon 2014



Sources: Cost Reports, Revenue Statements, and CASPER

The total number of licensed nursing facility beds declined 8.1% in the last 15 years, from 13,127 in 2000 to 12,068 in 2014 (Exhibit 1.2). The dashed vertical line between 2000-08 and 2010-14 signifies a change in the methodology used to obtain the data reported in this exhibit and in Exhibit 1.3 (next page). Thus, the trends for these two time periods may not be completely comparable.[4] The overall decrease in licensed capacity contrasts with the national trend which has remained relatively stable since 2004 (American Health Care Association, 2014). The decrease may reflect Oregon's ongoing efforts to direct individuals into home and community-based long-term care options. Moreover, Oregon has the third lowest number of nursing facility residents per 1,000 population 65 years and older in the United States (AARP, 2014), providing further evidence of the state's commitment to non-institutionalized long-term care.

Exhibit 1.2. Total Number of Licensed Beds in Oregon Nursing Facilities, 2000-2014

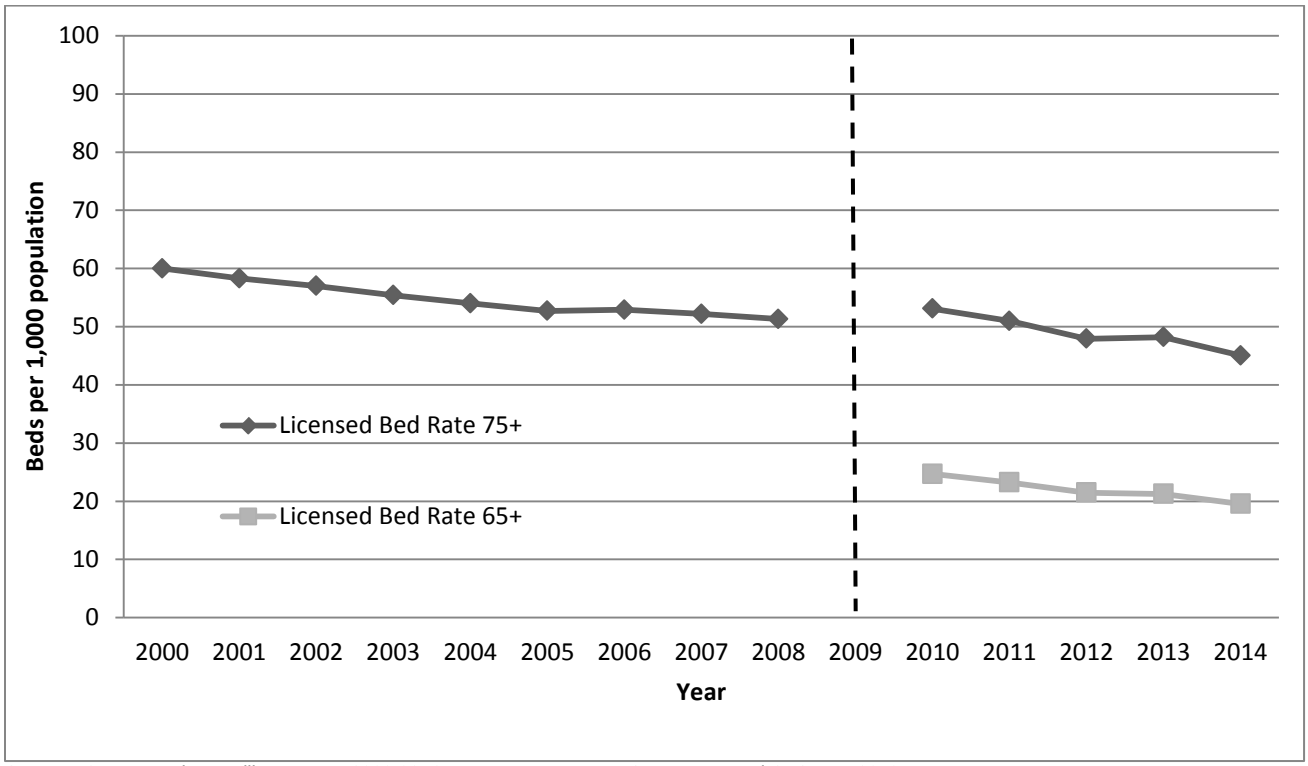


Sources: OHPR Nursing Facility Reports, 2000-08; Cost Reports, Revenue Statements, and CASPER, 2010-14

[4] Data for the 2000-08 period are based on information used by the state for facility licensing. The trend for 2010-14 come from state and federal data collected as part of the reporting requirements for nursing facility certification and payment.

The number of licensed beds per 1,000 population 75 years and older steadily declined in the last 15 years, from 60 in 2000 to 45 in 2014 (Exhibit 1.3). This 25% decrease reflects the overall reduction in licensed capacity across the state and the growth in the older population during this same time period. Over the last five years, the decrease in the number of licensed beds was greater per 1,000 population 75 years and older (21) than for the 1,000 population 65 years and older (16). This suggests a faster growth among individuals in the oldest age categories, consistent with national demographic trends in the U.S. population.

Exhibit 1.3. Licensed Bed Rate per 1,000 Population 65 Years and Older and 75 Years and Older, Oregon 2000-2014



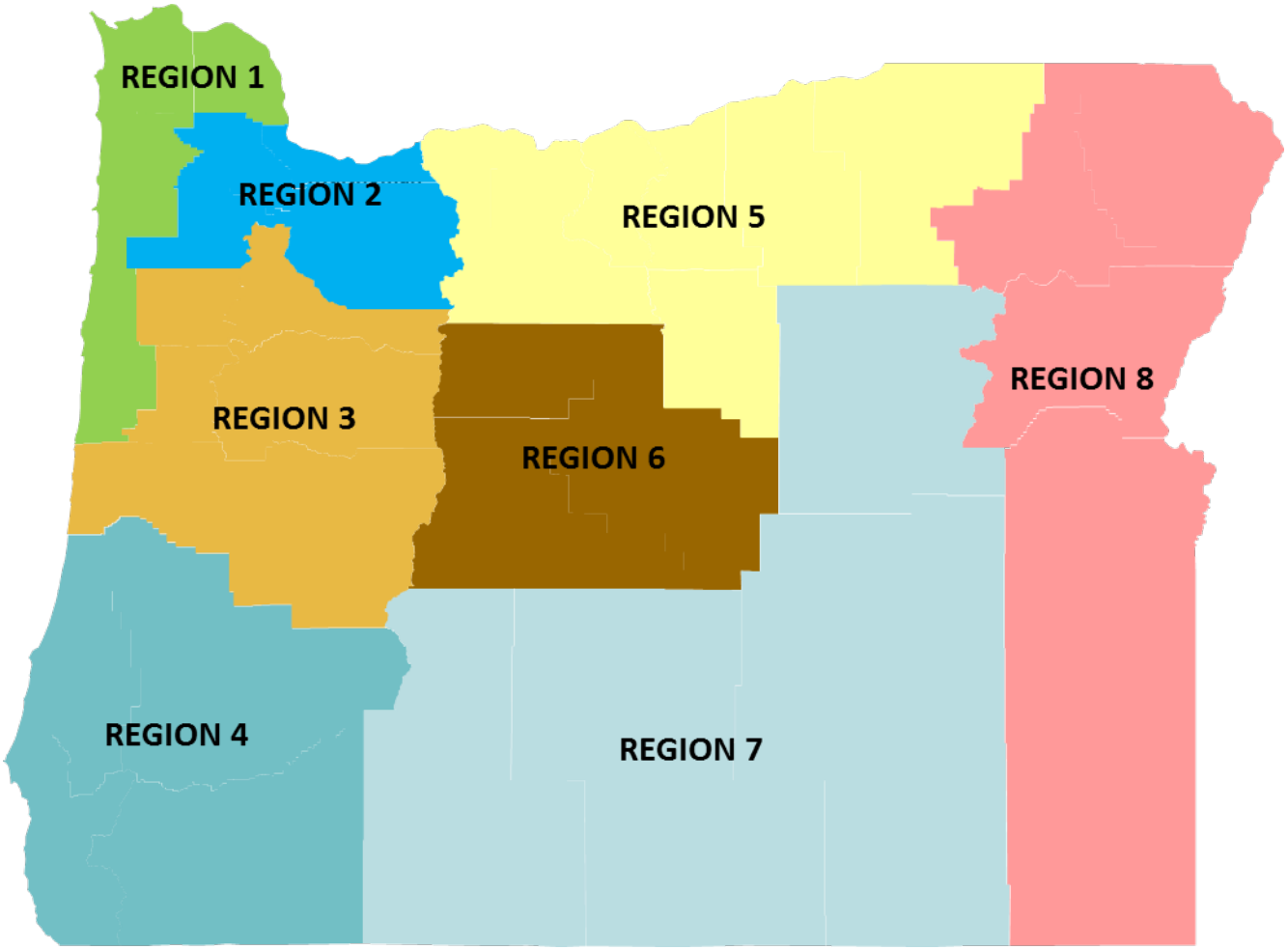
Sources: OHPR Nursing Facility Reports, 2000-08; Cost Reports, Revenue Statements, and CASPER, 2010-14

Section 2. Bed Availability

Exhibit 2.1. Map of Oregon Regions

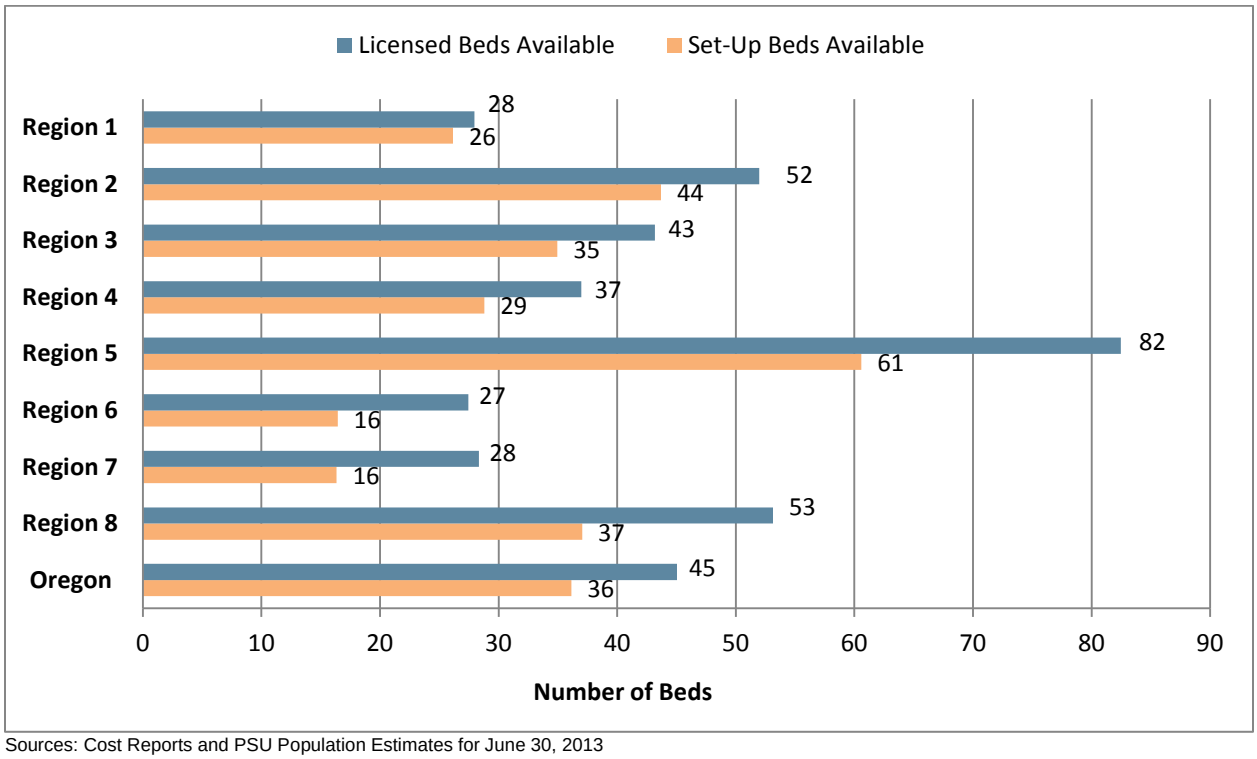
Color Key		Estimated Population
	Region 1: Clatsop, Columbia, Lincoln, Tillamook	159,055
	Region 2: Clackamas, Multnomah, Washington, Yamhill	1,795,000
	Region 3: Benton, Lane, Linn, Marion, Polk	962,460
	Region 4: Coos, Curry, Douglas, Jackson, Josephine	483,135
	Region 5: Gilliam, Hood River, Morrow, Sherman, Umatilla, Wasco, Wheeler	143,580
	Region 6: Crook, Deschutes, Jefferson	205,255
	Region 7: Grant, Harney, Klamath, Lake	89,445
	Region 8: Baker, Malheur, Union, Wallowa	81,090
Total Estimated Population		**3,919,020**

Source: PSU Population Estimates for June 30, 2013



In 2014, there were 45 licensed beds for every 1,000 adults aged 75 or older in Oregon (Exhibit 2.2).The number of licensed beds across the state's eight geographic regions ranged from a low of 27 in Region 6 to a high of 82 in Region 5 (Exhibit 2.1). Statewide, 80% of licensed beds were staffed and available for use, what we refer to as "set-up." However, the proportion of licensed beds that were "set-up" varied widely across the state. For example, Regions 6 and 7 had the lowest percentages of licensed beds (60% and 58%, respectively) that were set-up, compared to 94% of beds in Region 1 (Exhibit 2.2). Interestingly, Region 2 did not have the highest proportion of beds that were set-up, despite being the most populous region with 46% of the state's total population. There was an almost four-fold difference in the number of set-up beds per 1,000 adults 75 and older across the eight regions, from a low of 16 in Regions 6 and 7, to a high of 61 in Region 5.

Exhibit 2.2. Number of Licensed and Set-Up Beds Available by Region, per 1,000 Population 75 years and Older, Oregon 2014

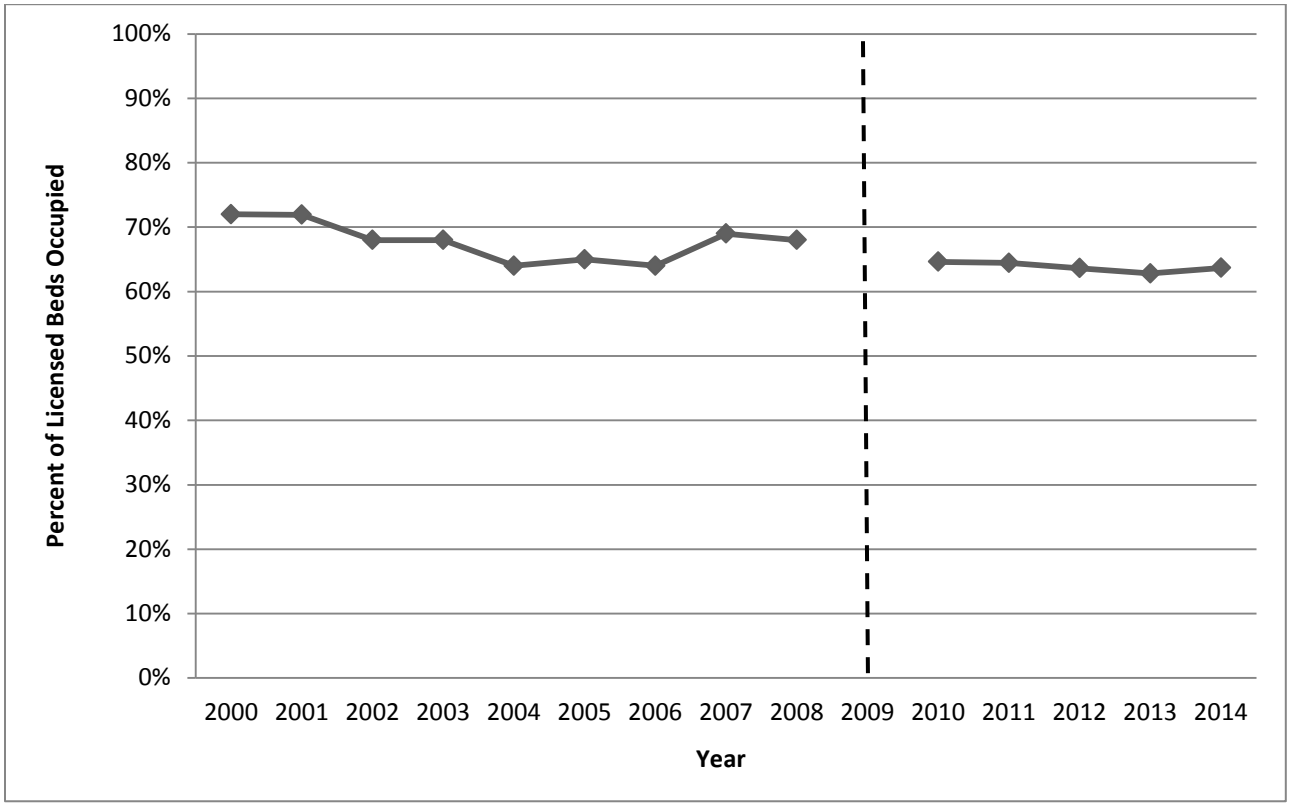


Sources: Cost Reports and PSU Population Estimates for June 30, 2013

Section 3. Occupancy

The average occupancy rate statewide decreased from 72% in 2000 to 64% in 2014 (Exhibit 3.1). The dashed line between the 2000-08 and 2010-14 periods signifies a change in the methodology used to obtain the data reported in this exhibit. Thus, the trends for these two time periods may not be completely comparable.[5] Nonetheless, Oregon's occupancy rates for the last 15 years rank as the lowest in the nation. This trend may reflect the state's continuing efforts to use home and community-based long-term care services, such as assisted living facilities, adult foster care, home health care, and residential care.

Exhibit 3.1. Average Occupancy Rate, Oregon 2000-2014

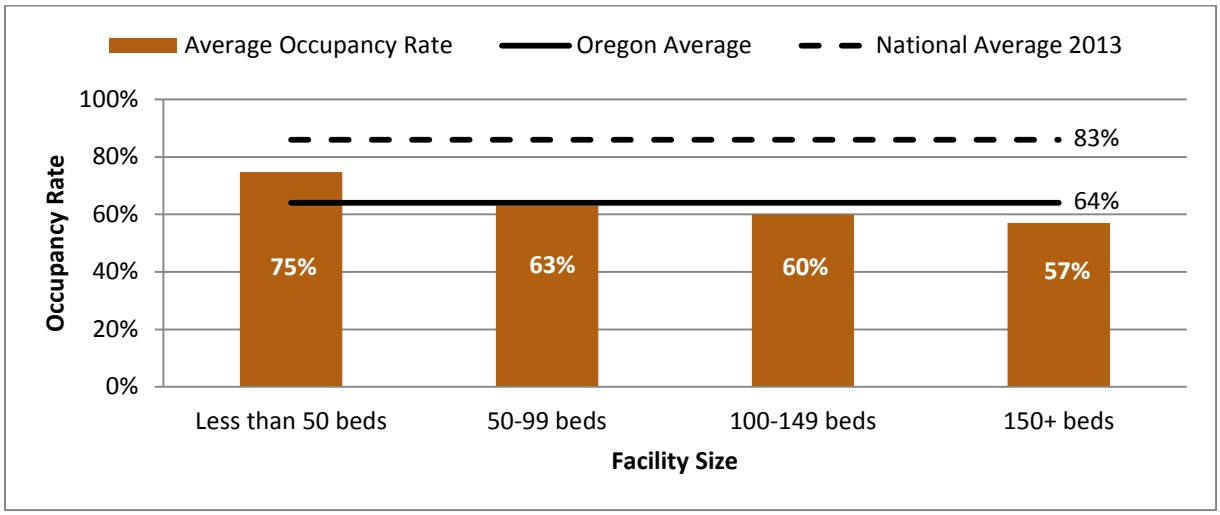


Sources: OHPR Nursing Facility Reports, 2000-08; Cost Reports, Revenue Statements, and CASPER, 2010-14

[5] Data for the 2000-08 period were collected from annual surveys of the state's nursing facilities, and year-by-year fluctuations reflect variation in responses rates to the survey. Data for 2010-14 come from state and federal reporting requirements for nursing facility certification and payment, which are not affected by response rates.

In Fiscal Year 2014, the average occupancy rate was 64% statewide (Exhibit 3.2), almost 20 percentage points lower than the national average (83%) in 2012 (the most current data available), and the lowest rate of any state (Centers of Medicare & Medicaid, 2014). Overall, smaller Oregon nursing facilities, with less than 50 beds, had a higher average occupancy rate (75%) than facilities of any other size. Larger facilities, with 150 or more beds, had the lowest occupancy rate (57%) compared to facilities of other sizes.

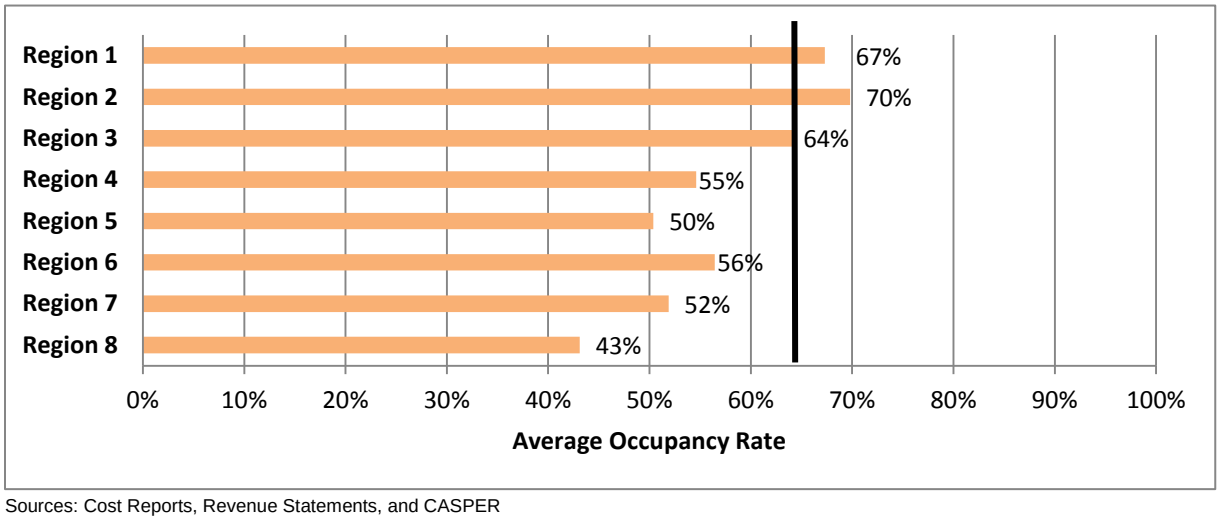
Exhibit 3.2. Average Occupancy Rate by Facility Size, Oregon 2014



Sources: Cost Reports, Revenue Statements, and CASPER

Average occupancy rates also varied across the state's eight geographic regions (Exhibit 3.3). Five of eight regions had rates under 60%. Three regions were located in the eastern part of the state. Three regions, comprising the northern coast, Portland metro area, and the Willamette Valley, had higher than average occupancy rates.

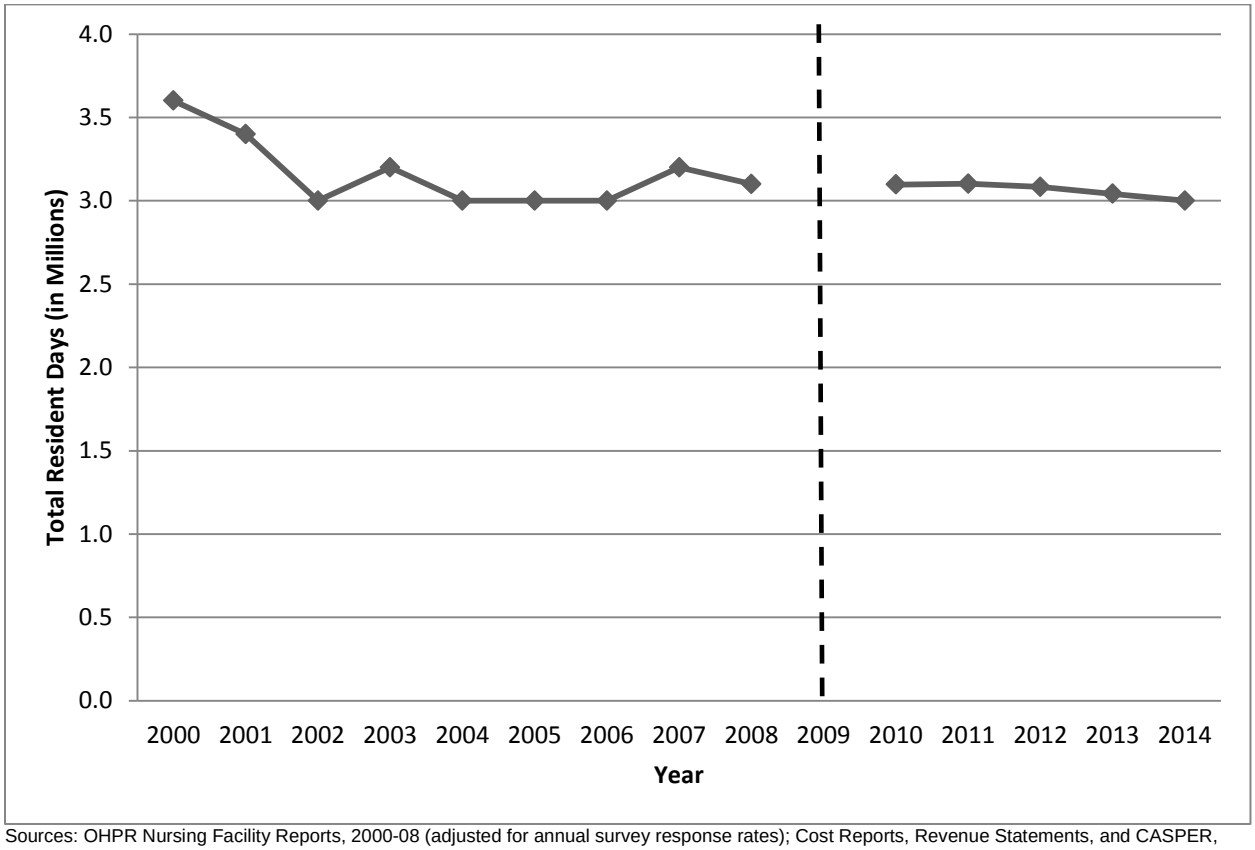
Exhibit 3.3. Average Occupancy Rate by Region, Oregon 2014



Sources: Cost Reports, Revenue Statements, and CASPER

Overall, the total number of resident days declined between 2000 and 2008, from 3.6 million to 3.1 million (Exhibit 3.4). The dashed line between the 2000-08 and 2010-14 periods signifies a change in the methodology used to obtain the data reported in this exhibit. Thus, the trends for these two time periods may not be completely comparable.[6] Over the last five years, the number of resident days has remained relatively stable, decreasing slightly (3%) to 3.0 million in 2014.

Exhibit 3.4. Number of Resident Days in Oregon Nursing Facilities, 2000-2014

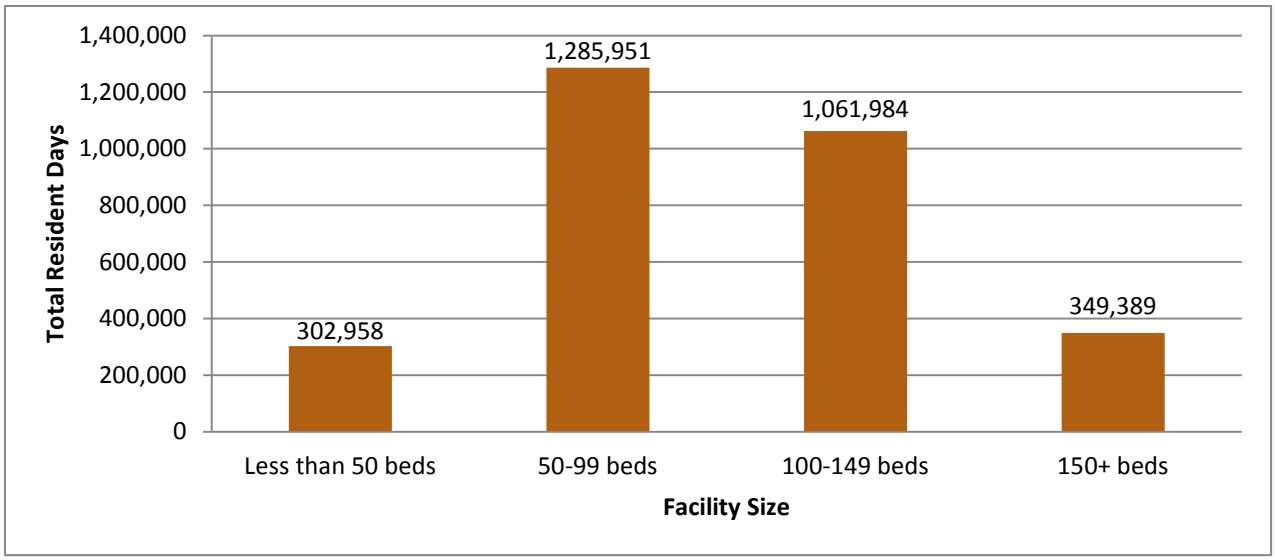


Sources: OHPR Nursing Facility Reports, 2000-08 (adjusted for annual survey response rates); Cost Reports, Revenue Statements, and CASPER, 2010-14

[6] Data for the 2000-08 period were collected from annual surveys of the state's nursing facilities; the data shown are adjusted for variation in responses rates to the survey. Data for 2010-14 come from state and federal reporting requirements for nursing facility certification and payment, which are not affected by response rates.

Facilities with 50-99 beds accounted for the greatest share of resident days (43%) for all facilities in 2014 (Exhibit 3.5). However, the smallest and largest sized facilities had the fewest number of resident days, representing 10% and 12%, respectively, of all resident days statewide.

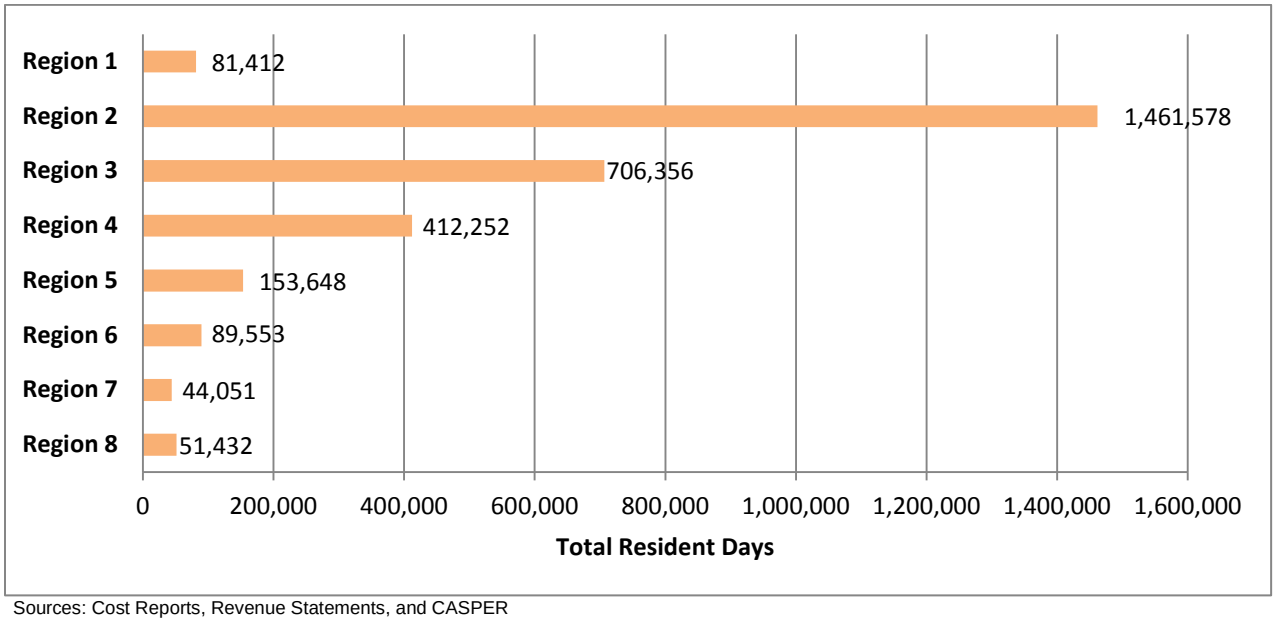
Exhibit 3.5. Total Number of Resident Days by Facility Size, Oregon 2014



Sources: Cost Reports, Revenue Statements, and CASPER

The total number of resident days also varied by geographic region (Exhibit 3.6). The most populous regions (Regions 2, 3, and 4) had the highest numbers of total resident days, accounting for 86% of all resident days statewide.

Exhibit 3.6. Total Number of Resident Days by Region, Oregon 2014



Sources: Cost Reports, Revenue Statements, and CASPER

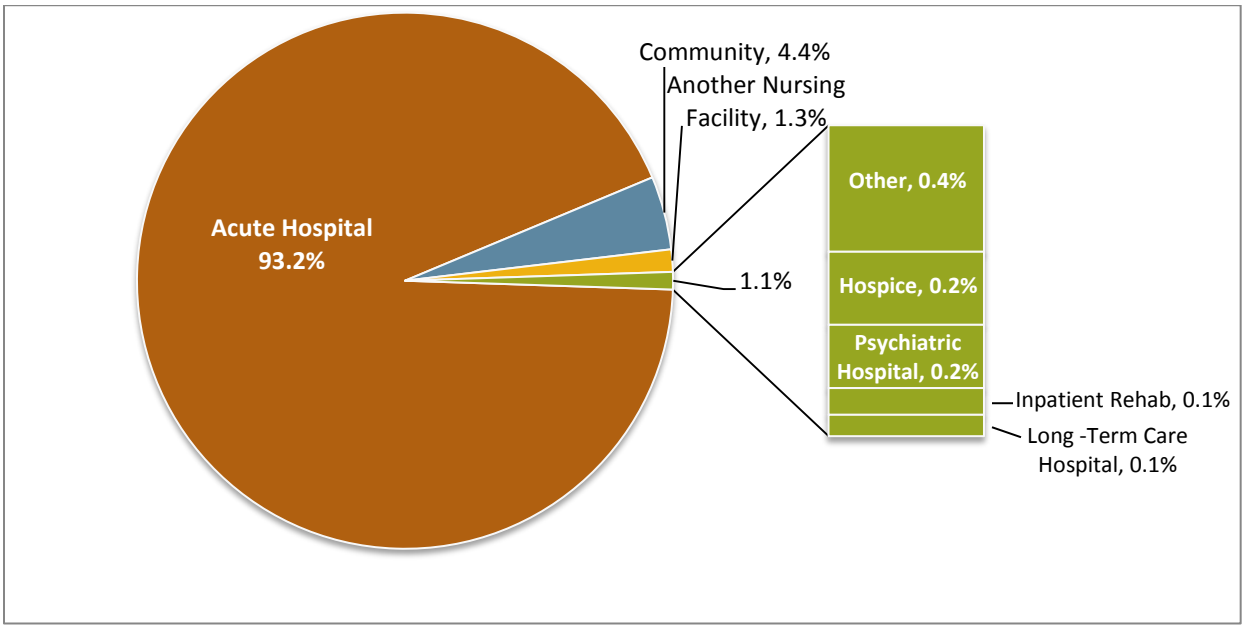
Section 4. Admissions, Discharges, and Readmissions

An admission refers to an entry into a nursing facility by an individual. There are two categories of admissions, according to CMS Minimum Data Set (MDS) definitions:

- A new entry is where an individual enters a facility for the very first time or for the first time after having been discharged from the facility at least 30 days before.
- A re-entry is where an individual returns to a facility from which he or she was discharged less than 30 days before. Re-entries, also referred to as re-admissions, are discussed in greater detail later in this section.

In Oregon Fiscal Year 2014, nursing facilities statewide had 33,184 admissions (Exhibit 4.1). The total admissions shown in Exhibit 4.1 include both new entries and re-admissions. The vast majority of nursing facility admissions came from acute care hospitals (93.2%), followed by the community at large (4.4%), which includes home, assisted living, residential care facilities, Program of All Inclusive Care for the Elderly, and adult foster care homes. All other sources represented only 2.4% of all total admissions.

Exhibit 4.1. Admission Source as Percentage of Total Admissions, Oregon 2014

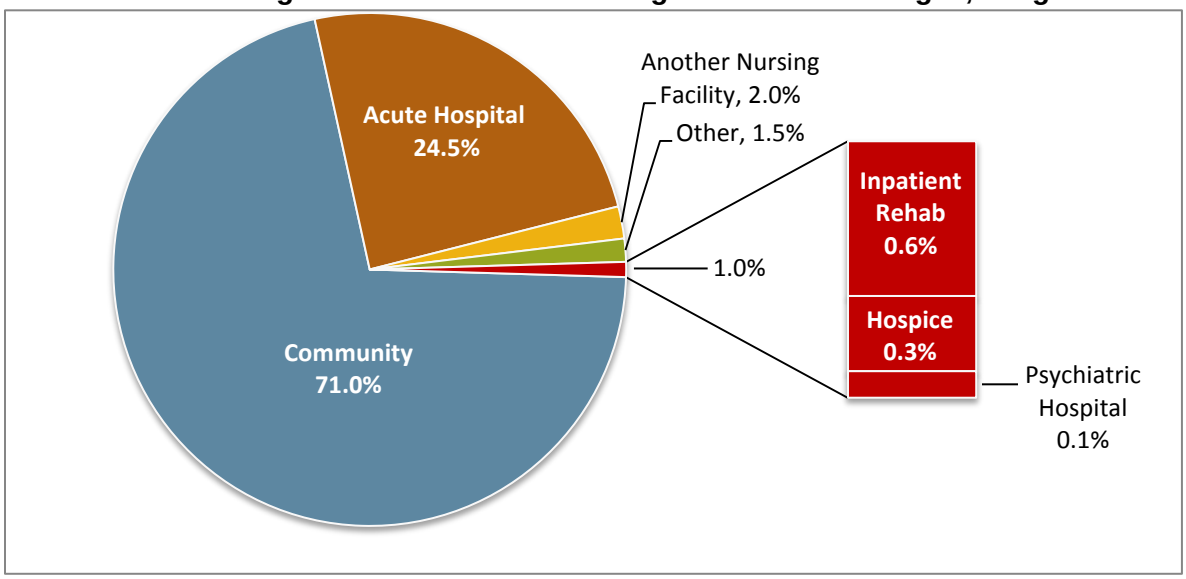


Source: CMS Minimum Data Set

The MDS data analyzed for this report do not allow construction of time trends in admissions and discharges prior to 2014. However, analyses of detailed annual cost reports submitted to CMS by nursing facilities suggest that from 2008 to 2013, admissions to Oregon nursing facilities rose by 16% (Hansen Hunter & Co., 2014).

In 2014, nursing facilities statewide had 31,654 discharges (Exhibit 4.2). A discharge refers to an individual leaving a nursing facility, regardless of whether or not it is followed by a re-admission. Reasons for discharge can include being hospitalized for an unexpected or worsening health problem, returning back to previous living arrangements, or dying while residing in the nursing facility. The majority of individuals discharged from nursing facilities returned to the community (71.0%), followed by an acute care hospital (24.5%) or another nursing facility (2.0%; Exhibit 4.2).

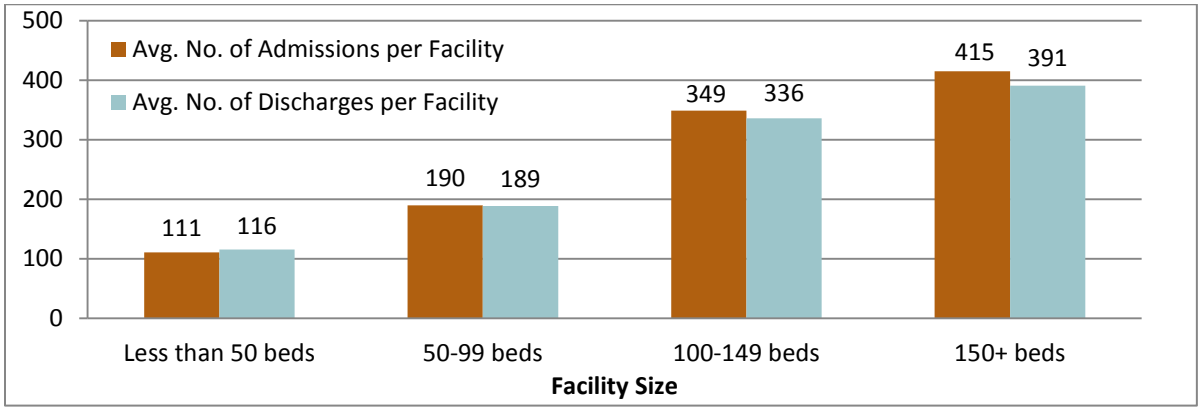
Exhibit 4.2. Discharge Destination as Percentage of Total Discharges, Oregon 2014



Source: CMS Minimum Data Set

The statewide average numbers of admissions and discharges were similar in 2014 (237 vs. 234). However, Exhibit 4.3 shows that the average numbers of admissions and discharges increased by facility size. Facilities with less than 50 beds had the lowest average numbers of admissions and discharges (111 and 116, respectively) and facilities with 150 or more beds had the highest average numbers of admissions and discharges (415 and 391, respectively).

Exhibit 4.3. Average Numbers of Admissions and Discharges by Facility Size, Oregon 2014



Source: CMS Minimum Data Set

Re-admissions to Nursing Facilities after Discharge to Acute Hospitals

As mentioned earlier in this section, some individuals return to nursing facilities within 30 days of being discharged. This event, defined as a re-entry or re-admission, may occur as part of a treatment plan or as a result of a new or unexpected health problem. In Oregon Fiscal Year 2014, almost one in five nursing facility discharges (17.6%) was re-admitted back to a nursing facility, for a total of 5,566 re-admissions statewide. Over 96% of all these re-admissions (5,353; Exhibit 4.4) were from an acute hospital followed by the community (2.3%), and other places (0.8%; data not shown).

Although directly comparable national data on re-admissions were not available at the time of this report, residents of Oregon nursing facilities were much less likely to be hospitalized than were nursing facility residents in other states. Compared to other states, Oregon had the second-lowest rate of hospitalization among its long-stay nursing facility residents (AARP, 2014) and the third lowest hospitalization rate among its Medicare-paid nursing facility residents (Office of the Inspector General, 2013).

Exhibit 4.4 shows the numbers of discharges to acute care hospitals and re-admissions to nursing facilities, plus re-admission rates, by geographic region. Of the 7,747 nursing facility discharges to acute care hospital, 5,353 of them (69.1%) were re-admitted back to a nursing facility within a 30-day period. Region 8 had the highest re-admission rate (81.0%) and Region 3 the lowest (66.2%). Re-admission rates varied only modestly by facility size. For example, facilities with 150 or more beds had the highest re-admission rate (74.7%) compared to other sized facilities.

Exhibit 4.4. Discharges to and Readmissions from Hospital Facilities by Region, Oregon 2014

	Number of Discharges to Acute Hospitals	Number of Readmissions from Acute Hospitals within 30 Days	Percent Readmitted within 30 Days
Region 1	175	117	66.9
Region 2	3,802	2,646	69.6
Region 3	2,016	1,335	66.2
Region 4	1,075	758	70.5
Region 5	264	181	68.6
Region 6	202	153	75.7
Region 7	92	65	70.6
Region 8	121	98	81.0
Total	**7,747**	**5,353**	**69.1**

Source: CMS Minimum Data Set

Section 5. Residents

Exhibit 5.1 shows the composition of Oregon's nursing facility population by age group. In 2014, the state's nursing facility population was younger on average than national estimates, with 81.1% of nursing facility residents being age 65 or older, compared to 85% of residents nationwide (Centers for Medicare & Medicaid Services, 2014).

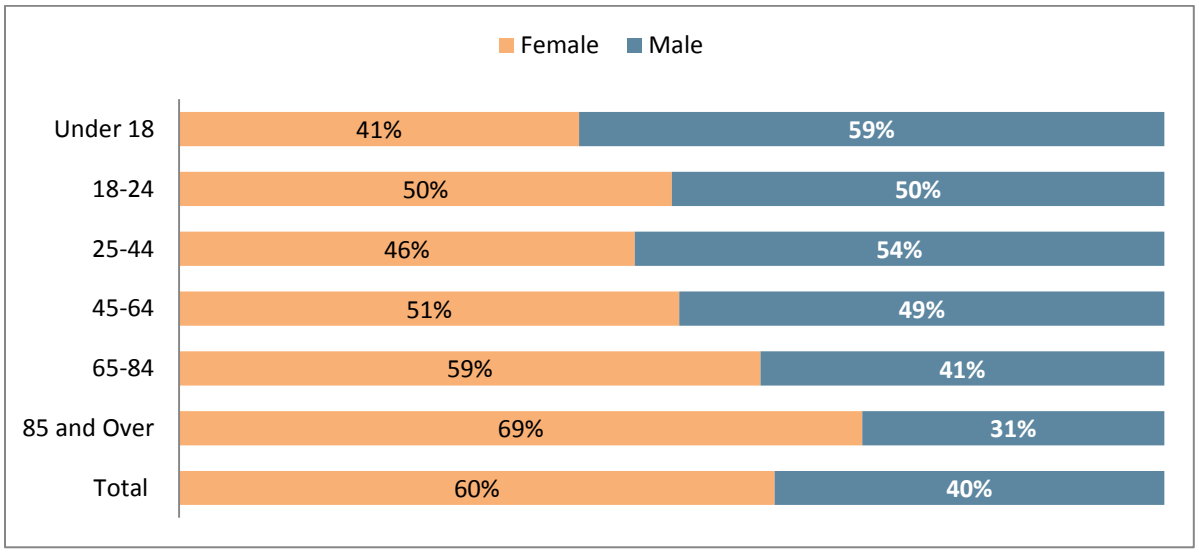
Exhibit 5.1. Distribution of Oregon Nursing Facility Residents by Age, 2014

Age Group	Percent
Under 18	0.2
18-24	0.3
25-44	1.8
45-64	16.6
65-84	51.1
85 and Over	30.0
Total	**100**

Source: CMS Minimum Data Set

Exhibit 5.2 shows the composition of Oregon's nursing facility population by age and sex. In 2014, the majority (60%) of all residents were women, slightly lower than the national average of 67% (Centers for Medicare & Medicaid Services, 2014). The proportions of female residents increased with age, with 69% of residents in the oldest age category (85 and older) being female.

Exhibit 5.2. Distribution of Oregon Nursing Facility Residents by Age and Sex, 2014



Source: CMS Minimum Data Set

Exhibits 5.3 and 5.4 show the distribution of race/ethnicity for all nursing facility residents and for residents 65 years and older, compared to their counterparts in the general Oregon population. In 2014, the majority of nursing facility residents were non-Hispanic white (89.0%), followed by African American (1.6%) and Hispanic (1.3%). In comparison, the state's general population in 2013 was 77.3% non-Hispanic white, 12.3% Hispanic, 2.8% Asian American, and 1.7% African American. The racial/ethnic composition of Oregon's nursing facility population also differed from that of the U.S. nursing facility population, where 78%, 13.9%, and 5% of all U.S. nursing facility residents non-Hispanic white, African American, and Hispanic, respectively, in 2012 (Centers for Medicare & Medicaid Services, 2014). The distribution by race/ethnicity for nursing facility residents 65 years and older was similar to that of all nursing facility residents. The slightly higher proportion of non-Hispanic white residents in the 65+ age category indicates that racial/ethnic minority residents were younger compared to the general nursing facility population.

Exhibit 5.3. Oregon Nursing Facility Residents and General Population by Race/Ethnicity, 2014

Race/Ethnicity	All Nursing Facility Residents	All Oregon Residents
Non-Hispanic White	89.1%	77.3%
Native American/Alaska Native	0.5%	0.8%
Asian American	0.8%	3.8%
African American or Black	1.6%	1.7%
Native Hawaiian/ Pacific Islander	0.2%	0.3%
Hispanic	1.3%	12.3%
More than 1 race	0.4%	3.5%
Unknown	6.1%	0.3%
Total	**100%**	**100%**

Source: CMS Minimum Data Set; American Community Survey, 2013

Exhibit 5.4. Oregon Nursing Facility Residents and General 65+ Population by Race/Ethnicity, 2014

Race / Ethnicity	Nursing Facility Residents 65+	Oregon Residents 65+
Non-Hispanic White	90.2%	78.0%
Native American/Alaska Native	0.3%	–*
Asian American	0.8%	–*
African American or Black	1.2%	–*
Native Hawaiian/ Pacific Islander	0.2%	–*
Hispanic	0.9%	11.9%
More than 1 race	0.4%	–*
Unknown	6.0%	–*
Total	**100%**	N/A

Sources: CMS Minimum Data Set; American Community Survey, 2013

* The U.S. Census Bureau does not provide estimates for the 65+ population in these racial/ethnic groups.

The distribution of race/ethnicity was similar by sex, with non-Hispanic whites comprising the majority of all male and female nursing facility residents (data not shown). However, the composition of men and women varied within racial/ethnic categories. The ratio of males to females was equal for non-Hispanic white and Asian American residents, whereas the ratio was 2 to 1 for Native American/Alaska Native residents, and 3 to 2 for African American, Native Hawaiian/Pacific Islander, and Hispanic residents.

Section 6. Length of Stay

Nursing facilities provide 24-hour medical care and monitoring for individuals who need it due to physical disability or after being discharged from the hospital but not yet able to return to the community. Nursing facilities serve individuals with post-acute care needs and those with ongoing needs. The length of time an individual remains in a nursing facility reflects whether services are needed on a temporary or an indefinite basis. People who enter nursing facilities and remain for 100 or more days are far less likely to return to the community than are those who have shorter stays (AARP, 2014).

In this report, we define short-term nursing facility stays as less than or equal to 90 (≤90) days, mid-length stays as 91 to 365 days, and long stays as more than one year. The Technical Notes at the end of this report provide further detail on how length of stay was calculated for this report.

Exhibit 6.1 shows the distribution of length of stay for Oregon's nursing facility population. In 2014, 82.1% of all nursing facility residents were short-stay residents, while 8.8% and 9.1% were mid-length and long-stay residents, respectively.

Exhibit 6.1. Nursing Facility Length of Stay, Oregon 2014

Length of Stay	Percent
Less than 7 days	11.2
7-13 days	16.0
14-30 days	32.5
31-60 days	17.7
61- 90 days	4.7
91-120 days	2.0
121-180 days	2.3
181-270 days	2.6
271-365 days	1.9
1+years-2 years	3.8
2+ years-4 years	3.2
4+ years	2.1
Total	**100.0**

Source: CMS Minimum Data Set

Exhibit 6.1 also shows that over half of Oregon nursing facility residents had a length of stay of 30 days or less. This reflects the dominant role of post-acute care in nursing facility utilization in Oregon. The percentage of new nursing facility stays in Oregon that last 100 days or longer is lower than in any other state (AARP, 2014). The greater utilization of nursing facilities for short

stays is likely due to utilization of home and community-based services and assisted living for ongoing long-term care (American Health Care Association, 2013).

The median length of stay—that is, the number of days for which half of stays were longer and half were shorter—provides further detail about the utilization of nursing facility care in Oregon. Specifically, although the overall average length of stay was 142 days in Oregon Fiscal Year 2014, the median length of stay was only 24 days (Exhibit 6.2). Thus, the median is a better representation of length of stay because a relatively small proportion of residents with very long lengths of stay inflated the average.

Exhibit 6.2 also presents average and median lengths of stay by age group. Average lengths of stay were highest for the youngest (under age 25) and oldest (85 and older) age groups. As discussed in Section 7, these age groups have the greatest need for assistance with Activities of Daily Living. The median length of stay is less than 30 days for all age groups, but the average length of stay ranges from 6 to 17 times greater than the median.

To characterize variation in length of stay across facilities, we divided nursing facilities into 10 equal-sized groups (13 or 14 facilities per group), based on their average length of stay (Exhibit 6.3). For each group, the average length of stay was much greater than the median. The average length of stay increased from 53 days in the first group to 712 days in the tenth group. However, the median length of stay is 33 days or less for the first eight groups, reflecting the preponderance of short stays in Oregon as described above. The last two groups, comprising approximately one-fifth of Oregon nursing facilities, have much higher median and average lengths of stay. This is consistent with the fact that many of these facilities serve residents with extensive, ongoing care needs including pediatric, enhanced care, or non-dementia behavioral health care need populations.

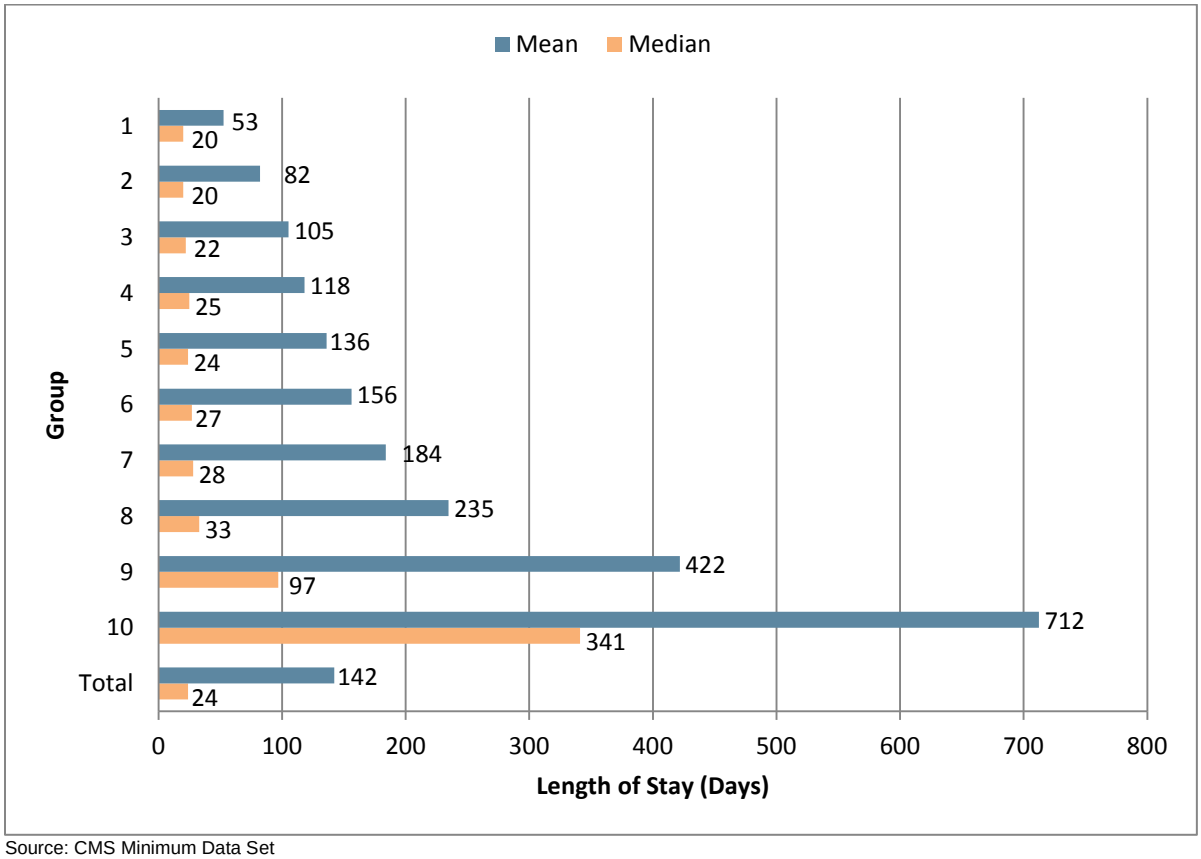
As previously mentioned, the MDS data analyzed for this report do not allow construction of time trends in admissions and discharges prior to 2014, which is necessary to calculate trends in length of stay. However, analyses of detailed annual cost reports submitted to CMS by nursing facilities suggest that from 2008 to 2013, average lengths of stay fell by 14% (Hansen Hunter & Co., 2014). This trend offsets the rising trend in admissions found by Hansen Hunter & Co. (2014); see Section 4), yielding the relatively flat trend in resident days observed over that time period (see Exhibit 3.4).

Exhibit 6.2. Nursing Facility Length of Stay (Days) by Age, Oregon 2014

Age Group	Average Length of Stay	Median Length of Stay
Under 18	268	17
18-24	379	22
25-44	160	21
45-64	118	21
65-74	119	21
75-84	129	23
85 and Over	181	28
Total	**142**	**24**

Source: CMS Minimum Data Set

Exhibit 6.3. Nursing Facility Length of Stay (Days) by Group, Oregon, 2014



Source: CMS Minimum Data Set

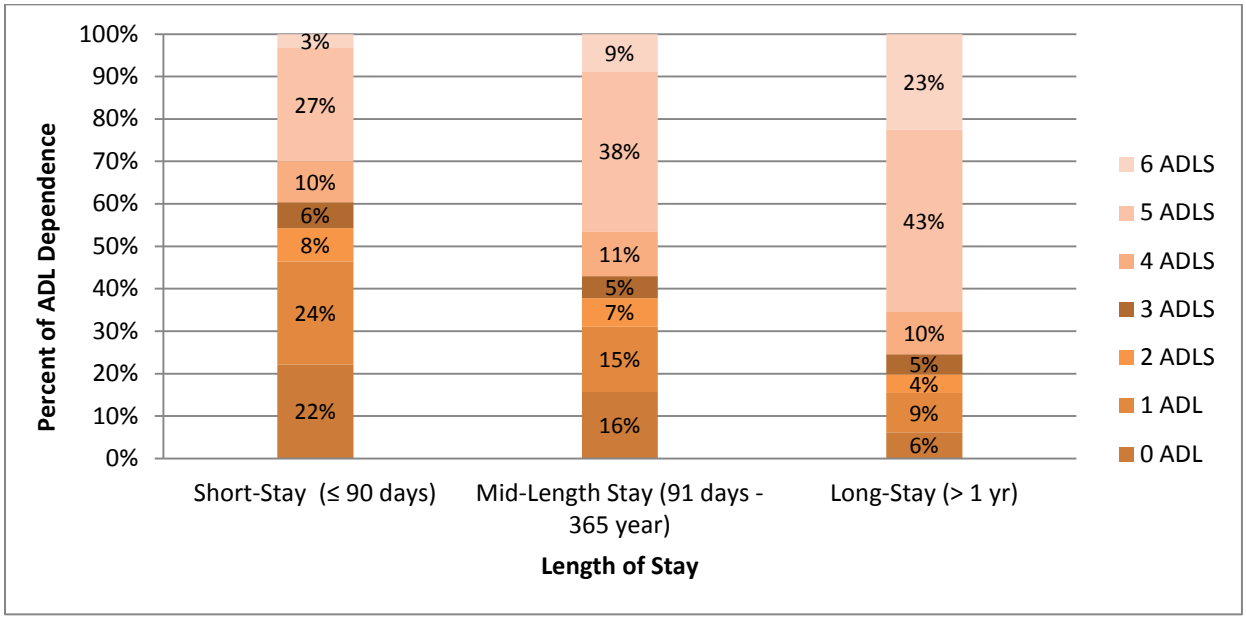
Section 7. Acuity: Activities of Daily Living

Activities of Daily Living (ADLs; Katz, 1983) measure the extent to which care recipients cannot perform self-care tasks. ADLs are used to characterize levels of caregiving need (National Center for Health Statistics, 2006), and nursing facilities serve individuals with temporary or ongoing needs with their ADLs. Once admitted to a nursing facility, residents are assessed for their level of dependence, ranging from independence in performing the activity to complete dependence on staff to achieve one or more ADLS. In this report, we focus on bed mobility, transfers, eating, dressing, toileting, and bathing ADLs.

We note that ADLs do not capture all clinical reasons for which individuals are admitted to nursing facilities. For example, many post-acute care patients are discharged from acute care hospitals after surgery or treatment for acute medical conditions, but temporarily require skilled rehabilitation or nursing care that cannot be provided effectively at home or in community-based facilities. Such individuals comprise a significant portion of short-stay nursing facility residents. Thus, while ADLs are an often-used assessment tool, they are only one measure of acuity.

In 2014, 19% percent of residents in Oregon nursing facilities did not require assistance for any ADL (Exhibit 7.1), similar to national estimates of 20% (Centers for Medicare & Medicaid Services, 2014). However, 30% of residents were somewhat or completely dependent on staff for five ADLs, compared to 23% of all nursing facility residents in the U.S. (Centers for Medicare & Medicaid Services, 2014). Short-stay residents in Oregon had the fewest ADL needs, with 46% requiring help with one or no ADL. Not surprisingly, two-thirds (66%) of Oregon long-stay residents required help with five or more ADLs, indicating significant frailty in this group.

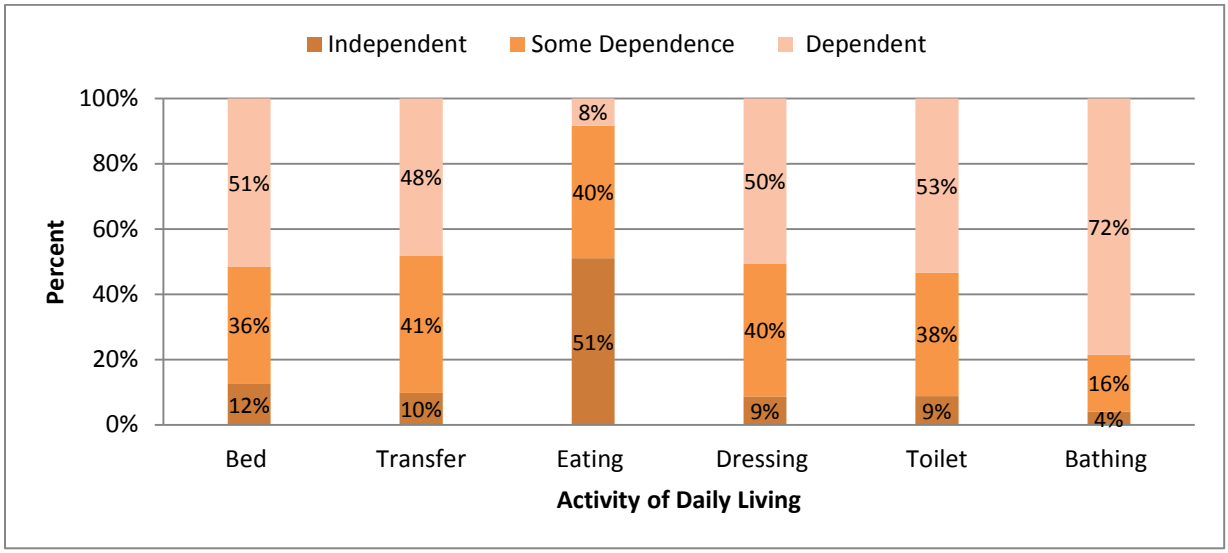
Exhibit 7.1. Activity of Daily Living (ADLs) Scores by Length of Stay, Oregon 2014



Source: CMS Minimum Data Set

The distribution of dependence level by ADL is presented in Exhibit 7.2. The ADLs for which the majority of residents were completely dependent on staff to achieve were bed mobility, dressing, toileting, and bathing. More than half of residents did not require assistance to eat.

Exhibit 7.2. Distribution of Dependence Level by Activity of Daily Living, Oregon 2014



Source: CMS Minimum Data Set

Exhibit 7.3 provides more detail on ADL dependence among groups of nursing facility residents. For each of the six ADLs, a higher proportion of long-stay residents were completely dependent compared to short-stay and mid-length stay residents. Residents under 18 years of age had higher levels of complete dependence than any other age group. Residents age 85 and older had the next highest rates of dependence. Bathing was the most common ADL need among all groups of residents. For all ADLs, the rates of complete dependence were similar by sex and by race/ethnicity (data not shown).

Exhibit 7.3. Complete Dependence for ADLs by Length of Stay and Age, Oregon 2014

	Bed	Transfer	Eating	Dressing	Toilet	Bathing
Length of Stay						
Short stay	46%	42%	4%	43%	47%	69%
Mid-length stay	59%	55%	11%	62%	64%	77%
Long stay	76%	72%	26%	80%	79%	89%
Age Group						
Under 18	68%	88%	83%	88%	91%	97%
18-24	56%	60%	48%	64%	62%	70%
25-44	39%	37%	11%	38%	42%	54%
45-64	39%	36%	6%	37%	41%	60%
65-74	46%	42%	7%	43%	47%	69%
75-84	53%	49%	7%	51%	54%	74%
85 and Over	61%	57%	10%	61%	64%	81%
Total Complete Dependence	**51%**	**48%**	**8%**	**50%**	**53%**	**72%**

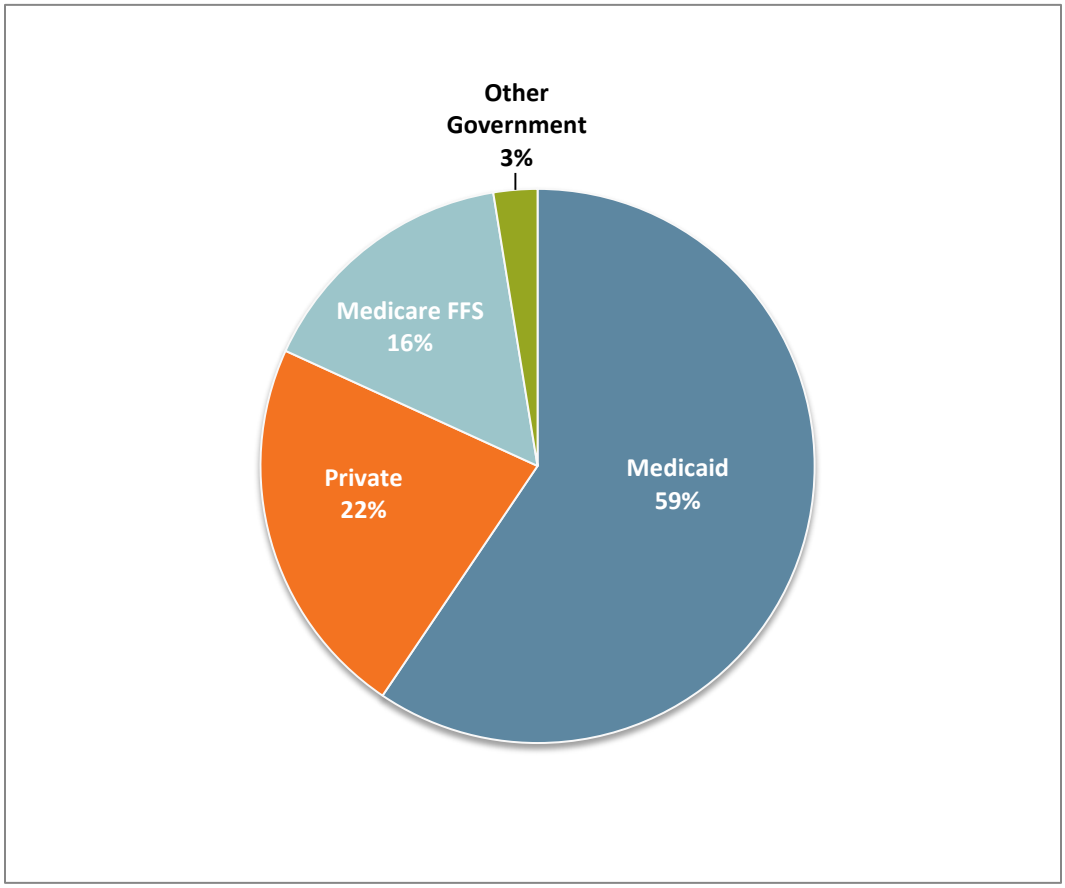
Source: CMS Minimum Data Set

Section 8. Payers

Medicaid was the primary payer for more than half (59%) of resident days in Oregon nursing facilities during 2014 (Exhibit 8.1). Private payers (including Medicare Advantage plans as well as commercial insurers, long-term care insurance plans, and self-pay residents) paid for 22% of resident days. Medicare Fee-For-Service (FFS), which covers up to 100 days of skilled nursing facility care per year, paid for 16% of resident days. Other government payers (including the Veterans Administration) paid for the remaining 3% of resident days in 2014.

Medicare Advantage, the managed care option for Medicare beneficiaries, is a very important payer in the Oregon health care market. At 43% of eligible beneficiaries, Oregon has the third highest rate of Medicare Advantage enrollment among states (Gold, Jacobson, Damico, and Neuman, 2014). This implies that Medicare Advantage plans pay for a significant proportion of "Private" resident days in Oregon nursing facilities. However, more detailed data about Medicare Advantage payments were not available at the time of this report.

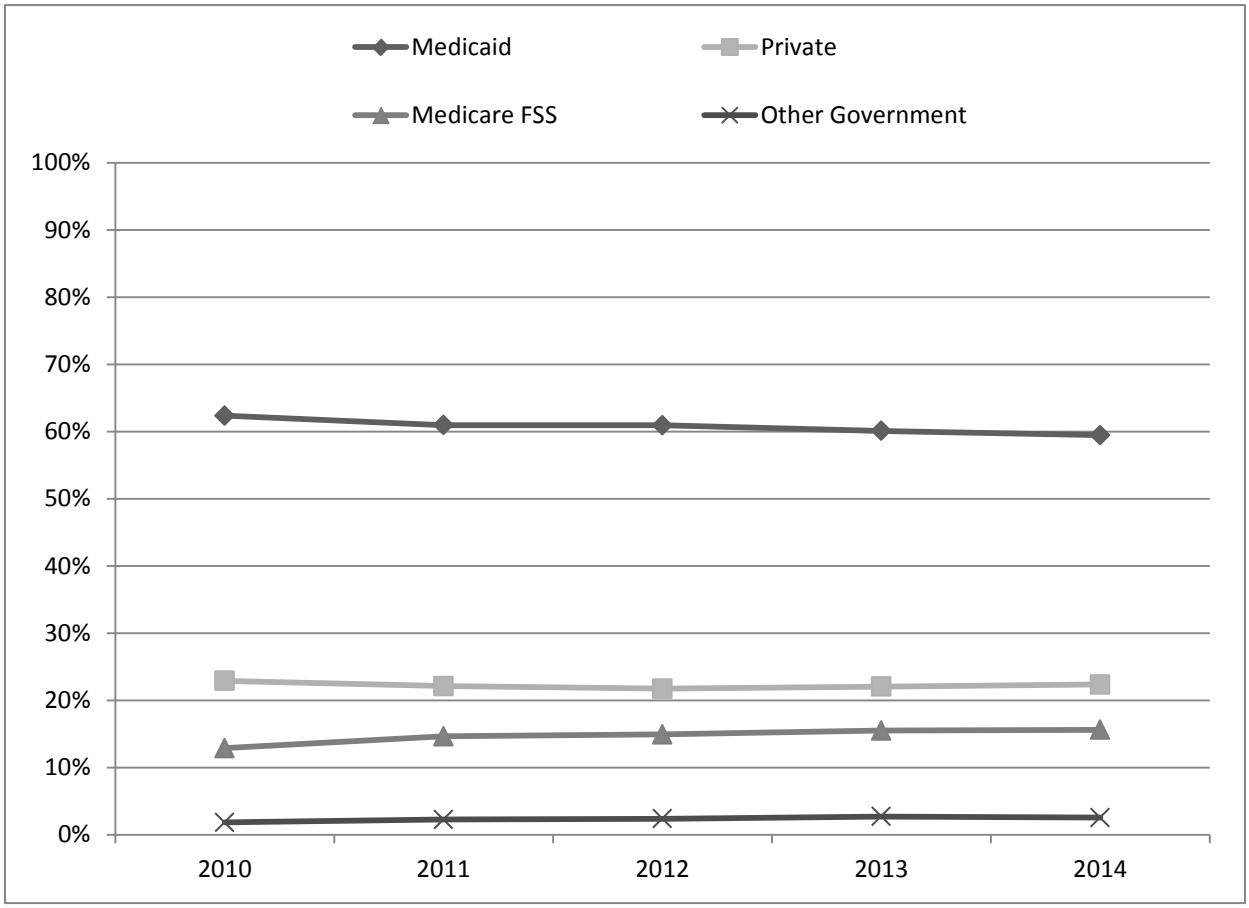
Exhibit 8.1. Payer Sources for Nursing Facility Care, Oregon 2014



Source: Cost Reports and Revenue Statements

As shown in Exhibit 8.2, the share of nursing facility resident days paid for by Medicaid declined slightly between 2010 and 2014 (62 vs. 59%). The proportion of days paid for by Medicare FFS increased slightly from 13% in 2010 to 16% in 2014. The proportions of days paid for by private payers and other government sources have remained relatively stable over those years.

Exhibit 8.2. Payer Sources for Nursing Facility Care, Oregon 2010-2014



Sources: Cost Reports and Revenue Statements

Section 9. Quality Measures

Exhibits 9.1 and 9.2 summarize information on specific nursing facility quality measures based on MDS 3.0 assessments. Exhibit 9.1 shows the rates of assessment of residents and appropriate administration of vaccinations for seasonal flu and pneumococcal pneumonia. Over 80% of short-stay residents, and over 90% of long-stay residents, were assessed for, and when appropriate, given each vaccine. Variation across facilities between the highest and lowest vaccination rates (data not shown) is greater for short-stay than for long-stay residents.

Exhibit 9.1. Vaccination Rates by Length of Stay, Oregon 2014

Vaccination	Short Stay	Long Stay
Seasonal flu vaccine	83%	94%
Pneumococcal vaccine	81%	91%

Source: CASPER

Exhibit 9.2 shows the rates of specific events among short-stay and long-stay residents; lower rates indicate better quality of care. Moderate to severe pain was reported by 24% of short-stay residents, but only 13% of long-stay residents. This may reflect the higher proportion of post-surgical patients among short-stay residents. There is substantial variation in reported rates of pain across facilities. Approximately 2% of short-stay residents newly received an antipsychotic medication, but 18% of long-stay residents received such a medication during the year. Use of antipsychotic medications among long-stay residents has been the target of a national quality improvement initiative since 2011, and has declined steadily in Oregon nursing facilities over that time period (Centers for Medicare & Medicaid, 2014). Use of these medications among long-stay residents is also highest at facilities serving a higher proportion of residents with mental health diagnoses.

Exhibit 9.2. Quality Measures by Length of Stay, Oregon 2014

Quality Measure	Percent
Short Stay	
Self-reported moderate to severe pain	24
Newly received an antipsychotic medication	2
Long Stay	
Self-reported moderate to severe pain	13
Received an antipsychotic medication	18
Help needed with ADLs increased	13
Lost too much weight	9
Had a urinary tract infection	6
High risk with pressure ulcers	6
Had depressive symptoms	6
Catheter inserted and left in bladder	5
Experienced one or more falls with major injury	3
Was physically restrained	1

Source: CASPER

The adverse outcomes of physical restraint, falls with injury, and ongoing catheter use were reported for 5% or less of long-stay residents. Depressive symptoms, pressure ulcers among high-risk residents, and urinary tract infections were present among 6% of long-stay residents. Nine percent of long-stay residents lost too much weight, and 13% needed increased help with ADLs.

Technical Notes

Data Sources and Analyses

This report is based on analyses of data from multiple sources, including:

- Annual Cost Reports and Revenue Statements provided to DHS by all Oregon nursing facilities
- Assessments of nursing facility residents as reported in the Centers for Medicare & Medicaid Services (CMS) Minimum Data Set (MDS)
- Facility-specific data on nursing facility characteristics and performance from the CMS Certification and Survey Provider Enhanced Reporting (CASPER) system

Each of these data sources is described briefly below. Also described are important assumptions or methods used in data analyses whose results are presented in this report.

DHS Reports

Each Oregon nursing facility that contracts with DHS to receive Medicaid reimbursement must submit an annual Cost Report that contain data including numbers of beds, resident days, costs, and revenues. DHS uses data from these reports to establish and update Medicaid payment rates.

Each facility that does not contract with Medicaid must submit an annual Revenue Statement, which contains similar information but not data on licensed or setup beds or costs. For these facilities, numbers of licensed beds were obtained from CASPER (see below); numbers of setup beds were estimated based on other facilities of similar size.

The reporting period for Cost Reports and Revenue Statements is the Oregon Fiscal Year (OFY), which begins July 1st and ends June 30th. This report focuses on OFY 2014 which ended June 30th, 2014, but also includes data for OFYs 2010 through 2013. If a facility changed ownership during a year, resident days from partial-year cost reports from the different owners were combined for that facility. If a facility opened or closed during a year, resident days and occupancy were reported only for the months the facility was in operation; however, facilities in operation for less than 2 months of a year were excluded for that year. If a data element, such as number of beds or resident days was missing for a facility for one year, we estimated it based on data from prior and/or subsequent years' reports.

Many sections of the Cost Reports and Revenue Statements provide details by payer and by payment category within payer. We used these detailed data to exclude Assisted Living and Residential Care resident days from our analyses.

Population data used to calculate nursing facility bed availability rates were obtained from Portland State University's annual population estimates. The numbers of licensed and set-up

beds at the beginning of each fiscal year were divided by population estimates for the beginning that year.

MDS Assessments

CMS mandates that the Minimum Data Set (MDS) assessment questionnaire be completed for all nursing facility residents within 7 days of entry (admission). This assessment includes a wide range of data, including demographics, ADLs, quality measures, admission source, and discharge destination. This report is based on Version 3.0 of the questionnaire

Nursing facility residents are assessed at entry and at discharge. Reassessments are to be performed if there is a significant change in a resident's health status, or quarterly if a resident's stay exceeds 3 months. If the resident is discharged within 7 days, only one assessment need be performed.

MDS data files were provided to OSU by DHS. These data files included assessments reported to DHS through December 4, 2014, which permitted analyses of nursing facility stays that extended past the end of OFY 2014. The data received by OSU were de-identified, so that resident names or other unique identifiers were removed. DHS provided a unique random ID number for each person, so that multiple assessments per person could be linked together. Duplicate assessments were removed from the de-identified dataset prior to analyses. OSU created a crosswalk between MDS facility identifiers and DHS report identifiers so that MDS results could be disaggregated by county or facility size.

This report is based only on assessments of residents for whom discharge dates were available in the MDS data. Residents with an uncertain discharge status (that is, no assessment within 150 days of the December 4, 2014 date when the dataset was created) were excluded from analyses. Residents of facilities with unknown or missing facility identification numbers were also excluded from analyses.

Nursing facility length of stay (LOS) was calculated from the resident's entry date and discharge date. If an individual was still resident in a facility as of December 4th, 2014, LOS was truncated as of that date; this yields a conservative underestimate of actual LOS for those residents.

For the purposes of this report, if a resident was discharged from and subsequently re-entered a nursing facility within 30 days, this was counted as one stay. If a resident was discharged from a nursing facility and subsequently re-entered after 30 or more days, this was treated as two separate stays. Data on admissions presented in this report are based on the initial entry date of a stay; data presented on discharges are based on the final discharge date of a stay. The LOS presented in this report was calculated from the last entry date (even if it was a re-entry) to the final discharge date.

LOS, demographics, and ADLs were calculated for any person who spent one or more days in an Oregon nursing facility during OFY 2014. We note that an individual person may have more than 1 nursing facility stay during OFY 2014.

Demographics were based on the entry assessment. Individuals who had more than one stay during OFY 2014 were counted only once in exhibits that present demographic data. ADLs were also based on the entry assessment. Changes in ADLs that may have been reported in later assessment were not used for these exhibits. Persons whose entry assessments were missing 1 or more ADLs were excluded from ADL analyses.

Certification and Survey Provider Enhanced Reports (CASPER)

The CASPER system reports data collected by CMS during periodic surveys of nursing facilities, which must happen at least every 15 months. This report uses CASPER data for each facility's survey date closest to the relevant OFY.

CASPER reports the percentage of each facility's residents who meet each MDS-based quality measure for each calendar quarter. Quality measure definitions can be found at http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/Downloads/MDS-30-QM-User's-Manual-V80.pdf

This report analyzed data for the 3 quarters (9 months) of OFY 2014 that were available from the June 2014 CASPER system to coincide with the OFY reporting period. Facilities that reported a measure for less than 20 short-stay residents or 30 long-stay residents during that 9-month period are excluded from analyses for that measure. For each measure, this report presents the average of values for all facilities for which CASPER reports data for that measure.

Definitions Used in This Report

Admission/entry: This occurs when a person enters a NF and is admitted as a resident. This includes new entry into a NF (if the resident has never been admitted to the specified facility before or if the resident was in the specified facility previously and was discharged and not did not return within 30 days of the discharge) as well as re-entry (within 30 days of a prior discharge from that facility).

Re-entry/re-admission*: A re-entry occurs when an individual is admitted to a NF and discharged and then returns to the facility within 30 days of that discharge.

Discharge*: A discharge occurs when an individual is discharged from a NF whether they re-enter or not. This does not include a leave of absence or hospital observational stays of less than 24 hours unless the individual was admitted to the hospital.

Final discharge: A final discharge occurs when an individual is discharged from the NF and does not return to the same facility within 30 days of that discharge date

Discharge followed by a reentry within 30 days: This occurs when an individual is discharged from a NF and returns to the same NF within 30 days of the discharge date.

*As defined by the CMS MDS v3 Manual Section A

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