

2017 Delaware Nursing Home Utilization Report

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Nursing Home Bed Projections (2018 – 2023)



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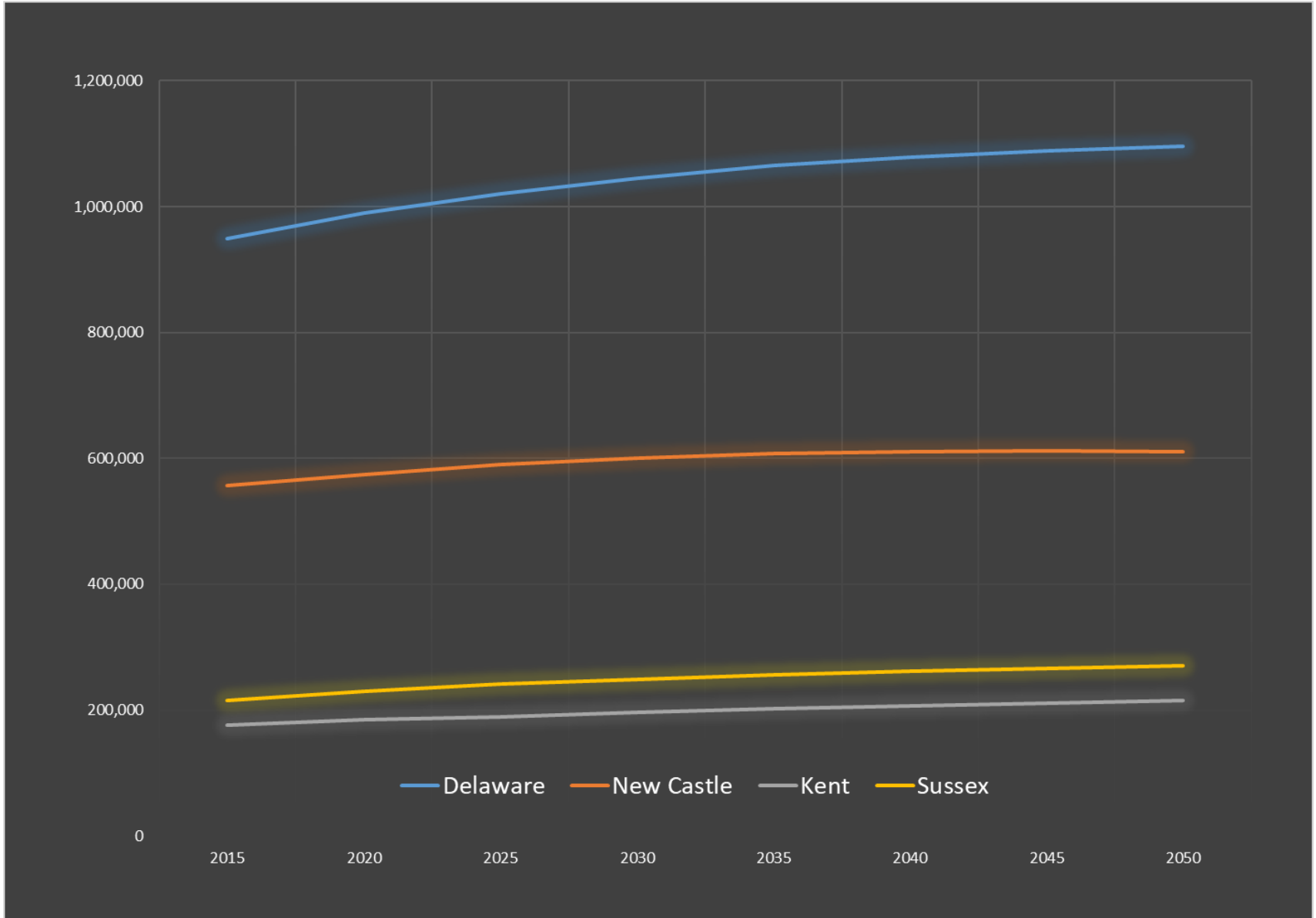
- Data: January – December 2017

- Nursing Home surveillance data used to project future NH bed need

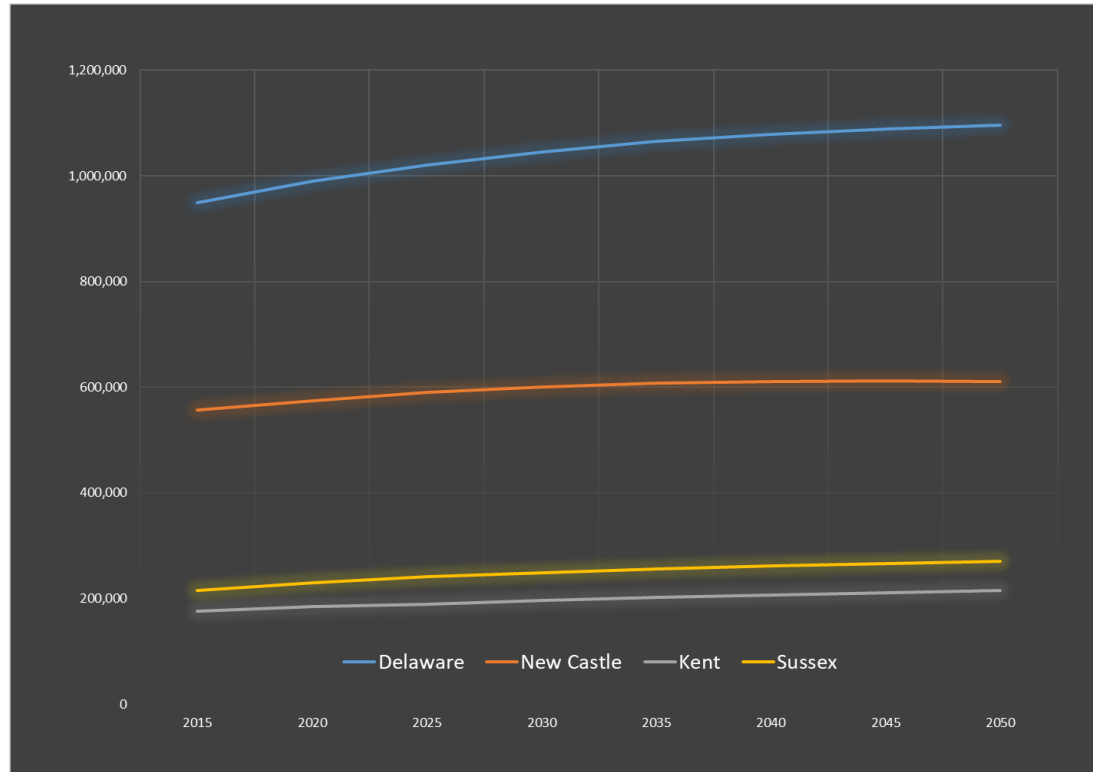
- Nursing homes fall under Delaware’s HRB / CPR process
 - Construction, development, establishment of a new facility
 - Acquisition of a nonprofit facility
 - Increase in bed capacity: more than 10 beds or more than 10% of all licensed beds over a 2-year period

- 2017 bed count and occupancy data used to project bed need for 2018-2023
 - Methodology for NH bed need projections outlined in HRMP

OVERALL Population Growth in Delaware

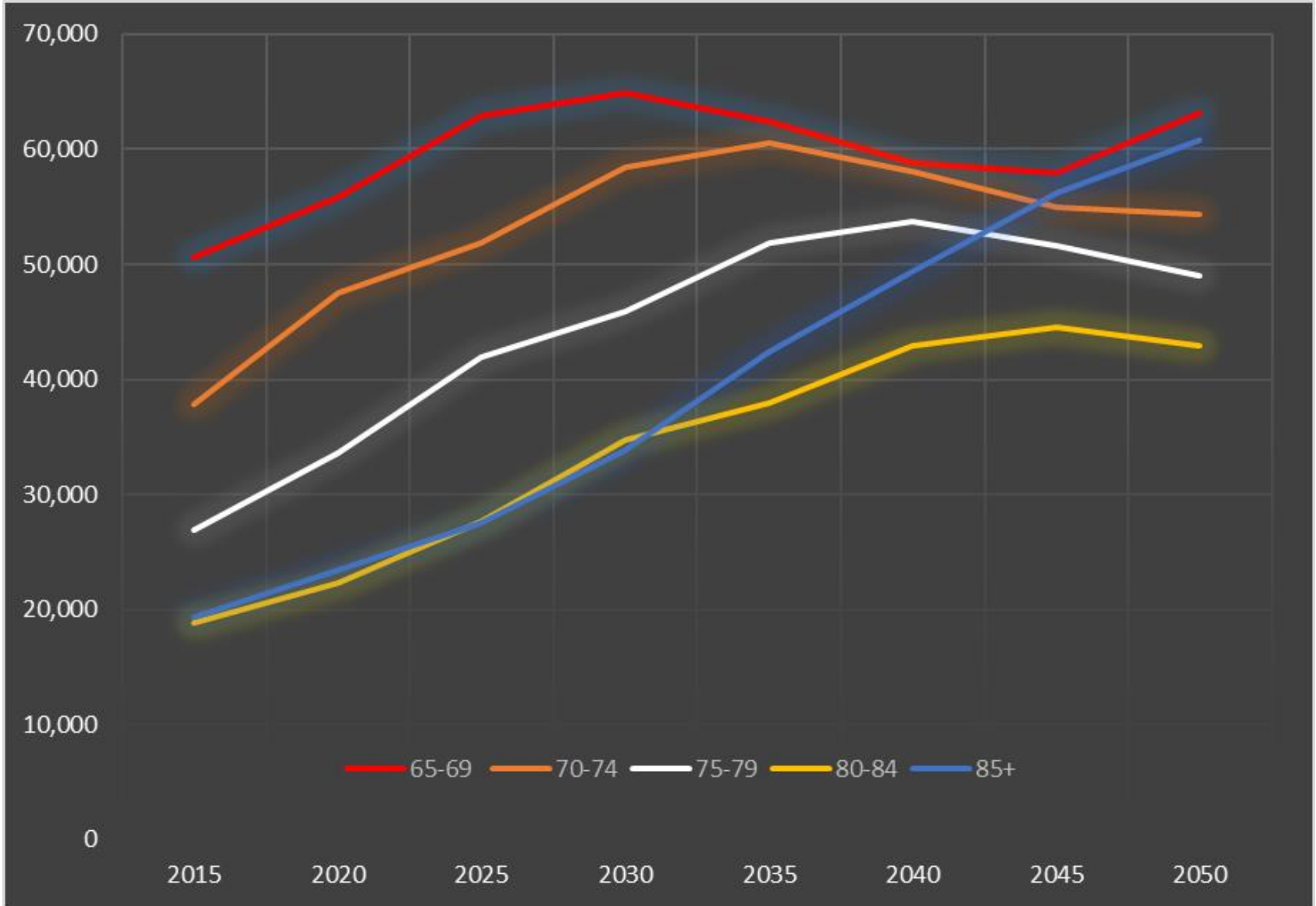


OVERALL Population Growth in Delaware

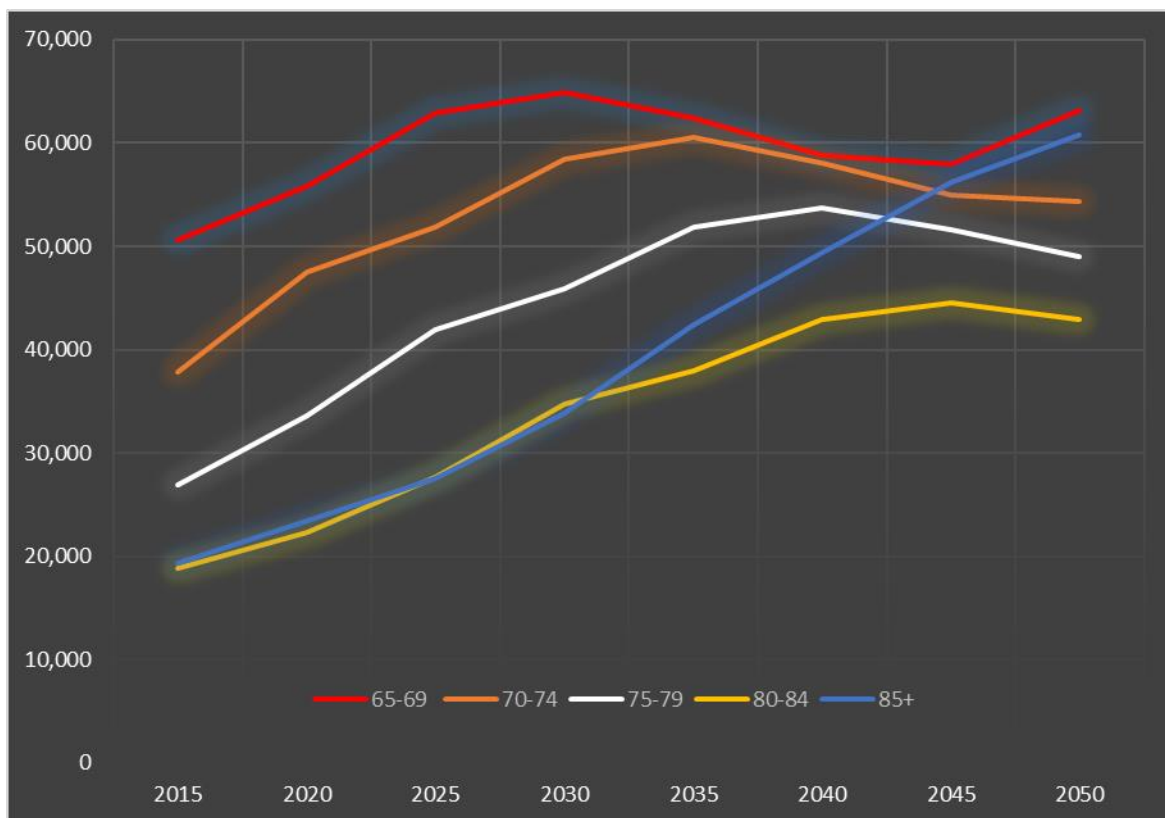


	2015	2020	2025	2030	2035	2040	2045	2050	2015-2050 Percentage Increase
Delaware	949,337	989,665	1,019,558	1,045,587	1,065,047	1,078,927	1,088,769	1,095,621	15.4%
New Castle	556,999	574,407	589,665	600,076	607,078	610,640	611,460	609,921	9.5%
Kent	176,716	184,920	189,023	196,219	201,960	206,861	211,271	215,279	21.8%
Sussex	215,622	230,338	240,870	249,292	256,009	261,426	266,038	270,421	25.4%

65+ Population Growth in Delaware



65+ Population Growth in Delaware



	2015	2020	2025	2030	2035	2040	2045	2050	2010-2050 Percentage Increase
65-69	50,681	55,887	62,885	64,961	62,361	58,850	57,923	63,215	24.7%
70-74	37,811	47,464	51,825	58,494	60,510	58,089	54,942	54,293	43.6%
75-79	26,917	33,664	41,931	45,918	51,841	53,681	51,598	48,987	82.0%
80-84	18,872	22,285	27,711	34,747	37,999	42,894	44,520	42,896	127.3%
85+	19,378	23,467	27,578	33,873	42,493	49,426	56,270	60,755	213.5%

65+ Population Growth in Delaware

DELAWARE		2020	2030	2040	2050	2020-50 % Increase
	65-69	55,887	64,961	58,850	63,215	13.1%
	70-74	47,464	58,494	58,089	54,293	14.4%
	75-79	33,664	45,918	53,681	48,987	45.5%
	80-84	22,285	34,747	42,894	42,896	92.5%
	85+	23,467	33,873	49,426	60,755	158.9%
NEW CASTLE		2020	2030	2040	2050	2020-50 % Increase
	65-69	30,926	36,326	31,538	34,542	11.7%
	70-74	24,409	32,388	31,474	29,179	19.5%
	75-79	15,987	24,691	29,256	25,776	61.2%
	80-84	10,570	17,381	23,184	22,884	116.5%
	85+	12,080	15,870	25,026	32,429	168.5%
KENT		2020	2030	2040	2050	2020-50 % Increase
	65-69	7,769	9,733	11,512	10,588	36.3%
	70-74	6,254	8,175	10,078	9,793	56.6%
	75-79	4,901	5,986	7,693	9,102	85.7%
	80-84	3,413	4,180	5,684	7,031	106.0%
	85+	3,272	4,344	5,780	7,697	135.2%
SUSSEX		2020	2030	2040	2050	2020-50 % Increase
	65-69	17,192	18,902	15,800	18,085	5.2%
	70-74	16,801	17,931	16,537	15,321	-8.8%
	75-79	12,776	15,241	16,732	14,109	10.4%
	80-84	8,302	13,186	14,026	12,981	56.4%
	85+	8,115	13,659	18,620	20,629	154.2%



Long-Term Support Services (LTSS) Categories

- Home Care Services
 - Family caregiving
 - Home health care (wound care, medication management, physical therapy)
 - Homemaker services
 - Home telehealth
 - Home-based hospice care

- Community Services
 - Adult day care / Senior Centers
 - Home care agencies
 - Transportation services
 - Meal services
 - Retirement communities

- Assisted Living Facilities
 - 24-hour supervision
 - Assistance with ADLs
 - Medication management
 - Homemaker services
 - Social / recreational activities
 - In Delaware, not included in CPR process

- Nursing Home Facilities
 - 24-hour supervision
 - Comprehensive skilled nursing care for chronically ill or rehabilitating residents
 - Respite care
 - In Delaware, included in CPR process



Delaware Assisted Living Facilities & Nursing Homes

	Assisted Living (2018)	Nursing Home (2017)	Ratio (AL Beds : NH Beds)
New Castle County			
Facilities	22	28	
Beds	1,313	2,719	0.483
Kent County			
Facilities	4	7	
Beds	373	883	0.422
Sussex County			
Facilities	6	11	
Beds	495	1,264	0.392
Delaware			
Facilities	32	46	
Beds	2,181	4,866	0.448

Delaware Nursing Home Licensed Bed Counts

Year	Private Facilities								Public Facilities		All Facilities	
	New Castle		Kent		Sussex		Total Private					
	Homes	Beds	Homes	Beds	Homes	Beds	Homes	Beds	Homes	Beds	Homes	Beds
2007	27	2,523	6	642	10	1,143	43	4,308	4	626	47	4,934
2008	26	2,498	6	642	12	1,323	44	4,463	4	626	48	5,089
2009	26	2,519	6	642	11	1,234	43	4,395	4	626	47	5,021
2010	26	2,519	6	642	11	1,234	43	4,395	3	591	46	4,986
2011	26	2,519	6	642	11	1,234	43	4,395	3	591	46	4,986
2012	27	2,569	6	672	11	1,264	44	4,505	3	576	47	5,081
2013	27	2,649	6	672	11	1,264	44	4,585	3	522	47	5,107
2014	27	2,649	6	672	11	1,264	44	4,585	3	375	47	4,960
2015	27	2,646	6	672	11	1,264	44	4,582	3	312	47	4,894
2016	27	2,647	6	678	11	1,264	44	4,589	2	287	46	4,876
2017	27	2,641	6	678	11	1,264	44	4,583	2	283	46	4,866

Delaware Nursing Home Occupancy Rates

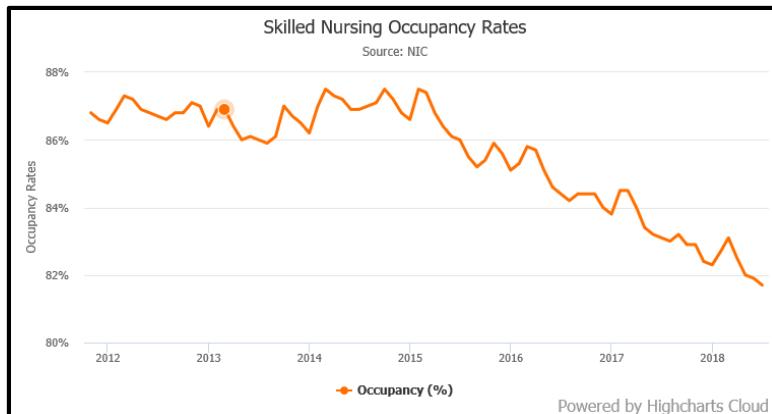
Year	Private Facilities				Public Facilities	All Facilities
	New Castle	Kent	Sussex	Total Private		
2007	90.2%	76.5%	89.1%	87.9%	62.5%	84.7%
2008	91.4%	88.9%	80.3%	87.7%	62.9%	84.7%
2009	89.6%	93.5%	89.7%	90.2%	60.2%	86.5%
2010	91.1%	93.3%	89.3%	90.9%	63.9%	87.7%
2011	90.3%	93.6%	88.5%	90.3%	61.0%	86.8%
2012	91.1%	89.5%	87.5%	89.8%	54.3%	85.8%
2013	89.0%	89.1%	87.8%	88.7%	51.5%	84.9%
2014	90.1%	91.5%	90.9%	90.5%	64.1%	88.5%
2015	89.8%	92.5%	89.4%	90.1%	67.7%	88.7%
2016	89.2%	90.7%	88.7%	89.3%	67.8%	88.0%
2017	89.6%	86.7%	88.8%	89.0%	67.5%	87.7%

- In Delaware, occupancy rates for private facilities ranged from 56.7% - 97.8% (median: 90.5%)
- 2015 U.S. Avg. NH Occupancy Rate: 80.3%

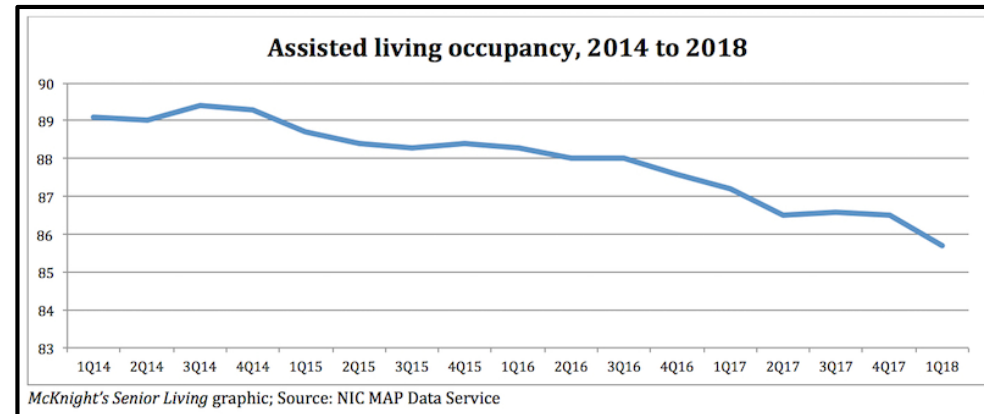
(<https://www.cdc.gov/nchs/data/hus/2016/092.pdf>; Table 92)

Rebalancing LTSS in the U.S.

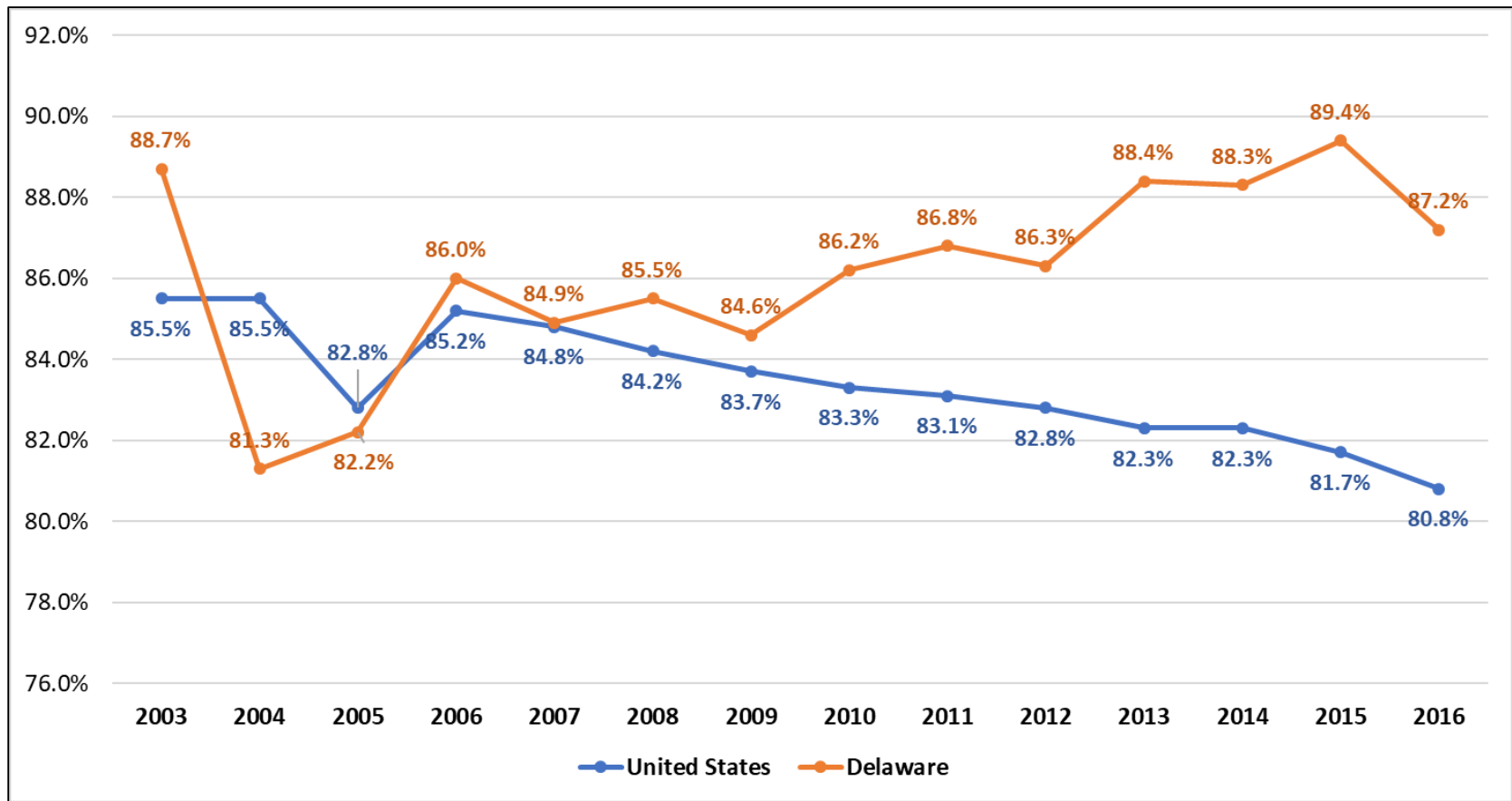
- Alignment of LTSS with consumers' needs determines QOL
- Past two decades → gradual rebalancing of LTSS toward consumer-preferred HCBS
 - Emphasis on community integration for seniors
 - Increased number of and access to HCBS
 - Policy changes related to reimbursement (patients staying for shorter lengths of time)
 - Efforts to reintegrate NH consumers back into community settings
- Gradual decline of NH and AL occupancy rates in the U.S.



National Investment Center for Seniors Housing and Care (NIC)



Nursing Facility Occupancy Rates, 2003-2016: DE vs US



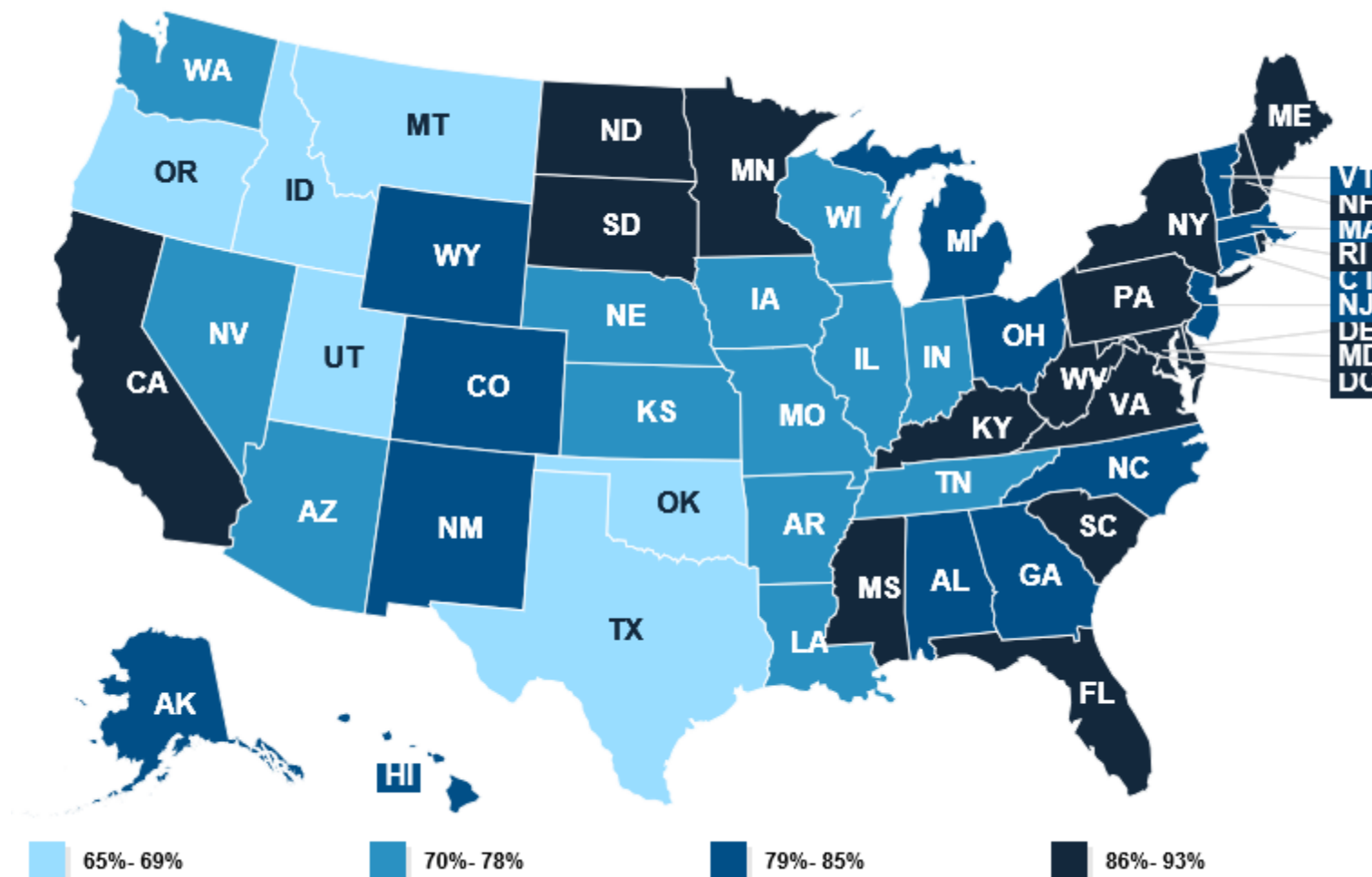
Source: University of California, San Francisco and Kaiser Family Foundation analysis of On-line Survey, Certification, and Reporting system (OSCAR) and Certification and Survey Provider Enhanced Reports (CASPER) data.

Nursing Facility Occupancy Rates, 2016

1	District of Columbia	93.0%
2	Rhode Island	91.0%
2	South Dakota	91.0%
4	New York	90.0%
4	North Dakota	90.0%
6	Maine	89.0%
7	Pennsylvania	88.0%
7	New Hampshire	88.0%
7	West Virginia	88.0%
7	Florida	88.0%
7	Maryland	88.0%
7	Mississippi	88.0%
13	Delaware	87.0%
14	Minnesota	86.0%
14	Kentucky	86.0%
14	South Carolina	86.0%
14	Virginia	86.0%
14	California	86.0%
19	Massachusetts	85.0%
19	Connecticut	85.0%
19	New Jersey	85.0%
22	Alabama	84.0%
22	Hawaii	84.0%
22	Alaska	84.0%
22	Georgia	84.0%
26	Ohio	83.0%

27	Michigan	82.0%
27	North Carolina	82.0%
27	Vermont	82.0%
30	Wyoming	81.0%
30	United States	81.0%
30	New Mexico	81.0%
33	Colorado	79.0%
34	Washington	78.0%
34	Nevada	78.0%
34	Wisconsin	78.0%
37	Louisiana	77.0%
37	Iowa	77.0%
39	Illinois	75.0%
39	Tennessee	75.0%
41	Nebraska	74.0%
42	Indiana	73.0%
42	Kansas	73.0%
44	Arkansas	72.0%
44	Missouri	72.0%
46	Arizona	70.0%
47	Texas	69.0%
48	Idaho	67.0%
49	Oklahoma	66.0%
49	Montana	66.0%
51	Oregon	65.0%
51	Utah	65.0%

Nursing Facility Occupancy Rates, 2016



Source: University of California, San Francisco and Kaiser Family Foundation analysis of On-line Survey, Certification, and Reporting system (OSCAR) and Certification and Survey Provider Enhanced Reports (CASPER) data.

Billable Patient Days

- Billable Patient Day: a unit of time (i.e., one day) during which the facility's services are used by one patient.
- For example, if a nursing home has 100 patients on a particular day, the facility has generated 100 billable patient days for that particular 24-hour period.
- If a facility's number of billable patient days increases from one time period to the next, it is an indication that the facility is
 - a. Caring for ***more*** patients
 - b. Caring for patients for ***longer periods of time***, or
 - c. A **combination** of these two factors.

Delaware Nursing Home Billable Patient Days

Year	Private Facilities				Public Facilities	All Facilities
	New Castle	Kent	Sussex	Total Private		
2007	830,921	179,315	371,520	1,381,756	142,893	1,524,649
2008	833,344	208,235	387,715	1,429,294	143,640	1,572,934
2009	824,262	219,019	404,234	1,447,515	137,584	1,585,099
2010	838,037	218,593	402,188	1,458,818	137,824	1,596,642
2011	829,974	219,302	398,550	1,447,826	131,675	1,579,501
2012	843,039	219,558	403,842	1,466,439	114,177	1,580,616
2013	860,924	218,651	404,942	1,484,517	98,108	1,582,625
2014	871,456	224,370	419,167	1,514,993	87,792	1,602,785
2015	867,015	226,841	412,646	1,506,502	76,993	1,583,495
2016	862,050	224,549	409,052	1,495,651	71,111	1,566,762
2017	864,047	214,618	409,816	1,488,481	69,703	1,558,184

Historical trends in billable patient day data mirrors increases / decreases in licensed bed counts.

Delaware Nursing Home Admissions

Year	Private Facilities				Public Facilities	All Facilities
	New Castle	Kent	Sussex	Total Private		
2007	5,358	755	2,246	8,359	156	8,515
2008	5,709	954	2,279	8,942	113	9,055
2009	5,835	1,066	3,242	10,143	126	10,269
2010	5,928	1,164	3,088	10,180	90	10,270
2011	6,406	1,353	3,247	11,006	119	11,125
2012	6,654	1,493	3,563	11,710	65	11,775
2013	6,566	1,696	3,477	11,739	31	11,770
2014	6,816	1,726	3,983	12,525	50	12,575
2015	6,544	1,612	3,672	11,828	64	11,892
2016	6,238	1,666	3,576	11,480	33	11,513
2017	6,685	1,701	3,637	12,023	36	12,059

Delaware Nursing Home Admissions, by Race and Age, 2017

	Age Groups				Total Admissions (by Race)
	Under 65	65-74	75-84	85+	
White (N=9,597)	12.8%	20.4%	31.1%	35.7%	79.6%
Black (N=2,168)	25.1%	31.8%	22.9%	20.2%	18.0%
Other (N=294)	14.6%	36.4%	25.2%	23.8%	2.4%
Total (by Age) (N=12,509)	15.1%	22.8%	29.5%	32.6%	100.0%



- **White patients represented 80% of all DE NH admissions 2017**
- **Age is positively correlated with proportion of admissions**
- **Discharge trends mirror admission trends**

Delaware Nursing Home Discharges, by Destination, 2017

Facility Type	Discharge Destination						
	Home	Hospital	Assisted Living	Private LTCF	State Owned LTCF	Death	Other
Private (N=11,431)	60.1%	21.3%	4.0%	2.2%	0.3%	10.7%	1.3%
Public (N=48)	10.4%	25.0%	0.0%	10.4%	0.0%	54.2%	0.0%
All facilities (N=11,479)	59.9%	21.4%	3.9%	2.3%	0.3%	10.9%	1.3%

How Has the Private Nursing Home Care Changed In Delaware?

2007 – 2017 Percentage Difference in Utilization Measures

	New Castle (private)	Kent (private)	Sussex (private)	Total Private
Bed Count	4.7%	5.6%	10.6%	6.4%
Billable Pt Days	4.0%	19.7%	10.3%	7.7%
Admissions	17.1%	78.3%	59.6%	34.5%
Occupancy	-0.7%	13.3%	-0.3%	1.3%

- **Increases in Bed Counts and Billable Pt Days were strongly correlated across all three counties**
- **Admissions increased at a higher rate than would be expected by bed expansion alone**
 - Private NH facilities caring for more patients for shorter periods of time
- **Occupancy rates maintained after bed expansion (new beds being filled)**

HRMP Methodology: Nursing Home Bed Projections

1. Obtain annual billable patient day data (by state and county)
2. Calculate projected population growth factors by age group (by state and county)
3. Calculate the proportion of NH admissions by age group (<65, 65-74, 75-84, and 85+) and use these proportions to calculate a weighted sum of population growth factors
4. Multiply weighted population growth factor by current year billable patient days to obtain projected billable patient days for the last year of the projection period (i.e., for 2020 or 2021)
5. Divide projected billable patient days by 365 to obtain projected bed need
6. Calculate the difference in current and projected bed need to obtain the projected shortage / surplus of NH beds (by state and county)

2018 – 2023 Delaware Nursing Home Bed Projections

Delaware			
	Current Beds (2017 Calcs)	Projected Bed Need	Shortage / Surplus
2018-19	4,866	4,896	-30
2018-20	4,866	5,035	-169
2018-21	4,866	5,179	-313
2018-22	4,866	5,322	-456
2018-23	4,866	5,470	-604
Kent			
	Current Beds (2017 Calcs)	Projected Bed Need	Shortage / Surplus
2018-19	624	631	-7
2018-20	624	650	-26
2018-21	624	668	-44
2018-22	624	682	-58
2018-23	624	679	-55
New Castle			
	Current Beds (2017 Calcs)	Projected Bed Need	Shortage / Surplus
2018-19	2,809	2,832	-23
2018-20	2,809	2,900	-91
2018-21	2,809	2,977	-168
2018-22	2,809	3,055	-246
2018-23	2,809	3,156	-347
Sussex			
	Current Beds (2017 Calcs)	Projected Bed Need	Shortage / Surplus
2018-19	1,432	1,429	3
2018-20	1,432	1,480	-48
2018-21	1,432	1,529	-97
2018-22	1,432	1,579	-147
2018-23	1,432	1,634	-202

NH Bed Projections: Summary Points

- ❑ Latest projections predict shortages in NH beds that increase over time
- ❑ The magnitude of bed shortages largest in New Castle and Sussex Counties
- ❑ When considered in the context of beds missing per 1,000 persons age 65+, in 2023:
 - **New Castle County:** **0.29** beds short per 1,000 persons age 65+
 - **Kent County:** **0.54** beds short per 1,000 persons age 65+
 - **Sussex County:** **0.97** beds short per 1,000 persons age 65+
- ❑ Mathematical equations to predict NH bed need do not incorporate broad LTSS trends

END