

# The Impact of State Nursing Home Bed Relocation Policy in Ohio

SHAHLA MEHDIZADEH, PHILIP E. SAUER, MATT NELSON, CASSANDRA HUA

**Research Brief | April 2018**

## Background

In an effort to slow the growth of nursing home (NH) use, and to develop a more balanced system of long-term services, Ohio, like many other states, enacted Certificate of Need (CON) legislation to control the supply of beds. The initial CON legislation in Ohio was passed in 1975 (National Conference of State Legislators, 2016). However, in 1993, with increasing Medicaid NH expenditures, the legislature established a Medicaid moratorium that prevented the construction of new NH beds across the state (Applebaum, Mehdizadeh, & Straker, 1997). As Ohio's population aged and shifted across county lines, an imbalance in the bed supply occurred. For example, in 2008, the bed supply varied by county, from a high of 130 beds per 1,000 persons aged 65 and older in Holmes County to a low of 20 beds per 1,000 persons 65 and older in Portage County. In response, Ohio enacted legislation in 2008 to address these changes.

To examine the impact of this legislation and other industry changes, this brief presents actual data from 2008, 2015, and projections for 2020. Figure 1 displays the bed per 65+ population supply by county that reflects the estimated excesses or shortages of beds when compared to the state average for 2008, prior to the passage of the revised legislation. At the time of the legislation, 25% of the counties (in blue) were within + or - five, of the state average ratio (64 at the time) of NH beds to the 65+ population bed supply. Four in ten counties (39%, in red and yellow) were considered to have fewer beds than needed (under-bedded). Finally, 36% of counties (with different shades of green) had more beds than were considered necessary (over-bedded). The differences between the beds per 1,000 65+ in the county and the state average (64 in 2008) are also shown for each county. For example, Delaware County in central Ohio, shown in red, was very under-bedded, having 28 beds fewer per 1,000 persons age 65 and older than state average.

Legislators responded to the imbalance by creating a formula that estimated the optimum number of beds needed in each county based on the projected number of persons age 65 and older, the number of licensed beds, and the NH state occupancy rate. Because the 65 and over population and NH occupancy rate changes annually, the legislation recommended a review every four years. Table 1 includes the CON state-level calculations based on the legislation in 2009. The top row of the table shows data on what had been the expected impact of the legislation. Because of the increase in the long-term services options available and the increase in the aging population, change in the



Based on the legislation, counties that had more than 54 beds per 1,000 persons 65+ in 2009 could sell or transfer the additional beds to another county with bed shortages. Under-bedded counties with a NH occupancy rate lower than 85% were ineligible to acquire additional beds. The formula also indicated that the state as a whole had too many NH beds (over-bedded by more than 5,200: see Table 1). Ohio was ranked 9th highest nationally in terms of NH beds per 1,000 persons 65 and older in 2010 (Houser, A., Fox-Grage, W., and Ujvari, K., 2012). Under the legislation enacted, the optimum number of beds per 1,000 65+ persons (defined by the formula) was lowered and will continue to drop, from an estimated 54 in 2009, to 46 in 2015 and 42 (expected) by 2020, as shown in Table 1.

## Impact of the Legislation

In the first two years after the legislation was enacted, ODH approved the relocation of 4,100 beds from over-bedded counties to under-bedded counties. During this time period some NHs also relinquished licensed beds that were out of service for an extended period of time (about 1,500), lowering the overall supply of beds across the state.

The legislation called for ODH to re-estimate the optimum number of beds every four years, thus in 2014 the state NH bed distribution was re-examined. The reassessment yielded a lower optimum bed per 1,000 65+ population ratio for 2015 (46, shown in Table 1). Several factors contributed to the lower optimal number of beds needed:

- » The population projections for 2015 in the initial calculation of the number of optimal beds per 1,000 65+ population, were based on the 2000 census. A new set of projections based on the 2010 census predicted a higher 65+ population for the state in 2015, by nearly 141,000 persons.
- » About 1,500 beds were removed from the license rolls.
- » Despite a growing older population and a declining number of beds, the overall state occupancy rate declined (from 85.2 to 84.2) through the state’s continuous efforts to bring a balance between long-term services and supports (LTSS) provided in NHs and in the community.

**Table 1. Estimating Optimal Bed Supply per 1,000 65+ Population in Ohio 2009 to 2020**

Year	State Avg. Occupancy Rate (Percent)	State Bed Supply	Number of Occupied Beds	65+ Projected Population in 2015	Optimum Number of Beds Based on ORC 3702.593	Optimum Beds Per 1,000 65+ Projected Population
2009 Projection of State Optimal Beds for 2015	85.2	98,255*	83,703	1,710,974♦	93,003	54
Calculation of New State Optimum Beds in 2015	82.4	91,991	75,801	1,844,694#	84,223	46
2016 Projections for 2020	82.4	91,991	75,801	2,011,340^	84,223	42

\*Bed supply in 2008; ♦ 2015 projected 65+ population in 2009 was based on 2000 Census; # 2015 American Community Survey (ACS) 65+ population estimates are from Census in 2015, occupancy rate and number of beds is for 2015. ^ The 2020 65+ population projections are from Ohio Development Services Agency.

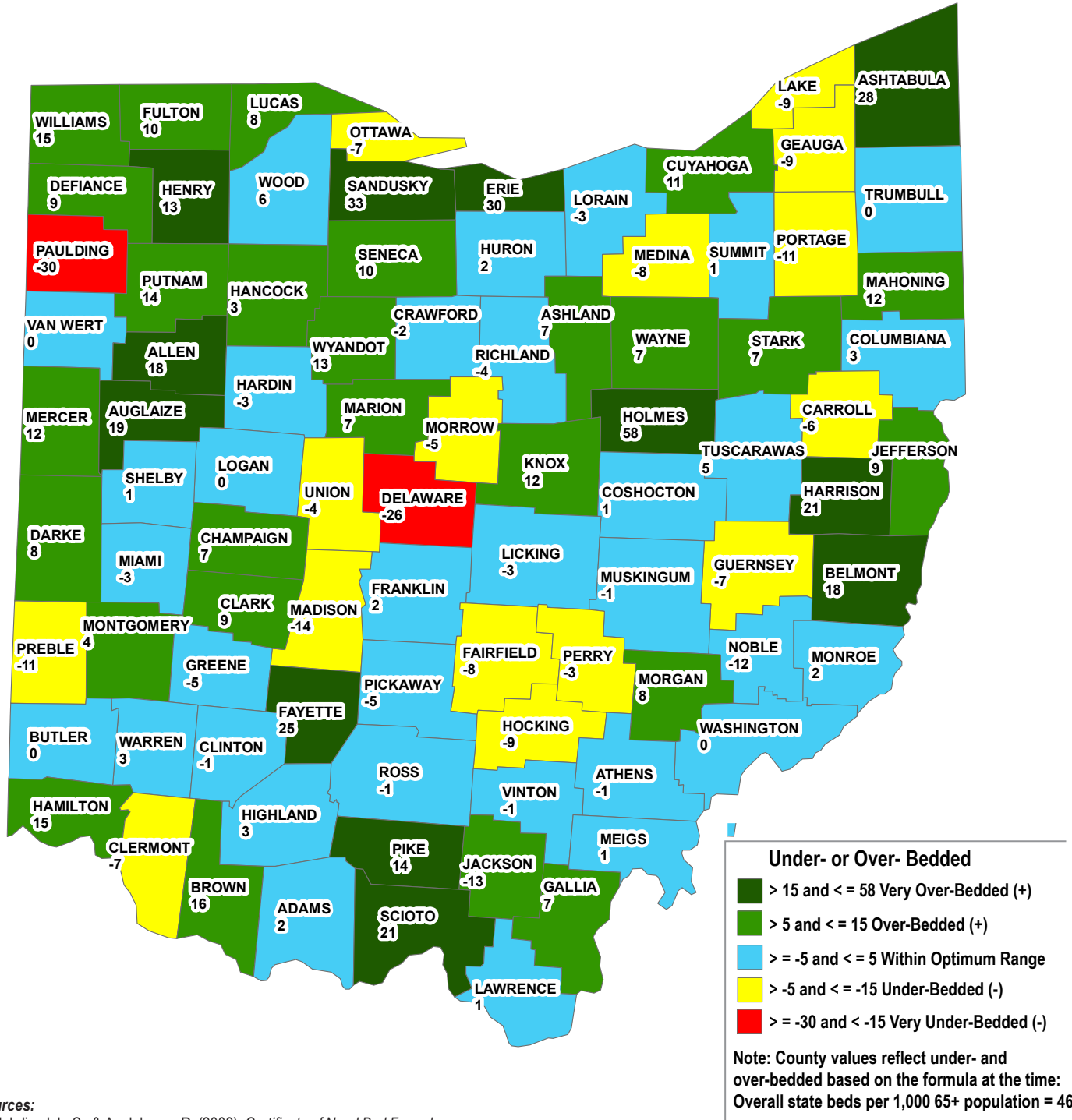
Based on the actual NH bed supply, NH occupancy rate and the estimated size of the 65+ population for 2015, we recalculated Ohio's beds per 1,000 population 65+ for the state and each county using the formula enacted in the 2009 legislation. The actual number of beds per 1,000 65+ population in 2015 at the state level was 46 beds, compared to the initial 2015 prediction of 54 in 2009. The range of beds per 1,000 65+ persons by county was 20 to 130 in 2009 and has currently narrowed to an estimated range of 16 to 79 with the exception of one county (Holmes) with 104 beds per 1,000 65+ population.

Figure 2 shows the difference between the number of NH beds per 1,000 65+ population in 2015 and the state optimum, after bed relocations. Table 2 provides data on bed supply changes between 2009 and 2015 and projections for 2020. The 2015 bed supply by county is shown in Figure 2, with the negative numbers reflecting under-bedded counties and the positive numbers showing over-bedded counties. Forty-two percent of Ohio counties (shown in blue) are now considered to have a bed ratio within the optimum range (plus or minus five beds per 1,000 65+). In 2009, 31% of counties were in this category. Seventeen counties (19%) are under-bedded (red and yellow), a drop from 25% in 2009. Twenty four counties (27%) are over-bedded (light green) between five to 15 beds, and 12 (14%) counties are over-bedded by more than 15 beds (dark green) per 1,000 65+ population, for a total of 41% of counties. In 2009, 46% of counties were classified as over-bedded. It should be noted that even the over-bedded counties experienced a drop on their beds to 65+ population ratio, because the 65+ population grew everywhere in the state. A review of the under- or over-bedded counties shows that the size of the difference from the optimal bed supply had been reduced, with no county showing a difference of more or less than 30 beds.

The percentage of the population living in under-bedded counties has declined from 23.4% to 14.6% and the percentage within plus or minus five beds from optimum has grown from 30.7 to 41.6%, with the remaining 43.8% of the population living in counties that are over-bedded by more than five beds per 1,000 65+ (See Table 2). The population residing in a county that has been determined to be within optimum range supply (+ or - five beds) of NH beds has increased from the earlier 77% to 85%. Looking at the most populated counties such as Cuyahoga, Franklin, and Hamilton, it is clear that counties that have gained population (Franklin) have acquired beds, but counties that have lost population (Cuyahoga and Hamilton) still have a larger number of beds than they are projected to need. Cuyahoga County is surrounded by counties that are under-bedded, while Hamilton County is surrounded by counties (except for Clermont) that have the optimum number of beds. Perhaps because of inter-state migration from Kentucky, Hamilton County has an occupancy rate of nearly 85%, above the state average by 2.5.

Between now and 2020 the 65+ population of the state is projected to increase by 9%, meaning that even in the absence of any further reduction in occupancy rate, the number of beds per 1,000 65+ population is projected to decline to 42.

Figure 2. Ohio's Actual Nursing Home Under-/Over-Bedded Counties Based on the Formula in 2015 after One Round of Bed Relocation



Sources:

- Mehdzadeh, S., & Applebaum, R. (2009). *Certificate of Need Bed Formula Validity for Ohio's Nursing Homes*. Oxford, OH: Scripps Gerontology Center, Miami University.
- Ohio Rev. Code. § 3702.593 and § 3702.594 available at <http://codes.ohio.gov/orc/3702.593> and <http://codes.ohio.gov/orc/3702.594>
- Ritchey, P. N., Mehdzadeh, S., & Yamashita, T. (2012). *Projections of Ohio's Population 2010-2030*. Oxford, OH: Scripps Gerontology Center, Miami University.
- U.S. Census Bureau. (2011). *2010: Census Summary File 1 & Investigative Reporters and Editors, Inc.* Census.IRE.ORG online database.
- U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

**Table 2. Table 2 Beds Per 65+ (Estimated/Projected) Population Ratio among Ohio Counties in 2009 - 2020**

Beds Per 1,000 65 Population	2009 (Optimal Bed /1,000 65+ Pop-54)			2015 (Optimal Bed Per 1,000 65+ Pop 46)			2020 (Optimal Bed Per 1,000 65+ Pop 42)		
	N of Counties	% of State 65+ Population	Average Occupancy Rate	N of Counties	% of State 65+ Population	Average Occupancy Rate	N of Counties	% of State 65+ Population	Average Occupancy Rate*
Under-Bedded by More than 15 Beds	5	3.4	86.3	2	1.4	78.2	2	1.5	78.2
Under-Bedded by Less than 15 up to 5 Beds	17	20	86.4	15	13.2	78.1	15	12.3	77.6
Under or Over-Bedded by 5 beds	27	30.7	85.1	35	41.6	83.4	33	37.9	83
Over-Bedded by 5 to 15 Beds	21	37.5	82.7	24	31.2	82.1	26	41.7	83.6
Over-Bedded by more 15 Beds	17	8.4	83.5	12	12.6	83.0	12	6.6	82.4
<b>Total (Average)</b>	<b>88</b>	<b>100</b>	<b>85.2</b>	<b>88</b>	<b>100</b>	<b>82.4</b>	<b>18</b>	<b>100</b>	<b>82.4</b>

**Note:** Optimal beds per 1,000 65+ were 54, 46, and 42 in 2009, 2015, and 2020 respectively. \*Assuming occupancy rate remains as 2015.

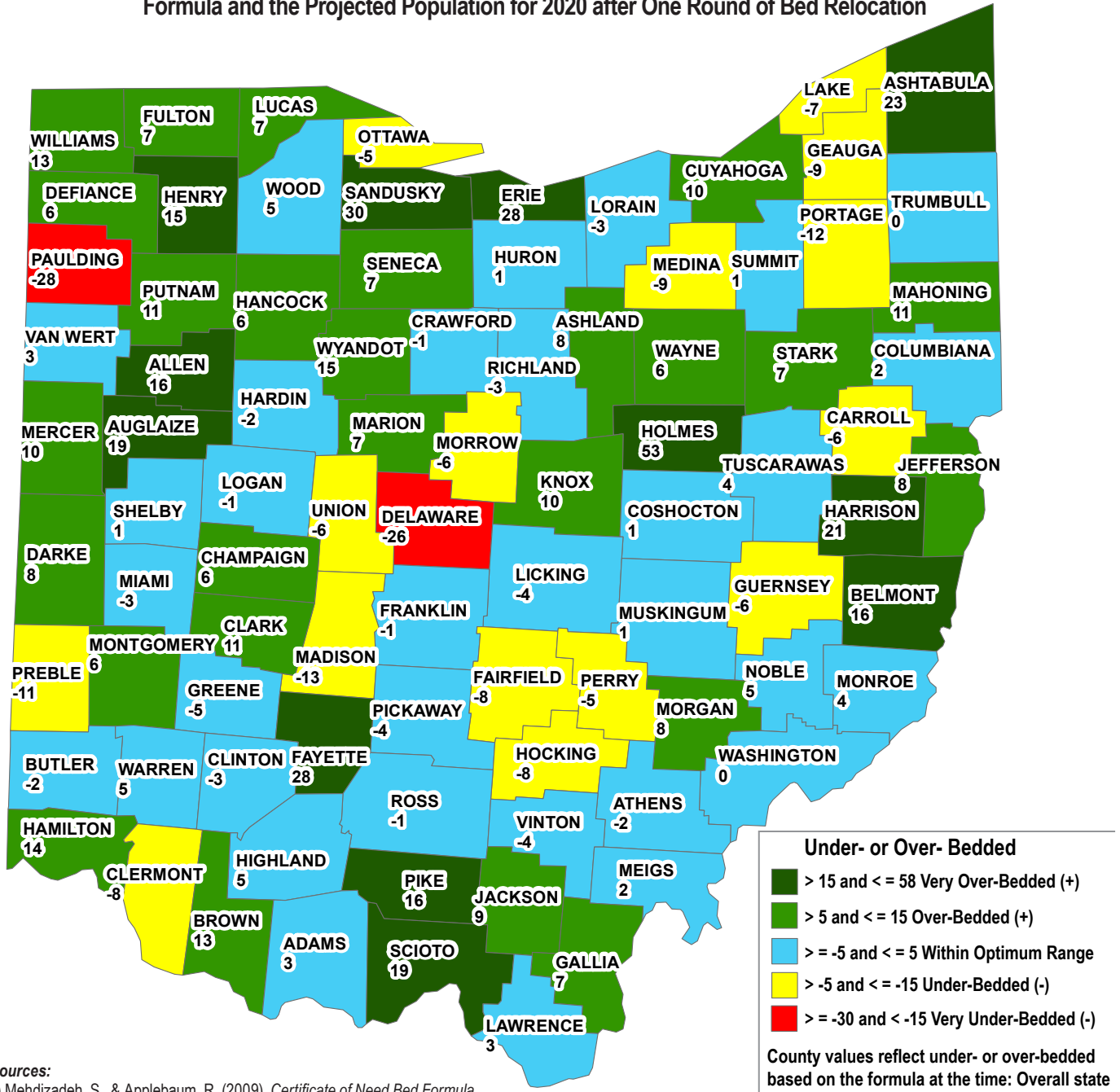
### Projections for 2020

Based on the 2014 review the state has provided estimates for the optimum bed supply in 2020. The numbers in Table 1 showed that as the size of the older population increases, without any new beds added to the system, the optimum number of beds per 1,000 65+ population declines. According to the formula, by 2020 the optimum NH beds per 1,000 65+ persons in Ohio is projected to decline to 42 beds, still above the overall U.S. average number of beds per 1,000 65+ population in 2011 which was 36 (Center for Medicare & Medicaid Services, 2013). With the expansion of in-home services and assisted living, states across the nation have essentially held NH bed supply constant as the older population grows. Ohio’s policies are consistent with the national trends.

In Figure 3 we provide projections about state bed supply in 2020 assuming no changes in bed allocation for the state or individual counties. The map again displays the differences by county from the optimum number of beds per 1,000 65+ population in 2020. Compared to Figure 2 the number of counties that are under-bedded (red or yellow) will not change from 2015, but the proportion of Ohio’s older population that it covers will decline slightly from 14.6% to 13.8%.

By 2020, Ohio will have been able to relocate more than 4,000 beds from over-bedded counties to under bedded counties, while taking about 1,500 beds out of service. The state is not planning a second round of bed relocations based on ORC 3702.593 at this time. As a consequence, as Table 2 shows, the percentage of the population in the under-bedded counties will continue to decline from 14.6% in 2015 to 13.8% in 2020, and the percentage of older population residing in over-bedded counties will increase from 43.8% to 48.3%.

Figure 3. Ohio's Projected Nursing Home Under-/Over-Bedded Counties Based on the Formula and the Projected Population for 2020 after One Round of Bed Relocation



Sources:  
 1) Mehdizadeh, S., & Applebaum, R. (2009). *Certificate of Need Bed Formula Validity for Ohio's Nursing Homes*. Oxford, OH: Scripps Gerontology Center, Miami University.  
 2) Ohio Rev. Code. § 3702.593 and § 3702.594 available at <http://codes.ohio.gov/orc/3702.593> and <http://codes.ohio.gov/orc/3702.594>  
 3) Ritchey, P. N., Mehdizadeh, S., & Yamashita, T. (2012). *Projections of Ohio's Population 2010-2030*. Oxford, OH: Scripps Gerontology Center, Miami University.  
 4) U.S. Census Bureau. (2011). *2010: Census Summary File 1 & Investigative Reporters and Editors, Inc.* Census.IRE.ORG online database.  
 5) U.S. Census Bureau, 2000: Public Use Microdata Sample: 5-Percent.

### Did the Legislation Accomplish Its Intended Goal?

The state has made good progress in rebalancing the supply of beds. The overall ratio of beds to 65+ population for the state has dropped, putting Ohio closer to the national average on supply. Ohio has increased the number of counties with the optimum supply of beds, has decreased the

number of counties considered to be under-bedded, and has decreased the number of counties that are considered to be over-bedded. These findings indicate that Ohio has made good progress in improving access and supply across the state.

Despite important progress, our findings indicate that additional relocations may be warranted. For example, we project that by 2020 14 counties (16%) will be over- or under-bedded by 15 or more beds. As shown in Figure 3, central Ohio is likely to have some of the largest access issues; Delaware County and other surrounding counties will be under-bedded. It is important to remember that county lines are fluid designations and families and residents cross county lines to get the care and services they need. It is also important to consider the full picture of access to long-term services and supports in the state, with some counties having significantly more residential care (assisted living) facilities than others, along with county levy programs that fund home- and community-based services. NH access is only one aspect of the availability of long-term services and supports to older Ohioans.

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## Acknowledgments

This report was funded by a grant from the Ohio Legislature through support from the Ohio Long-Term Care Research Project.



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