Demand Projections from: Current and Projected Future Health Care Workforce Demand in Vermont Final Report

June 16, 2017

Prepared for: State of Vermont Agency of Administration by: IHS Markit Funding for this report was provided by the State of Vermont, Vermont Health Care Innovation Project, under Vermont’s State Innovation Model (SIM) grant, awarded by the Center for Medicare and Medicaid Services (CMS) Innovation Center (CFDA Number 93.624) Federal Grant #1G1CMS33181-03-01.

- The growing elderly population in Vermont is the primary driver of increasing demand for health care services and the workforce required to meet the projected future demand for services. Between 2015 and 2030, Vermont is projected to experience a slight overall population decline (-0.9%), but will experience a 50% growth in the population aged sixty-five and older. This rapid growth in the elderly population suggests that a large portion of the increase in demand for health workers will primarily be among those professions and in care delivery settings that predominantly serve the elderly.

- Demand for physicians and mid-level providers (physician assistants [PAs] and advanced practice nurses [APRNs]) will grow between 2015 and 2030 by approximately 300 or more FTEs. The increase in demand will need to be met by a combination of treating clinicians. At the national level, the growth in physician supply will be insufficient to meet the projected growth in demand for services; however, the rapidly growing supply of PAs and APRNs will help mitigate future shortfalls of physicians. Based on current care delivery models the growth in demand between 2015 and 2030 would be approximately 207 physicians, 60 APRNs, and 30 PAs.

- Statewide demand for registered nurses will grow by about 1,422 FTEs (22%). The highest growth rates are expected in nursing home and residential care settings (69%), and home health (41%). Hospitals will continue to be the largest employer of registered nurses. However, system transformation will likely increase demand for health care providers rather than reduce demand – especially in the longer term by reducing mortality and providing more comprehensive services to patients.

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Visit www.vtahec.org to download workforce reports.

Vermont’s Future of Nursing

2017 DATA DASHBOARD

Data presented in this dashboard has been compiled by the Vermont Office of Nursing Workforce with support from UVM’s Area Health Education Centers (AHEC), and a Robert Wood Johnson Foundations’ AARP Future of Nursing State Implementation Program grant. Data sources include: the Vermont State Board of Nursing Relicensure Surveys of RNs, LPNs and APRNs, State of Vermont Agency of Administration SIM grant report, the Vermont Board of Nursing – Vermont Nursing Educational Programs Annual Report, and an email/telephone survey of Vermont hospitals conducted in June/July 2017 by Matthew Hennigar from the UVM AHEC Nursing Workforce Office and the Future of Nursing Campaign for Action.

The growing elderly population in Vermont is the primary driver of increasing demand for health care services and the workforce required to meet the projected future demand for services. Between 2015 and 2030, Vermont is projected to experience a slight overall population decline (-0.9%), but will experience a 50% growth in the population aged sixty-five and older. This rapid growth in the elderly population suggests that a large portion of the increase in demand for health workers will primarily be among those professions and in care delivery settings that predominantly serve the elderly.

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In May 2017, there were 265 new RNs graduated from Vermont schools. There were also 43 RN to BSN graduates from Vermont schools alone and 489 Vermont RNs who report being enrolled in a BS nursing program. More nurses are now continuing their nursing education (11% in 2017 compared to 8% in 2015). Ninety-two RNs and APRNs report having a doctoral degree in nursing representing 1% of the workforce.

All five nursing programs in Vermont now offer a bachelor's degree in nursing. Two programs offer a master's degree and one offers the licensed practice nursing degree and one offers the doctor of nursing practice degree.

This “Data Dashboard” has been prepared to guide decision-making regarding the nursing workforce in order to assure an adequate and well-educated supply of nurses to meet Vermont’s healthcare needs.

Progress is presented on the following goals, which were recommended by the Institute of Medicine (2010) Future of Nursing: Leading Change, Advancing Health report and endorsed by the Vermont Blue Ribbon Commission on Nursing in 2012:

1. Produce a Nurse Workforce Data Dashboard encompassing Education, Practice, Leadership, and Supply and Demand data.
2. Increase the diversity of the nursing workforce.
3. Increase the proportion of nurses with baccalaureate in nursing degrees (BSN) to 80% by 2022.
4. Double the number of nurses with a doctorate by 2022.
5. Increase nursing representation on hospital and healthcare boards, executive management teams, government advisory committees, and in other key leadership positions.

Diversity Trends in Vermont Nurses
Vermont Board of Nursing Relicensure Surveys

Non-Caucasian RNs increased from 3% in 2001 to 9% in 2017.
Non-Caucasian LPNs remained at 7% in 2014 and 2016.
Non-Caucasian APRNs have the lowest diversity at 6% in 2017.

GENDER
RN: Male 7%, Female 91%, Other/missing 2%
LPN: Male 8%, Female 92%
APRN: Male 12%, Female 87%, Other/missing 1%

MEAN AGE
RN (2017)...... 48 years
LPN (2016)...... 49 years
APRN (2017)... 49 years

Licensed Vermont Nursing Workforce

<table>
<thead>
<tr>
<th>Year</th>
<th>RNs</th>
<th>LPNs</th>
<th>APRNs</th>
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<tbody>
<tr>
<td>2014</td>
<td>6723</td>
<td>1178</td>
<td>538</td>
</tr>
<tr>
<td>2015</td>
<td>8457</td>
<td>3441</td>
<td>72</td>
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<tr>
<td>2016</td>
<td></td>
<td>620</td>
<td>134</td>
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<tr>
<td>2017</td>
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<td>220</td>
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Highest Degree in Nursing (2017)

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<thead>
<tr>
<th>Degree</th>
<th>Diploma</th>
<th>ADN</th>
<th>BSN</th>
<th>MSN</th>
<th>Doctorate</th>
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<tbody>
<tr>
<td>RNs (n=8,380)</td>
<td>7%</td>
<td>45%</td>
<td>39%</td>
<td>7%</td>
<td>0.5%</td>
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<tr>
<td>APRNs (n=617*)</td>
<td>1%</td>
<td>2%</td>
<td>3%</td>
<td>88%</td>
<td>5%</td>
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<td>Working Vermont RNs with BSN or Higher = 46%</td>
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<tr>
<td>Working Vermont RNs and APRNs with BSN or Higher = 50%</td>
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<td>Working Vermont RNs currently enrolled = 6% in Bachelors in nursing, 3% in Master’s in nursing</td>
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RNs missing 1.9%. <1% other degree with APRN certificate
National average for RNs with BSN or higher in 2017: 53%
(Future of Nursing Campaign for Action, 2017)

Demand for Hospital-Based RNs
During June/July 2017, a telephone survey of Human Resources Departments in 15 Vermont hospitals yielded a response from 100%.
The open positions for RNs and the number of full-time and part-time RNs on staff was requested. Vacancy rates were then calculated.
Average vacancy rate................. 9.5%
Full-time: 8.7%, Part-time: 8.7%, Per diem: 11.1%
Range of vacancy rates............... 0-25%
This represents a 3% increase in RN open positions over the past two years.

Nursing Education – Goal 3
In May 2017, there were 265 new RNs graduated from Vermont schools. There were also 43 RN to BSN graduates from Vermont schools alone and 489 Vermont RNs who report being enrolled in a BS nursing program. More nurses are now continuing their nursing education (11% in 2017 compared to 8% in 2015). Ninety-two RNs and APRNs report having a doctoral degree in nursing representing 1% of the workforce.

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Nurses on Hospital Boards
Of the 14 hospitals in Vermont, 9 of the 219 board members are nurses (4%).
This number has increased by 5 nurse board members since 2015.