Introduction
Highlights of Minnesota’s RN Workforce - Slide 3

Demographics
Demographics: Sex and Age – Slide 5
Demographics: Race and Ethnicity – Slide 6
Demographics: Languages Spoken in Practice – Slide 7

Education
Education: Initial Education Attainment – Slide 9
Education: Highest Educational Attainment – Slide 10
Education: MN RN Graduates – Slide 11

Employment
Employment: Hours Worked – Slide 13
Employment: Future Plans – Slide 14

At Work
RNs at Work: Specialties – Slide 16
RNs at Work: Primary Work Settings – Slide 17
RNs at Work: EHRs and Telemedicine – Slide 18
RNs at Work: Teamwork – Slide 19
RNs at Work: Cultural Competence – Slide 20
RNs at Work: Career Satisfaction – Slide 21

Geographic Distribution
Geographic Distribution: A Way of Looking at Geography – Slide 23
Geographic Distribution: by Planning Area – Slide 24

End Notes and Methodology
Methodology – Slide 25
Notes – Slide 26
As of June 2019, there were 104,355, actively licensed registered nurses in Minnesota, the majority of whom work in the Twin Cities region (slide 24).

Registered nurses are mostly female (91 percent) and younger overall (slide 6) with more than half the providers under the age of 45 and most plan to practice for at least another ten years (slide 14).

A large majority of RNs speak English (91 percent) (slide 7) and are white (91 percent) (slide 6), which may impact the populations served.

The majority of RNs work in either a hospital (51 percent) or clinic/professional office/ambulatory care facility (17 percent) (slide 17).

Registered nurses utilize electronic health records (EHRs) “all the time” (84 percent), while use of dedicated telemedicine equipment was less than 30 percent (slide 18).

There are differences in the geographic distribution of RNs across the state (slide 24). The majority of RNs remain concentrated in the 7-county Twin Cities Metro and Southeast regions (71 percent), most likely drawn to the larger hospital systems and the Mayo Clinic.
The median age of RNs was 45. As a group, RNs are younger than Minnesota physicians (median age, 50), but older than the state’s health workforce overall (median age, 41 years).

Slightly more than half of RNs were under the age of 44. This is good news for Minnesota as the percentage of older RNs retiring and leaving the workforce (see slide 15) continues to grow.

Data not shown: Only 9 percent of Minnesota RNs are male.

Source: Minnesota Board of Nursing, July 2019. Analysis done by MDH. Percentages are based on all 104,355 Minnesota licensed RNs who provided valid birth dates to the licensing board.
The majority (89 percent) of LPNs indicated they were white, and the next largest share—eight percent—indicated that they identified as black, African American, or African. Although a predominately white profession, the LPN workforce is slightly more culturally and racially diverse than rest of the health care workforce. 

(Data not shown): Thirty percent of LPNs 44 years and younger were more likely to identify as non-white versus 27 percent of LPNs who were 45 years and older.

Source: MDH Licensed Practical Nurse Workforce Questionnaire, 2017-2018. Respondents could select as many races as applicable. The chart is based on 12,561 valid survey responses.
• A majority of RNs only speak English in their practice. The second most commonly spoken language was Spanish. Some of the more frequently spoken languages listed as “other” were Tagalog, Filipino, German, Yoruba, and Chinese.
• Registered nurses usually complete either a bachelor’s degree in nursing, an associate’s degree in nursing, or a diploma from an approved nursing program. All RNs must pass an additional licensing exam to practice.

• RNs were asked about the type of degree or credential they first obtained to practice as a nurse. Over a third of RNs reported earning a bachelor’s degree (38 percent) qualifying them for their first nursing license, while 60 percent earned an associate degree or other type of certificate such as a hospital diploma.

• Data not shown: Among RNs who reported earning a bachelor’s degree, 90 percent also reported their bachelor’s degree was in nursing.

Source: MDH Licensed Practical Nurse Workforce Questionnaire, 2017-2018. Respondents could select as many races as applicable. The chart is based on 12,561 valid survey responses.
Sixty-four percent of Minnesota’s RNs have a bachelor’s degree or higher.

Data not shown: A comparison of RNs by age shows a greater percentage of RNs under 45 acquired a bachelor’s degree or higher compared to RNs 45 years and older (71 percent versus 57 percent). Most RNs earned their highest degree in Minnesota (68 percent), followed by the border states of Wisconsin at 5 percent, North Dakota at 4 percent, South Dakota at 3 percent, Iowa at 3 percent.

In 2019, Minnesota produced **3,651 new graduates** across all the RN degree programs, a five percent increase from the previous year.

The Twin Cities region has over twice as many RN graduates across all RN degree programs compared to the other regions of the state.

The Southwest region had an 18 percent increase in the number of RN graduates from 2018 to 2019, the largest regional increase of graduates compared to other regions of the Minnesota during the same time period.

*Source: Data from the Minnesota Board of Nursing’s Annual Compliance Survey.*

---

### Degrees Awarded from Minnesota’s Registered Nurse Programs, by Region and Year*

<table>
<thead>
<tr>
<th>Region</th>
<th>Degree Type</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>Associate Degree</td>
<td>239</td>
<td>249</td>
<td>246</td>
<td>252</td>
<td>262</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s of Science</td>
<td>121</td>
<td>125</td>
<td>127</td>
<td>125</td>
<td>121</td>
</tr>
<tr>
<td></td>
<td><strong>Sub Total</strong></td>
<td><strong>360</strong></td>
<td><strong>374</strong></td>
<td><strong>373</strong></td>
<td><strong>377</strong></td>
<td><strong>383</strong></td>
</tr>
<tr>
<td>Northeast</td>
<td>Associate Degree</td>
<td>208</td>
<td>187</td>
<td>199</td>
<td>221</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s of Science</td>
<td>161</td>
<td>169</td>
<td>164</td>
<td>171</td>
<td>185</td>
</tr>
<tr>
<td></td>
<td><strong>Sub Total</strong></td>
<td><strong>369</strong></td>
<td><strong>356</strong></td>
<td><strong>363</strong></td>
<td><strong>392</strong></td>
<td><strong>395</strong></td>
</tr>
<tr>
<td>Northwest</td>
<td>Associate Degree</td>
<td>343</td>
<td>337</td>
<td>298</td>
<td>323</td>
<td>311</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s of Science</td>
<td>87</td>
<td>77</td>
<td>78</td>
<td>95</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td><strong>Sub Total</strong></td>
<td><strong>430</strong></td>
<td><strong>414</strong></td>
<td><strong>376</strong></td>
<td><strong>418</strong></td>
<td><strong>397</strong></td>
</tr>
<tr>
<td>Southeast</td>
<td>Associate Degree</td>
<td>354</td>
<td>340</td>
<td>344</td>
<td>351</td>
<td>246</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s of Science</td>
<td>268</td>
<td>300</td>
<td>289</td>
<td>293</td>
<td>287</td>
</tr>
<tr>
<td></td>
<td><strong>Sub Total</strong></td>
<td><strong>622</strong></td>
<td><strong>640</strong></td>
<td><strong>633</strong></td>
<td><strong>644</strong></td>
<td><strong>533</strong></td>
</tr>
<tr>
<td>Southwest</td>
<td>Associate Degree</td>
<td>149</td>
<td>146</td>
<td>148</td>
<td>134</td>
<td>158</td>
</tr>
<tr>
<td></td>
<td><strong>Sub Total</strong></td>
<td><strong>149</strong></td>
<td><strong>146</strong></td>
<td><strong>148</strong></td>
<td><strong>134</strong></td>
<td><strong>158</strong></td>
</tr>
<tr>
<td>Twin Cities</td>
<td>Associate Degree</td>
<td>909</td>
<td>1130</td>
<td>1112</td>
<td>964</td>
<td>1121</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s of Science</td>
<td>425</td>
<td>430</td>
<td>403</td>
<td>423</td>
<td>530</td>
</tr>
<tr>
<td></td>
<td>Master’s in Nursing</td>
<td>65</td>
<td>119</td>
<td>125</td>
<td>135</td>
<td>134</td>
</tr>
<tr>
<td></td>
<td><strong>Sub Total</strong></td>
<td><strong>1399</strong></td>
<td><strong>1679</strong></td>
<td><strong>1640</strong></td>
<td><strong>1522</strong></td>
<td><strong>1785</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td><strong>3,329</strong></td>
<td><strong>3,609</strong></td>
<td><strong>3,533</strong></td>
<td><strong>3,487</strong></td>
<td><strong>3,651</strong></td>
</tr>
</tbody>
</table>
Employment: Hours Worked

• The median work week for RNs was 37 hours, and more than half of RNs worked between 31 and 40 hours per week (62 percent). Twelve percent of RNs reported working 41+ hours in a typical week.

• Data not shown: An estimated 90 percent of licensed RNs reported on the MDH questionnaire that they were “working in a paid or unpaid position related to [their] license.” This indicates that the vast majority of the RN workforce is working in the field. Among the 10 percent of RNs who were not working, 62 percent had retired or were working in another role unrelated to their license. Another 28 percent said they were not working because of family or medical reasons and 10 percent were in search of a nursing position. RNs spent the majority of their time caring for patients. Seventy-one percent reported that they spent more than half of their time providing direct patient care. This is another indication that RNs are being fully utilized professionally.

Source: MDH RN Workforce Questionnaire, 2017-2018. Percentages are based on 58,104 valid responses.
Employment: Future Plans

“How long do you plan to continue practicing as a Registered Nurse in Minnesota?”

- When asked about future plans, 67 percent of RNs said they were planning to practice for more than 10 years. This is an increase from 62 percent of RNs in 2015-2016 who reported plans to practice more than 10 years.

- Data not shown: Sixteen percent of RNs indicated that they planned to leave the field within five years. Of those planning to leave, the vast majority (80 percent) said they planned to retire. Nine percent of this subgroup planned to leave to pursue training to advance in their current or a related profession, while 3 percent planned to leave the field due to burnout or dissatisfaction, and another 3 percent said they planned to pursue a different career. The final five percent were leaving due to family obligations or for some other personal reason.

Source: MDH RN Workforce Questionnaire, 2017-2018. Percentages are based on 58,393 valid responses.
At Work: Specialties

- The most commonly reported work setting among LPNs was an ambulatory care setting such as a clinic, professional office, or health center. A large share (nearly one in three) of LPNs also commonly work in long-term care facilities.

- Registered Nurses were asked to identify all the medical specialties they practiced. As shown above, Medical Surgery and Acute Critical Care were the most commonly reported specialties among RNs, with 19 percent and 18 percent respectively identifying each area as their specialty. Gerontology was the third most common specialty reported by RNs.

- The largest share of RNs (21 percent) reported they had another specialty not included in the selection list. Based on open-ended responses, RNs’ most common “other” specialties were occupational, anesthesiology, rehabilitation, cardiology, research and care coordination.

Source: MDH RN Workforce Questionnaire, 2017-2018. Respondents could select as many specialties as applicable; therefore, totals may not sum to 100 percent. Percentages are based on 61,368 valid responses.
At Work: Primary Work Settings

RNs were asked to identify their primary work setting. Most RNs described working in either a hospital or clinical setting (68 percent).

Data not shown: When RNs were asked about the number of physical locations where they worked, 76 percent reported working in one location; 13 percent reported splitting their time across two locations, and another 11 percent said they worked at three or more different locations.

Source: MDH RN Workforce Questionnaire, 2017-2018. Percentages are based on 54,347 valid responses. The survey includes questions on both the “primary” and “secondary” settings in which providers work. For the purposes of the analysis in this section, we present data only on the setting RNs reported as their “primary” setting. An analysis of work settings indicates that the types of settings in which RNs worked did not differ depending on whether they were primary or secondary.

<table>
<thead>
<tr>
<th>Primary Setting</th>
<th>Share of RNs Working in this Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>51.0%</td>
</tr>
<tr>
<td>Clinical/Professional Office/Health Center/Ambulatory Care</td>
<td>17.4%</td>
</tr>
<tr>
<td>Long-Term Care Facility</td>
<td>8.1%</td>
</tr>
<tr>
<td>Home Health Care</td>
<td>4.8%</td>
</tr>
<tr>
<td>Insurance/Benefits Management Organization</td>
<td>4.3%</td>
</tr>
<tr>
<td>Academic (Teaching/Research)</td>
<td>3.2%</td>
</tr>
<tr>
<td>Public Health Agency</td>
<td>1.6%</td>
</tr>
<tr>
<td>School (Pre-K to 12)</td>
<td>1.5%</td>
</tr>
<tr>
<td>Community/Faith-Based Organization</td>
<td>0.9%</td>
</tr>
<tr>
<td>Correctional Facility</td>
<td>0.6%</td>
</tr>
<tr>
<td>State, County, City Agency</td>
<td>0.5%</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>0.1%</td>
</tr>
<tr>
<td>Other</td>
<td>5.9%</td>
</tr>
</tbody>
</table>
At Work: EHRs and Telemedicine

LPNs’ Use of Electronic Health Records and Telemedicine Equipment

- The 2017-2018 questionnaire included items about the use of both electronic health records (EHRs) and dedicated telemedicine equipment. Among RNs who reported seeing patients, the results showed a majority of RNs use EHRs “all the time” (84 percent).

- When asked how often telemedicine is used to deliver patient care, most RNs reported not using telemedicine equipment in their practice (71 percent). The use of telemedicine by providers is not always reimbursable by private insurance carriers.

Source: MDH RN Workforce Questionnaire, 2017-2018. Percentages are based on 48,239 and 48,245 valid responses to both questions respectively.
Health care providers increasingly work in multidisciplinary teams, prompting educators and health policymakers to ask how best to train providers to communicate and coordinate across professions. In 2017-2018, MDH added a question to the workforce survey about multidisciplinary team work. As shown above, 78 percent of RNs reported that learning on the job (either informal or formal) best prepared them to work in multidisciplinary teams.

Source: MDH RN Workforce Questionnaire, 2017-2018. Percentages are based on 62,065 valid responses.
A question about the best way to prepare the health care workforce to provide “culturally competent” care was also added to the survey. As shown above, RNs most commonly indicated that formal or informal learning on the job (67 percent) provided the best preparation for working with diverse groups of patients.

Source: MDH Licensed Practical Nurse Workforce Questionnaire, 2017-2018. Percentages are based on 12,586 valid responses.
The 2017-2018 survey included questions on career satisfaction in the past 12 months and overall. As shown above, the majority of LPNs indicated that they were either “satisfied” or “very satisfied,” both in the past 12 months and overall. LPNs were more likely to report being very satisfied with their career overall compared to the last 12 months—a trend typical among health care professionals for which work satisfaction data is available. This is consistent with national findings which suggest that the increase in administrative work—such as dealing with billing, insurance, and electronic medical records—has dampened work satisfaction among health care providers.
A Way of Looking at Geography

By state planning areas

For more information:

https://apps.deed.state.mn.us/assets/lmi/areamap/plan.shtml
Over half of all RNs work in the 7-County Metro area, with another 15 percent in the Southeast region, which is likely reflecting the presence of the Mayo Clinic in Rochester.

With the exception of the Northeast region, the Central, Northwest, and Southwest regions all have smaller percentages of RNs relative to the population residing there, indicating there may be an unmet need for RNs.

Source: Percentages are based on 56,051 valid Minnesota business addresses reported during license renewal at the MN Board of Nursing and geocoded by the Minnesota Department of Health. 2017 Population data are from MN State Demographer’s office. Details about Department of Employment and Economic Development’s Planning Regions can be found at https://apps.deed.state.mn.us/assets/lmi/areamap/plan.shtml
Methodology

The data in this report come from two sources:

• The Minnesota Board of Nursing (MBN) provides data on the entire population of Registered Nurses (RNs) who have active licenses in the state of Minnesota. MBN maintains this database and provides the data to the Minnesota Department of Health, Office of Rural Health and Primary Care (MDH ORHPC). This report uses data current as of July 2019. At that time, there were a total of 104,355 RNs with active Minnesota licenses, approximately 55 percent of whom indicated that their primary business address was in Minnesota. MDH ORHPC analysts clean organize, clean, and geocode addresses that come from the board to identify practice locations (shown in Slides 25 and 26).

• The 2017-2018 MDH ORHPC RN Questionnaire collects additional demographic and workforce data from RNs. MDH ORHPC administered the survey to all RNs who renewed their Minnesota license in the calendar years of 2017-2018. A total of 69,600 responses to the workforce questionnaire were received; a response rate of 67 percent.

• See the ORHPC website for more details about the methodology (www.health.state.mn.us/data/workforce/method.html) of survey.
Visit our website at Reports on Workforce to learn more about the Minnesota health care workforce.

County-level data for this profession is available at MN Health Professions by County Data.

Minnesota Department of Health
Office of Rural Health and Primary Care
85 East 7th Place, Suite 220
Saint Paul, MN 55117
(651) 201-3838
health.orhpc@state.mn.us