

Indiana's School-Based Health Workforce



December 2020



SCHOOL OF MEDICINE

BOWEN CENTER FOR HEALTH
WORKFORCE RESEARCH & POLICY

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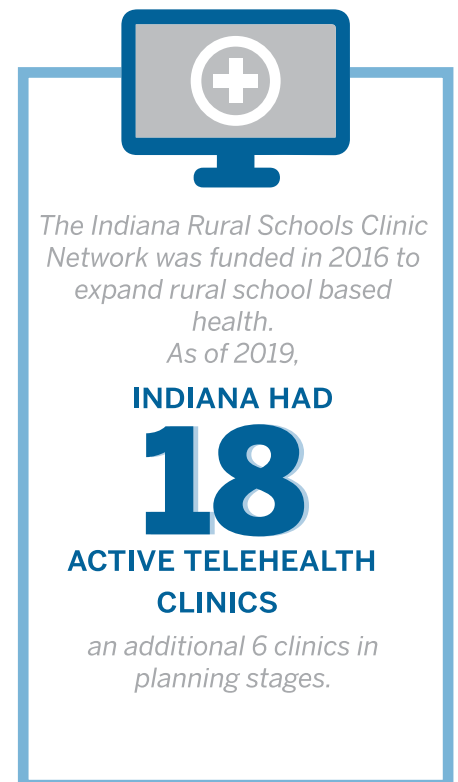
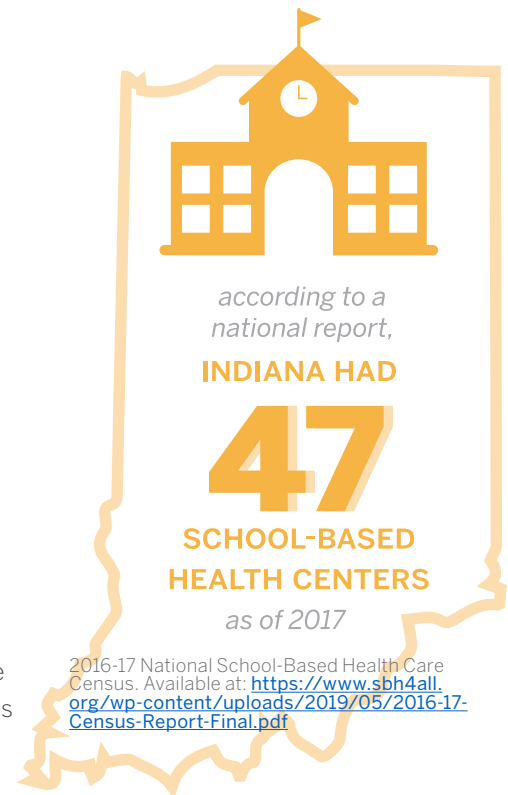
INTRODUCTION

SCHOOL BASED HEALTH

Children are our future. Education and healthcare are essential building blocks to the foundation that helps children grow and thrive. By connecting these blocks and offering school-based health care, communities have strengthened the foundations of countless children in Indiana.

For some children and families, healthcare can be difficult to access. Even when healthcare services are available in the community, they may not be accessible to children and families due to transportation issues, work schedule conflicts (parents may have to miss work for appointments), or limited financial resources (inability to pay for care).^{1,2,3,4} Additionally, many healthcare appointments are scheduled during school hours, causing children to miss school. Travel distance to appointments and wait times at healthcare sites can increase the amount of time students are out of school. Frequent absences impact a child's academic success.^{5,6,7} In the context of the many challenges related to a child's healthcare access, families may be forced to make impossible choices between their child's health, academic performance, and a parent's continued employment.

The concept of "school-based health care" aligns foundational building blocks for children: education and health care. In the early 1900s, school systems began to embed a nurse within schools to mitigate the spread of contagious diseases within schools.⁸ Beginning in the 1960s, academic programs for some providers (including nurse practitioner and physician assistants) began to offer coursework or specialties in school-based health care to train practitioners to deliver care in these types of settings. Today, a myriad of health care providers serve in school-based health care (SBHC) settings under various models to deliver primary care, preventive services, and other related health services to students.⁹



https://www.indianaruralhealth.org/clientuploads/services/irha-school-network/IRSCN_Map_jm_V1.pdf

1 Margolis, P. A., Carey, T., Lannon, C. M., Earp, J. L., & Leininger, L. (1995). The rest of the access-to-care puzzle: addressing structural and personal barriers to health care for socially disadvantaged children. *Archives of pediatrics & adolescent medicine*, 149(5), 541-545.

2 Newacheck PW, Hughes DC, Stoddard JJ. Children's access to primary care: differences by race, income, and insurance status. *Pediatrics*. 1996 Jan;97(1):26-32. PMID: 8545220.

3 Grant R, Gracy D, Goldsmith G, Sobelson M, Johnson D. Transportation Barriers to Child Health Care Access Remain After Health Reform. *JAMA Pediatr*. 2014;168(4):385-386. doi:10.1001/jamapediatrics.2013.4653

4 Yang S, Zarr RL, Kass-Hout TA, Kourosh A, Kelly NR. Transportation barriers to accessing health care for urban children. *J Health Care Poor Underserved*. 2006 Nov;17(4):928-43. doi: 10.1353/hpu.2006.0137. PMID: 17242539.

5 Walker, S. C., Kerns, S. E., Lyon, A. R., Bruns, E. J., & Cosgrove, T. J. (2010). Impact of school-based health center use on academic outcomes. *Journal of Adolescent Health*, 46(3), 251-257.

6 Geierstanger, S. P., Amaral, G., Mansour, M., & Walters, S. R. (2004). School-based health centers and academic performance: research, challenges, and recommendations. *Journal of School Health*, 74(9), 347-352.

7 Allison, M. A., & Attisha, E. (2019). The link between school attendance and good health. *Pediatrics*, 143(2).

8 Keeton V, Soleimanpour S, Brindis CD. School-based health centers in an era of health care reform: building on history. *Curr Probl Pediatr Adolesc Health Care*. 2012;42(6):132-158. doi:10.1016/j.cppeds.2012.03.002

9 Arenson M, Hudson PJ, Lee N, Lai B. The Evidence on School-Based Health Centers: A Review. *Glob Pediatr Health*. 2019;6:2333794X19828745. Published 2019 Feb 19. doi:10.1177/2333794X19828745

DEFINING SCHOOL-BASED HEALTH CENTERS

WHAT IS A SCHOOL-BASED HEALTH CENTER?

Federal code defines a School-Based Health Center as a health clinic that:

- “1) is located in or near a school facility of a school district or board or of an Indian tribe or tribal organization;
- 2) is organized through school, community, and health provider relationships;
- 3) is administered by a sponsoring facility;
- 4) provides through health professionals primary health services to children in accordance with State and local law, including laws relating to licensure and certification; and
- 5) satisfies such other requirements as a State may establish for the operation of such a clinic.”

Sources: 42 U.S. Code §1397jj(c)(9)

WHAT TYPES OF DELIVERY MODELS MAY BE CONSIDERED SCHOOL-BASED HEALTH?

- 1) Traditional Model: a fixed site on a school campus with providers on-site,
- 2) School-Linked Centers: a fixed site near campus (with a formal or in-formal link with the school) with providers on site who may also be accessed remotely,
- 3) Mobile Centers: an equipped bus or van, on or near a school campus, providers are on site and may also be accessed remotely
- 4) Telehealth centers: at a fixed location on campus, primary care providers are only accessed remotely, (though other services like mental and health education might be available on site.)

School-based Health Alliance. National School-Based Health Care Census. Available at: <https://www.sbh4all.org/school-health-care/national-census-of-school-based-health-centers/>

FUNDING FOR SCHOOL-BASED HEALTH CENTERS

HOW ARE SCHOOL-BASED HEALTH CENTERS FINANCED?

Revenue sources vary by community/center, but the majority of school-based health centers bill for patient health care visits, so they are financed by the patient (student) insurance source (Medicaid, private insurer, Children’s Health Insurance Program/CHIP, or self-pay).

Non-reimbursable services may be covered by a variety of sources, including

- block grants (such as the School-Based Health Center Capital Program operated by the Health Resources and Services Administration)
- state appropriations or pass-through funds, such as those to a local health department
- private sector support, such as local foundations
- or financial or in-kind support provided by the SBHC clinical partner

School-based Health Alliance. Who Pays for SBHCs?. Available at: <https://www.sbh4all.org/school-health-care/school-based-health-care-financing/>

Arenson M, Hudson PJ, Lee N, Lai B. The Evidence on School-Based Health Centers: A Review. *Glob Pediatr Health*. 2019;6:2333794X19828745. Published 2019 Feb 19. doi:10.1177/2333794X19828745

INDIANA SCHOOL-BASED HEALTH CENTERS FUNDING

Delivery of health care in school-based settings is primarily supported through student/patient insurance reimbursement. Other services may be supported through community health center funding (as a Federally Qualified Health Center Lookalike). Most recently, schools can also obtain Secured School Safety Grants through the Department of Homeland Security to support provision of mental health and emotional wellbeing services delivered to students.

State Budget Bill 2019-2021. Available at: https://www.in.gov/sba/files/AP_2019_0_0_0_HEA_1001_-_The_Budget_Bill.pdf

Department of Homeland Security Secured School Safety Grant Program. Available at: <https://www.in.gov/dhs/securedschoolsafety.htm>

THIS REPORT

The purpose of this report is to describe the characteristics associated with the licensed workforce that reports working in school-based settings. For the purposes of this report, we will describe these individuals as the **“school-based health workforce.”**

WHAT WAS PREVIOUSLY KNOWN ABOUT INDIANA’S SCHOOL-BASED HEALTH WORKFORCE?

The short answer is some, but very little. In 2018, the Indiana Department of Education issued a voluntary survey to school nurses to understand about the geographies of their schools, the students they serve, students’ medication characteristics, and the specific services they provide (ex: nebulizer treatments, administering insulin, etc.). The 2018 school nurse survey results¹⁰ included information on 1,017 school nurses that voluntarily responded to the survey. The report found that these respondents accounted for “56% of traditional public schools, 14% of non-public schools, and 5% of charter schools” in Indiana. However, it is likely that this does not include all of the school nurses in Indiana, and although gathering information on nurses is a good start, there are many other profession types that serve in school-based settings.

WHAT DO WE KNOW NOW ABOUT INDIANA’S SCHOOL-BASED HEALTH WORKFORCE?

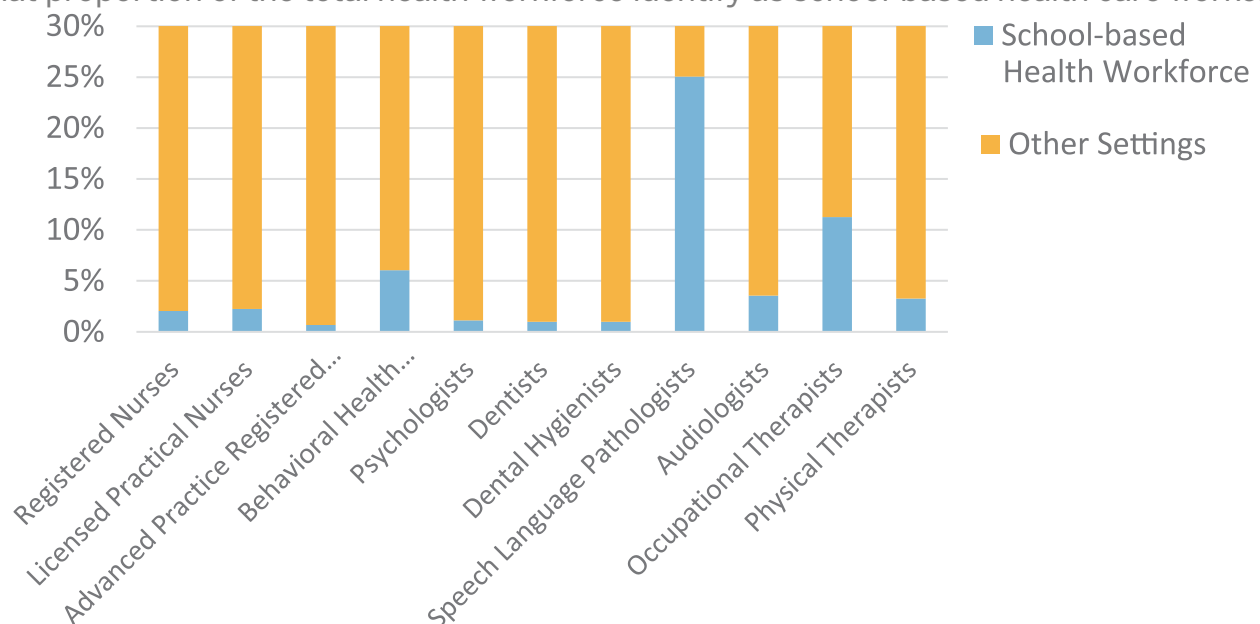
Because of recent legislation and state investments in data infrastructure, we can now know much more about Indiana’s school-based health workforce.

In fact, Indiana is fortunate to have a mechanism in place to collect robust information on the practice characteristics of all licensed health professionals. As a result of a law that went into effect in 2019¹¹, many professions are required to provide updated information on their practice characteristics when they renew their license every two years. However, even for many licensed professionals that are not included in this requirement, a survey is administered during license renewal with a high response rate. For most licensed health professions, information is captured on practice setting type or practice specialty. The response options for these questions vary by profession (for example, the practice setting options for a dentist would be quite different from the practice setting options for a nurse or a mental health professional), but many professions include some variation of “school-based health” as a setting option.

HOW WAS THIS REPORT PREPARED?

For this report, we reviewed all of the license renewal surveys administered to Indiana’s licensed health professions. We highlighted any data point that could help us identify those health professionals that serve in schools, and used that to identify the professionals that work in school-based health care in Indiana. The graphic on the following page identifies which professions were included in this report, and what data variable we used to identify the school-based health professionals. Table 1 in the Appendix gives additional information as to how these professionals were identified based on their response options to their professions’ licensure survey. All data were aggregated using SAS 9.4. For a more detailed methodology, check out Appendix B.

What proportion of the total health workforce identify as school-based health care workers?



¹⁰ A summary of the Indiana Department of Education’s 2018 School Nurse Report is available at <https://www.doe.in.gov/sites/default/files/health/final-sn-data-report-disclaimer-1-11-19.pdf>, beginning on page 19.

¹¹ Indiana Senate Enrolled Act 223-2018. Information available at: <http://iga.in.gov/legislative/2018/bills/senate/223#document-b0603ddf>

INCLUDED IN THIS REPORT

THOSE WHO ARE INCLUDED:



- **Advanced Practice Registered Nurses (APRNs)**
- **Registered Nurses (RNs)**
- **Licensed Practical Nurses (LPNs)**



- **Behavioral Health and Human Service (BHHS) Professionals**
- **Psychologists**



- **Dentists**
- **Dental Hygienists**



- **Physical Therapists**
- **Occupational Therapists**
- **Audiologists**
- **Speech Language Pathologists**

LIMITATIONS

We hope this report will contribute to discussions on school-based health care in Indiana. However, we want to note some important limitations in this report to minimize inappropriate conclusions or implications. First, as discussed in the previous section, not all profession types are included in this report. Excluding physicians and physician assistants because of a lack of data is a significant limitation. Secondly, even among the professions that were included, there may be missing data. Many professions are required to report their practice settings (including nurses and behavioral health), but there are many other professions for which reporting their practice characteristics is voluntary. Among the professions included in this report, speech language pathologists, audiologists, occupational therapists, and physical therapists survey response were voluntary. As such, there may be individuals from these professions that are practicing in a school-based setting that are not included in this report. Third, there may be other professionals that are practicing in school-based settings that are not surveyed at all and are excluded in the report (ex: athletic trainers).

WHO IS NOT INCLUDED IN THE REPORT?

- Physicians
- Physician Assistants

Unfortunately, the above professions' license renewal surveys did not include school-based health as a specialty or setting type. These surveys included specialty and practice setting options for physicians that were based on a Minimum Data Set published by the federal government and recommended to be administered to physicians.¹ School-based health was not a setting or specialty option so those individuals are not able to be identified using the licensure surveys and they are therefore excluded from this report.

WHAT INFORMATION IS INCLUDED IN THIS REPORT?

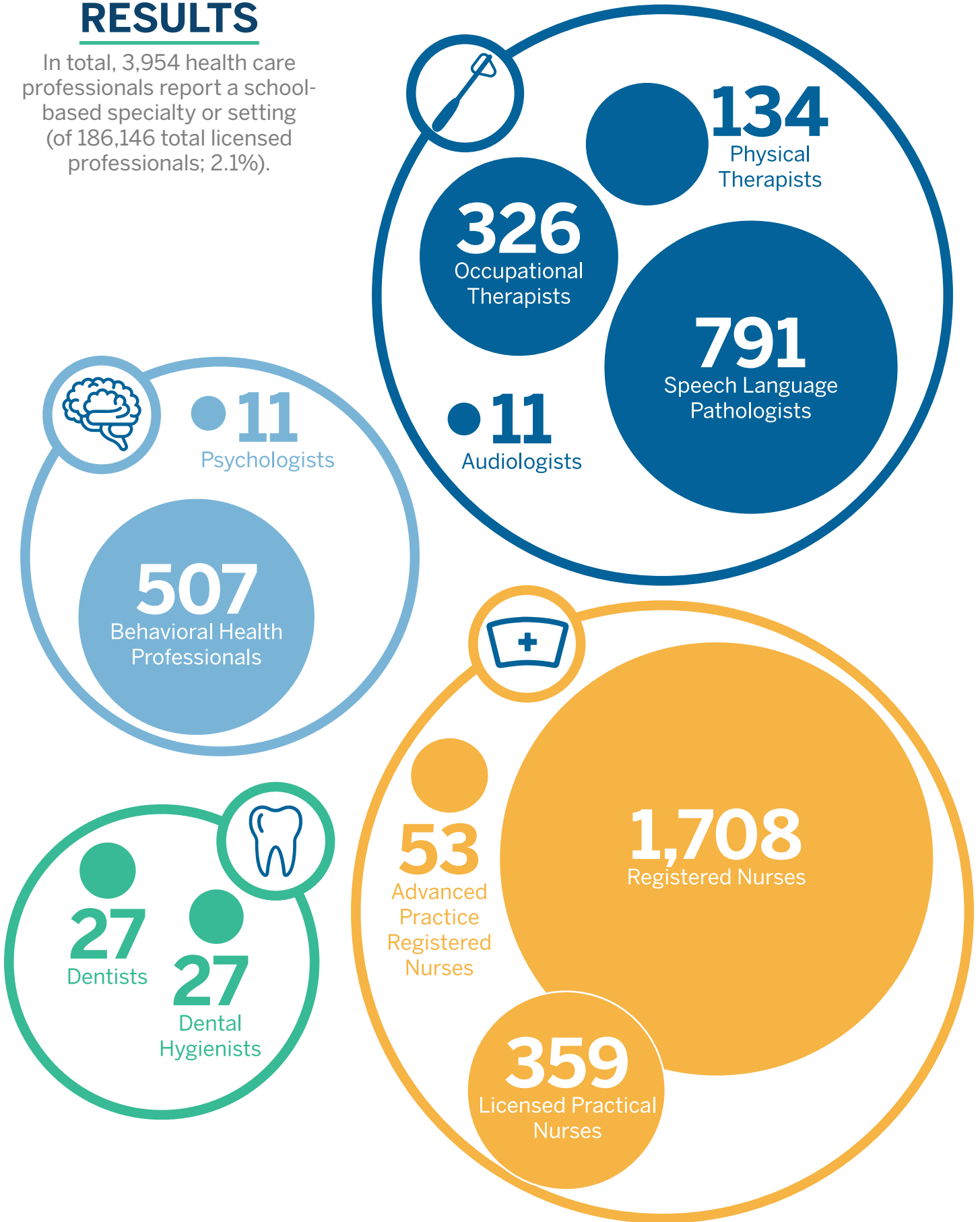
In this report, we included a side-by-side comparison of the following characteristics associated with the total workforce in Indiana and the school-based health workforce in that profession

- License counts vs. actively practicing
- Labor market indicators (such as future employment plans and mean age)
- Educational characteristics (such as highest degree and what proportion were trained in Indiana)
- Practice characteristics (such as roles/fields of employment and rurality of practice location)

¹ Minimum Data Set: Physicians. Available at: <https://bhw.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/minimum-data-sets/physicians.pdf>

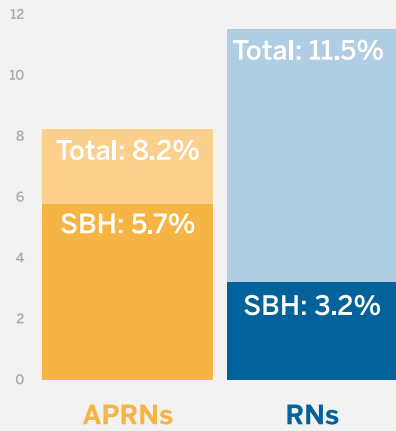
RESULTS

In total, 3,954 health care professionals report a school-based specialty or setting (of 186,146 total licensed professionals; 2.1%).





Nurses Providing Telehealth Services



INCLUSION CRITERIA



LABOR MARKET INDICATORS



EDUCATION



PRACTICE

APRNs

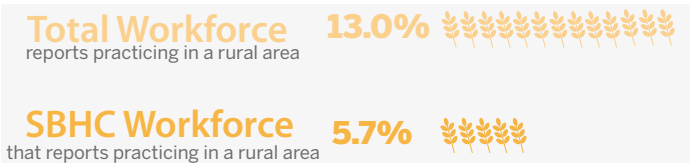
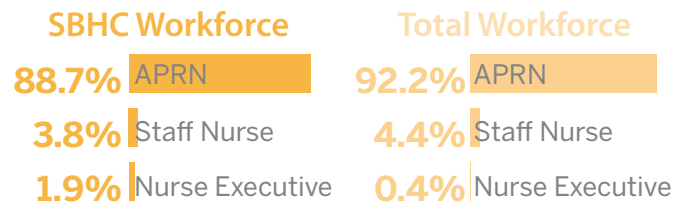
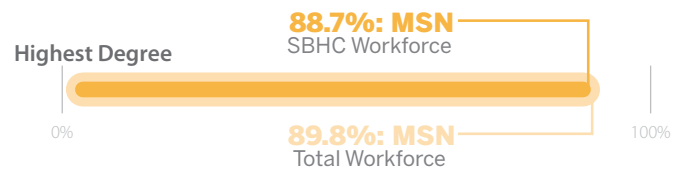
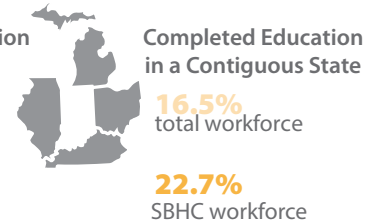
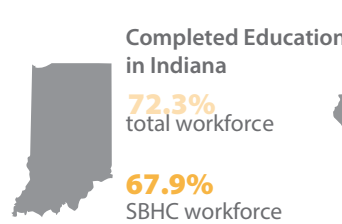
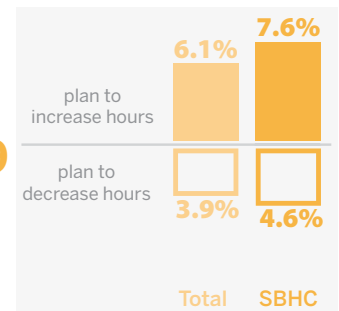
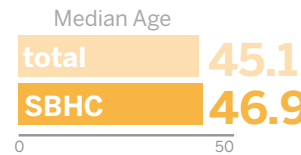
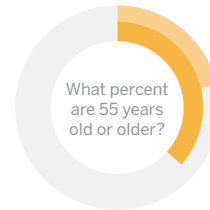
Advanced Practice Registered Nurses

10,022 Total Licenses

7,746 Actively Practicing

53 Actively Practicing in School-Based Health Care (SBHC)

45.3 Total SBHC FTE



RNs

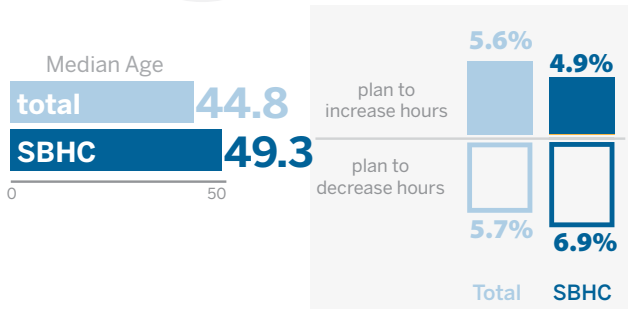
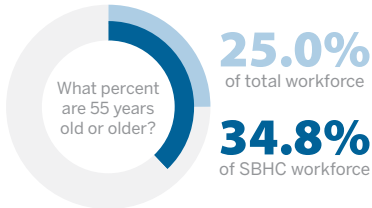
Registered Nurses

116,259 Total Licenses

81,539 Actively Practicing

1,708 Actively Practicing in School-Based Health Care (SBHC)

1,365.0 Total SBHC FTE



LPNs

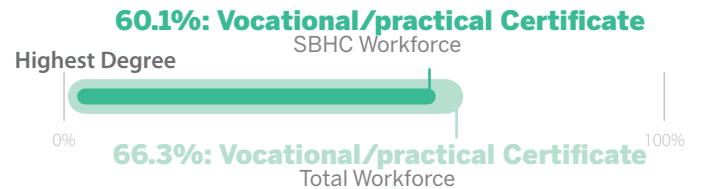
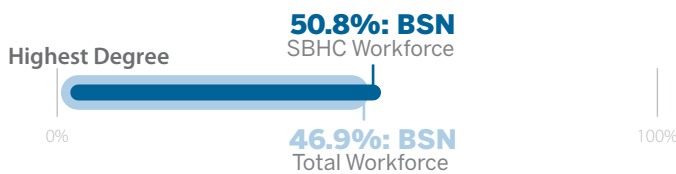
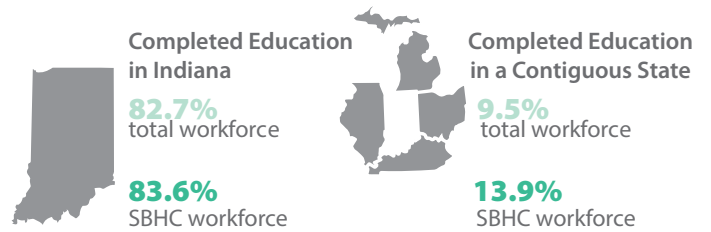
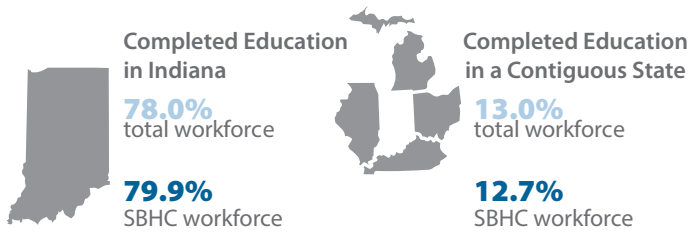
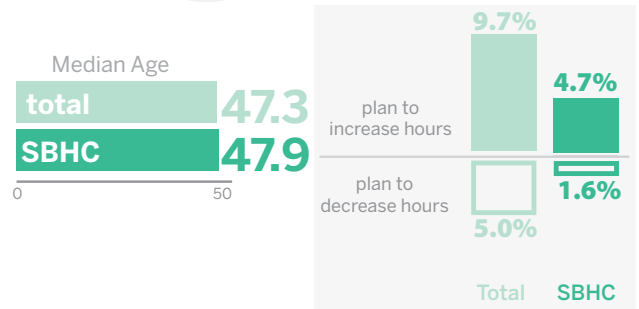
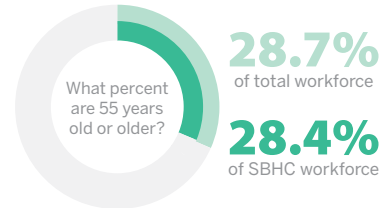
Licensed Practical Nurses

23,063 Total Licenses

15,597 Actively Practicing

359 Actively Practicing in School-Based Health Care (SBHC)

295.9 Total SBHC FTE

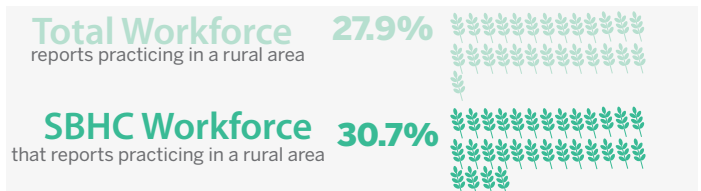


23,063 Total Licenses

15,597 Actively Practicing

359 Actively Practicing in School-Based Health Care (SBHC)

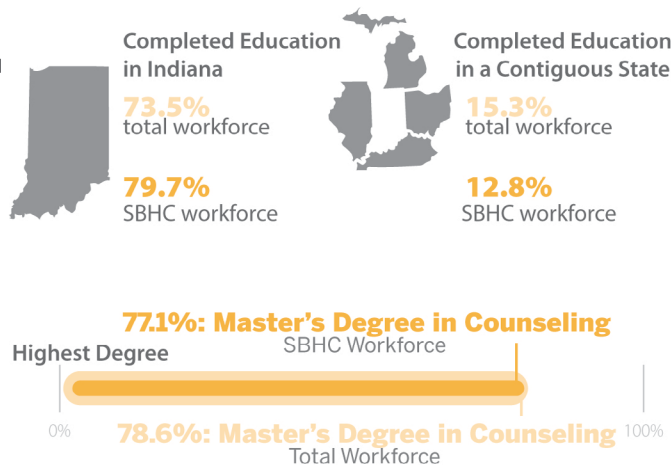
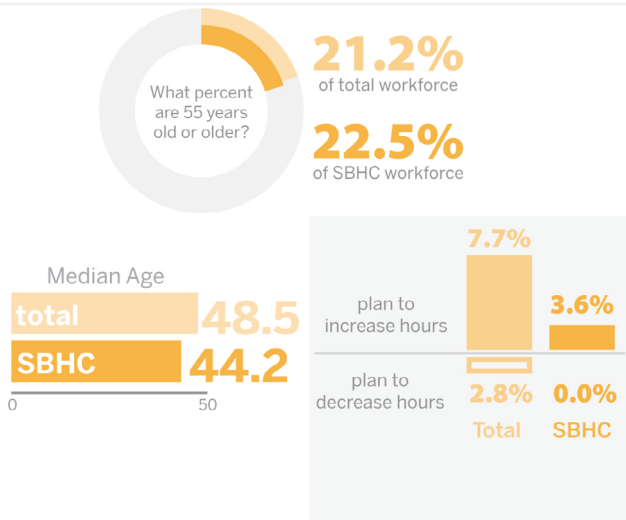
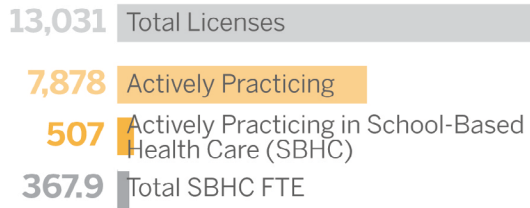
295.9 Total SBHC FTE



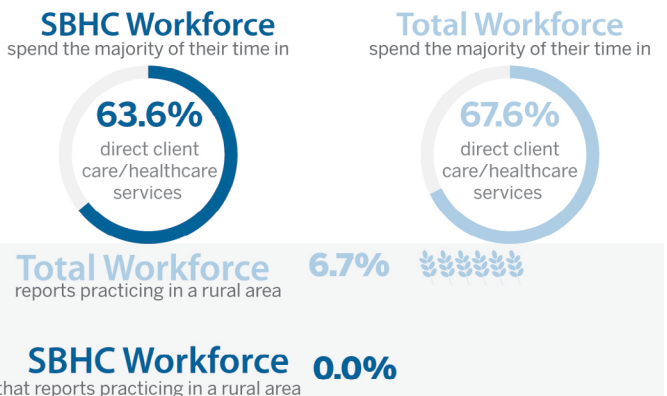
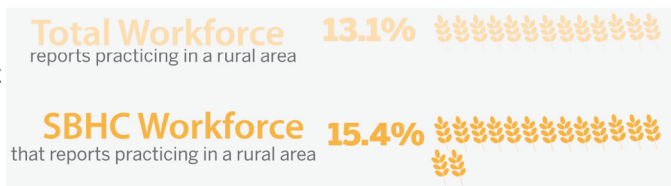
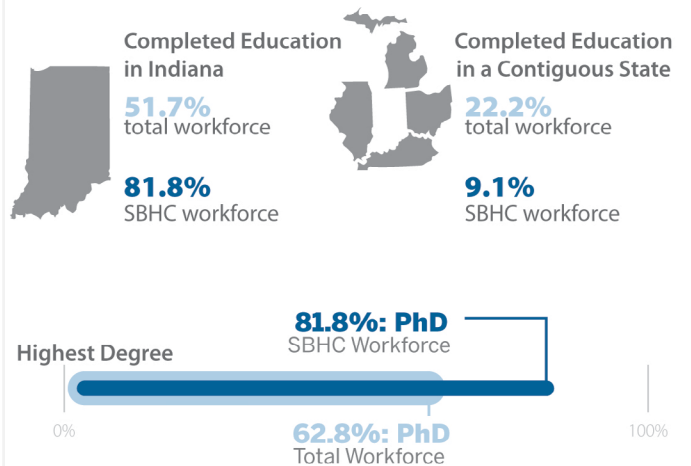
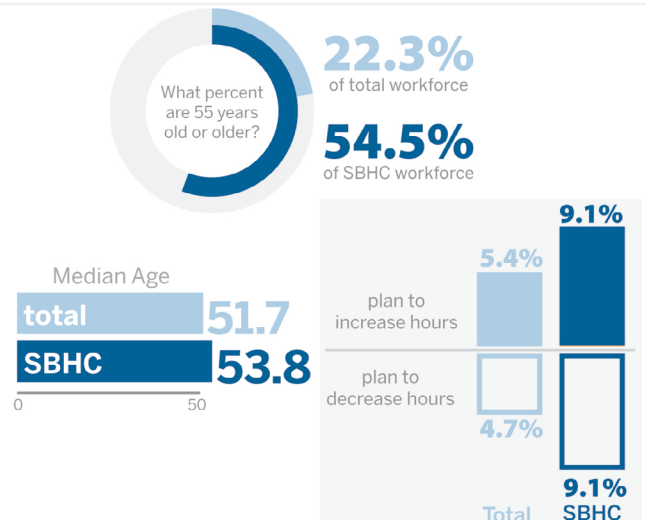
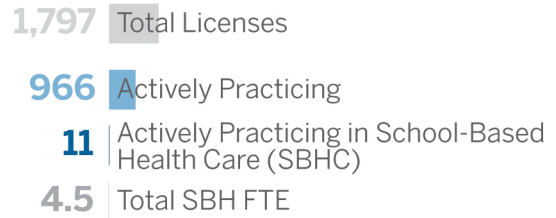


BHHS Professionals

Behavioral Health and Human Service Professionals*



Psychologists



*BHHS Professionals: Addiction Counselors, Clinical Addiction Counselors, Social Workers, Clinical Social Workers, Marriage and Family Associates, Marriage and Family Therapists, Mental Health Associates, Mental Health Counselors



Dentists

Dental Hygienists



INCLUSION CRITERIA

4,002 Total Licenses

2,697 Actively Practicing

27 Actively Practicing in School-Based Health Care (SBHC)

15.6 Total SBHC FTE

4,996 Total Licenses

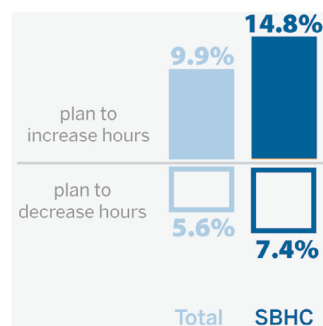
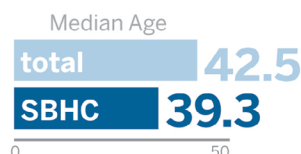
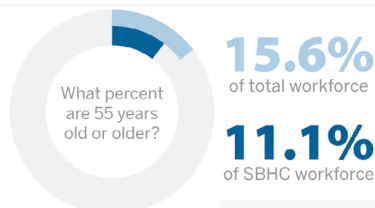
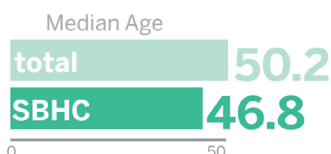
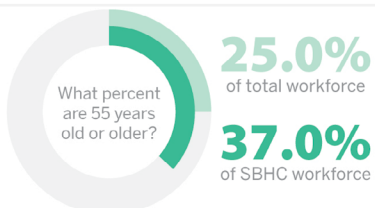
3,521 Actively Practicing

27 Actively Practicing in School-Based Health Care (SBHC)

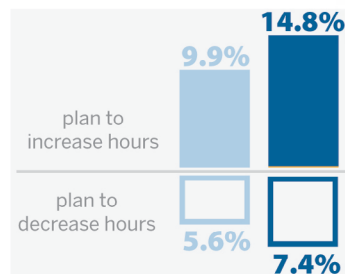
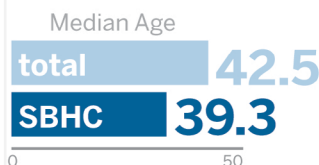
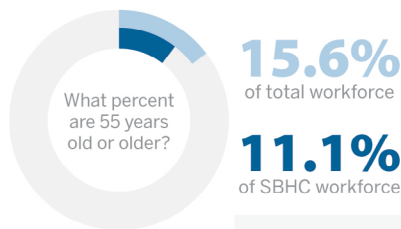
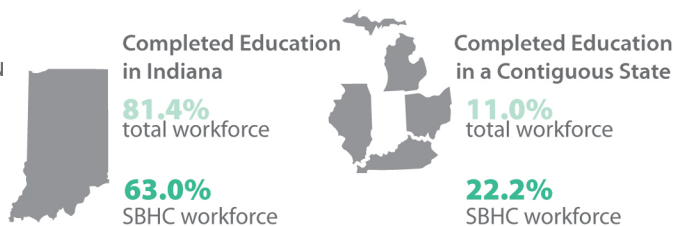
13.7 Total SBH FTE



LABOR MARKET INDICATORS



EDUCATION

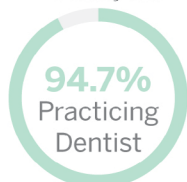


PRACTICE

SBHC Workforce Primary Role



Total Workforce Primary Role



Total Workforce 13.4% reports practicing in a rural area

SBHC Workforce 3.7% that reports practicing in a rural area

Total Workforce 18.0% reports practicing in a rural area

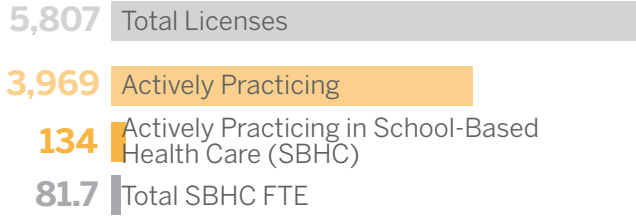
SBHC Workforce 11.1% that reports practicing in a rural area



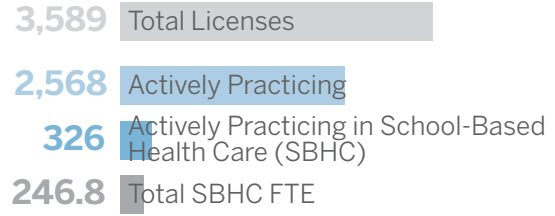
Physical Therapists



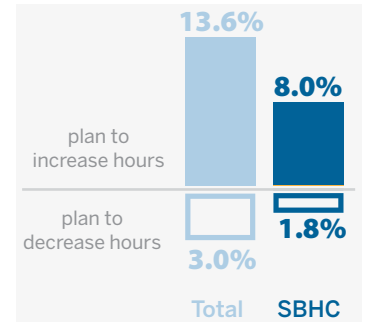
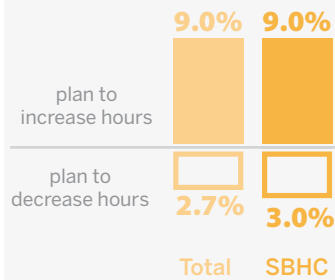
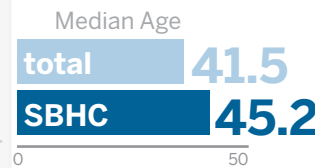
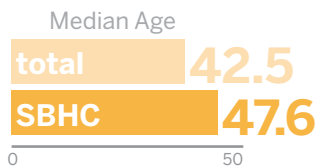
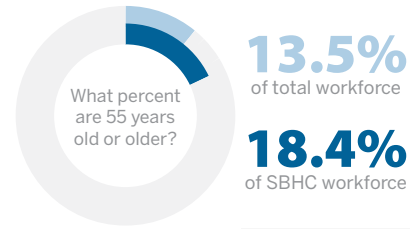
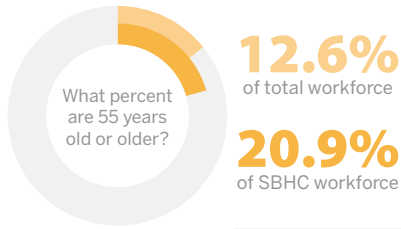
INCLUSION CRITERIA



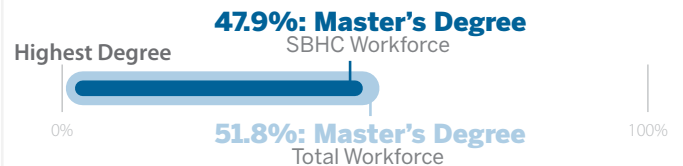
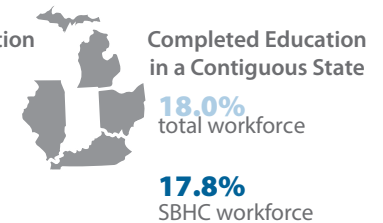
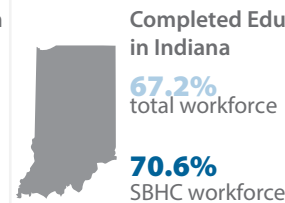
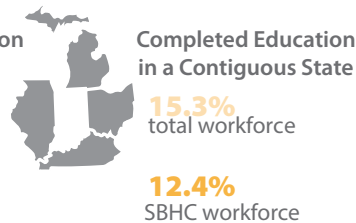
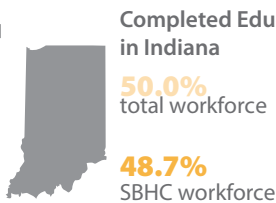
Occupational Therapists



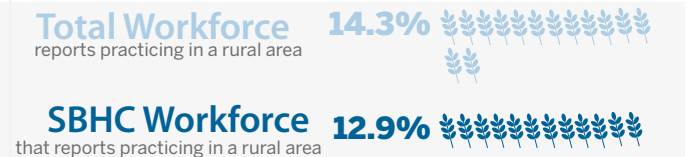
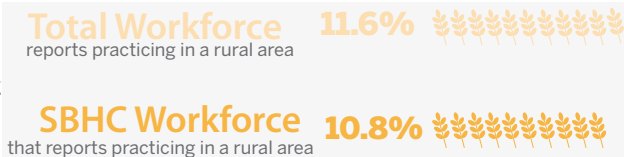
LABOR MARKET INDICATORS



EDUCATION

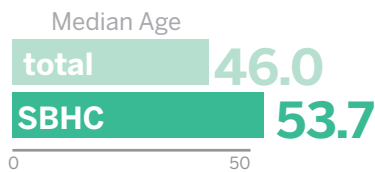
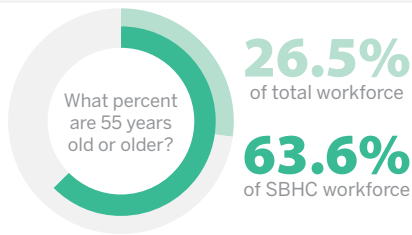


PRACTICE



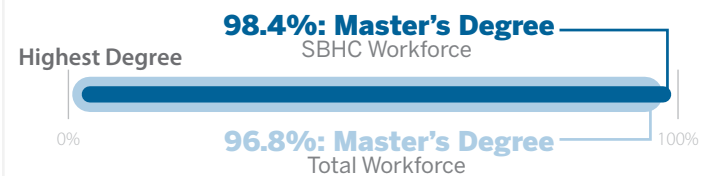
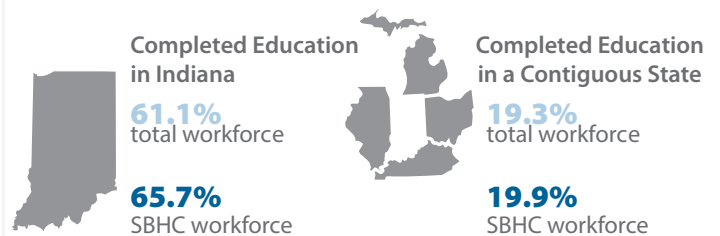
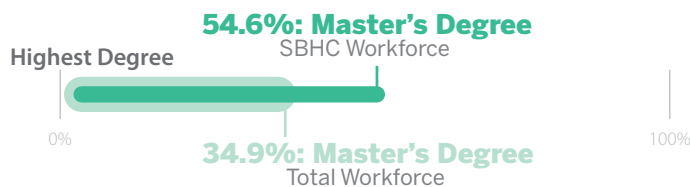
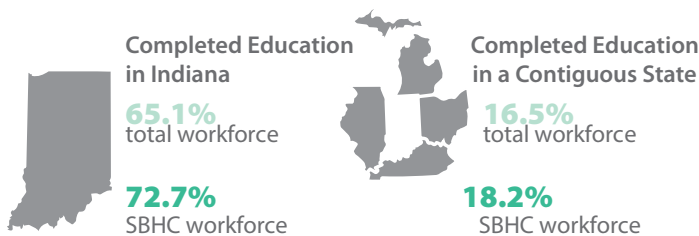
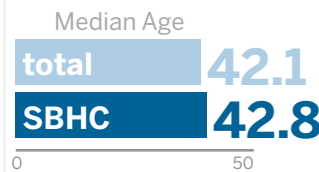
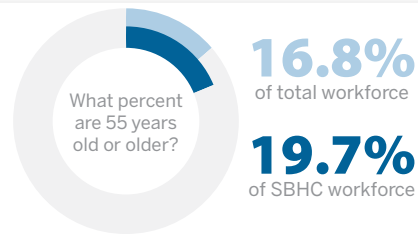
Audiologists

429 Total Licenses
 298 Actively Practicing
 11 Actively Practicing in School-Based Health Care (SBHC)
 7.8 Total SBHC FTE



Speech Language Pathologists

3,151 Total Licenses
 2,367 Actively Practicing
 791 Actively Practicing in School-Based Health Care (SBHC)
 699.7 Total SBHC FTE



Total Workforce 11.7% reports practicing in a rural area

SBHC Workforce 18.2% that reports practicing in a rural area

Total Workforce 14.0% reports practicing in a rural area

SBHC Workforce 18.6% that reports practicing in a rural area

APPENDIX A

Table 1. Setting and specialty criteria used for identify school-based professional, based on professional survey license data

Licensing Board	Profession	Practice Setting	Specialty
Nursing	Registered Nurse	School-based health	School Health
	Advanced Practice Registered Nurse		
	License Practical Nurse		
Behavioral Health and Human Services	Addiction Counselors	School health service	Not Applicable
	Clinical Addiction Counselors		
	Clinical Social Workers		
	Social Workers		
	Marriage and Family Therapists		
	Marriage and Family Therapist Associate		
	Mental Health Counselors		
Mental Health Counselor Associate			
Psychology	Psychologists	School-based mental health service	Not Applicable
Dentistry	Dentists	School health service	Not Applicable
	Dental Hygienists		
Physical Therapy	Physical Therapists	School system (preschool/primary/secondary)	Not Applicable
Occupational Therapy	Occupational Therapists	School	School System
Speech Pathology and Audiology	Speech Language Pathologists	Education - K-12 schools	Not Applicable
	Audiologists		

APPENDIX B

METHODOLOGY DATA COLLECTION AND MANAGEMENT

Health professions data used in this report were collected by the Indiana Professional Licensing Agency (IPLA). Demographic, educational and professional characteristics were obtained through survey questions administered during the 2018 and 2019 license renewal periods. Survey and license data were transferred to the Bowen Center for Health Workforce Research and Policy after license renewal periods ended. The data were then processed through cleaning and coding procedures developed by the Bowen Center.

Health professions data are then imported into the Indiana Health Professions Database (IHPD), following which license addresses are prepared and geocoded. The final dataset include three data final components: license data, survey data, and geocoded address data.

SAMPLE SELECTION

Individuals from the reporting samples for each professions' biennial data report were included in this report if they reported a specialty, certification or practice setting related to school-based health. The list below outlines the selection criteria:

- Health professional renewed Indiana license between 2018 and 2019
- Health professional had an active, valid to practice while under review or probationary license
- Health professional responded to their respective online licensure survey
- Health professional reported actively practicing in their respective field
- Health professional had an Indiana license or practice address that could be geocoded
- Health professional reported a specialty, certification or practice setting related to school-based health

It is important to note that questions asked on the online licensure surveys are customized to the scope of practice of each licensed health profession. Therefore, each survey will not have the same number and type of questions. Table 1 on the previous page provides the specialty, certification or practice setting criteria used for each profession included in this report.

ANALYSIS AND LIMITATIONS

This report presents descriptive statistics on the reported specialty and primary practice setting of health professions who practice in school-based health. These statistics are also stratified by the professional's rurality status as derived from their license address county. Because the surveys that were administered to many of these health professionals during their biennial license renewal were voluntary (speech language pathologists, audiologists, occupational therapists, and physical therapists), tables may have a statistic for non-respondents to specific questions. However, the rate of non-respondents for these professions is generally small. This report provides a snapshot of the school-based health workforce. Therefore, data should only be used for informing related policy discussions and workforce initiatives. For more information on the data management processes implemented by the Bowen Center visit IUPUI ScholarWorks at <https://scholarworks.iupui.edu/handle/1805/5420>.

ACKNOWLEDGEMENTS

The Bowen Center for Health Workforce Research and Policy (Bowen Center) would like to extend its gratitude to the Indiana Professional Licensing Agency for their commitment to ensuring Indiana with robust health workforce data through administration of surveys to licensed health occupations. The Bowen Center would also like to acknowledge the expert data management support we receive from our institutional collaborators at the Department of Biostatistics at the Indiana University School of Medicine.

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