2021-2022 Update to the Texas State Health Plan

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Statewide Health Coordinating Council

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Executive Summary

By November 1 of even-numbered years, the Statewide Health Coordinating Council (SHCC) directs and approves the development of the Texas State Health Plan or its updates for submission to the Governor. This plan, following the legislatively determined purpose of the SHCC,[i] seeks to ensure that the State of Texas implements appropriate health-planning activities and that health care services are provided in a cost-effective manner throughout the state.

This update was due November 1, 2020. However, the SHCC determined that additional time was needed to further develop the policy recommendations included in this update.

This update builds on the 2017-2022 Texas State Health Plan and its 2019-2020 Update. The 2017-2022 Plan focused on innovations in health care payment and delivery systems and persistent challenges in providing high-quality and efficient health care in Texas. The plan identified challenges in ensuring health care access and providing efficient service delivery and highlighted existing and projected primary care and psychiatry workforce shortages. In response to these challenges, the SHCC offered strategies to improve the efficiency of the state's health care delivery system, address shortcomings in its payment system, produce more health care providers in critical areas of need, and heighten patient satisfaction with the health care system. The 2019-2020 Update to the Texas State Health Plan continued this work by seeking to improve access to the health care system, ensure quality in the system, and strengthen the system by guaranteeing a robust health care workforce.

The current update carries forward the SHCC's efforts, while addressing serious health problems in the state through a population health approach. Based on the evidence contained within each chapter, the SHCC makes policy recommendations consistent with its goal of ensuring that the State of Texas implements appropriate health-planning activities and that health care services are provided in a cost-effective manner throughout the state. These recommendations include:

[i] See Texas Health and Safety Code §104 and §105.

- Vaccinations:
    - The state should consider monitoring the impact of exemptions on vaccination rates and the health of Texans.
- Maternal Health:
    - The state should monitor the effect of Senate Bill 750, 86th Legislature, Regular Session, 2019, on maternal health care and the quality of services provided to women in Texas.
- Vaping/Electronic Nicotine Delivery Systems Products:
    - The state should take concrete actions to deter the use of such products by teens. Such actions include:
        - The incorporation of appropriate educational materials into school health curriculum;
        - The prohibition of flavored products; and
        - The limitation of product marketing geared towards teens.
- Nutrition and Physical Activity:
    - The state should support the scientific evaluation of community-based interventions for nutrition and physical activity, as well as support the initiation of coalitions in local communities, especially in rural areas.
    - The Legislature should require that students enrolled in prekindergarten through grade 12 perform at least 30 minutes of moderate or vigorous physical activity daily through the school district's physical education curriculum.
    - The Legislature should require that students enrolled in grades nine through 12 at school districts in the state earn one health education credit in order to graduate.

In addition to its population health concerns, the SHCC also identified avenues for improving the state's health care system. The SHCC's recommendations include:

- Rural Health:

    - The state should support the expansion and availability of telehealth and telemedicine, as well as remove barriers to telehealth and telemedicine in rural Texas.

    - The state should support new and innovative methods of hospital financing.

    - The state should monitor the impact of the coronavirus pandemic on the number of uninsured people in Texas.

- Mental Health:

    - The state should support efforts by school districts to increase access to mental health services for students.

    - The state should continue to support the work of the Texas Child Mental Health Care Consortium.

    - The state should support efforts to increase the funding and stipends available to students of the mental health professions as they complete their education and training, as well as support the expansion of the Loan Repayment Program for Mental Health Professionals.

- Supporting Students of the Health Professions:

    - The state should support actions to allow for the remote supervision of health profession students.

Background

With an eye toward the innovations being introduced to health care payment and delivery systems nationwide and throughout Texas, the 2017-2022 Texas State Health Plan provided guidance on how to achieve a high-quality, efficient health system that serves the needs of all Texans. Specifically, the plan identified challenges in ensuring that a population as large and diverse as Texas' has access to the health care system, that health care services are provided in an efficient and orderly manner, and that an ample health care workforce exists to provide these services. The 2019-2020 Update to the Texas State Health Plan continued this work by seeking to improve access to the health care system, ensure quality in the system, and strengthen the system by guaranteeing a robust health care workforce.

The current update is loosely divided into two sections, each with multiple parts. The first section is comprised of four chapters focused on promoting population health in Texas. These chapters describe health challenges and propose solutions related to achieving higher rates of vaccination among Texans, ensuring optimum health for Texas mothers, promoting informed choices and responsible practices surrounding vaping, and devising better ways for Texans to eat healthy and stay active.

The second section of this update covers challenges faced by the state's health care system. The three chapters that follow approach these issues from the perspective of rural health, mental health, and health professions education. However, they share similar goals of expanding efforts we know work, supporting the identification and implementation of promising practices, and ensuring the Texas practice environment remains welcoming to new and established providers.

1. Vaccines

Vaccination has been proven effective in disease control through the reduction, and even eradication, of multiple infectious diseases. Despite these successes, some vaccine-preventable diseases have seen a resurgence that may threaten the Texas population given the state's low vaccination rates relative to the United States. To reduce the morbidity and mortality of infectious disease and to ensure there is not a resurgence of eliminated diseases, it is essential to increase Texas' vaccination rates.

The Statewide Health Coordinating Council (SHCC) recommends improving the vaccination rates in the state through two mechanisms: monitor the impact of exemptions on vaccination rates and, given the pending need to distribute coronavirus vaccines, expand support for the state's vaccination programs. First, data from the Texas Department of State Health Services (DSHS) show that Texans have increasingly sought exemptions that allow many Texas students to remain unvaccinated.[1] To achieve state-level improvements in vaccination rates, the state should act to monitor the impact of non-medical vaccine exemptions. Second, Texas can increase its vaccination rate by working with providers to remove barriers to care. The existing Texas Vaccines for Children (TVFC) and Adult Safety Net (ASN) programs are strong programs, but have the need for additional presence, especially in rural areas.

Finally, although the SHCC recognizes the importance of coronavirus vaccination, this section focuses on four common vaccines: (1) measles, mumps, and rubella (MMR); (2) influenza; (3) tetanus, diphtheria, and acellular pertussis (Tdap and DTaP); and (4) human papillomavirus (HPV). The SHCC recognizes that stronger leadership on vaccination will improve Texans' willingness to be vaccinated, an effect that will serve the state well for addressing the current coronavirus pandemic and future emerging infectious disease.

Measles, Mumps, and Rubella

The MMR vaccine protects against three contagious, viral illnesses: measles, mumps, and rubella. Measles causes a variety of symptoms, including a rash, and can result in hospitalization, brain swelling, and even death.[2] Mumps can cause swelling of the salivary glands, testicles, ovaries, and brain, as well as meningitis, hearing loss, and death.[3] Rubella, like measles, also causes a rash, and can result

in miscarriage and birth defects.[4] The Centers for Disease Control and Prevention (CDC) recommends children receive the first MMR dose at 12 to 15 months and a second MMR dose at four to six years.[5]

According to the CDC, vaccination has reduced measles and mumps cases in the United States by over 99 percent and eliminated rubella in the United States in 2004.[6,7,8] However, the national number of measles cases in 2019 was the highest it has been since 1992 at 1,282, largely affecting the unvaccinated population.[9] Texas had 22 cases of measles in 2019, which is an increase from the past few years.[10] The importance of these measles rates can be demonstrated by the current outbreak in the Democratic Republic of the Congo that has claimed the lives of more than 6,000 people, highlighting the importance and urgency to increase vaccination rates.[11]

Both Texas and the nation saw a large increase in mumps cases in 2016 and 2017, and Texas was among the states with the highest number of mumps cases as of September 2019.[12,13] Texas had 17 mumps outbreaks in 2017, the largest of which affected school-aged children in Johnson County.[14]

In 2017, 90.3 percent of Texas children between 19 and 35 months of age received at least one dose of the MMR vaccine, compared to 91.5 percent nationally, meeting the Healthy People 2020 target of 90 percent for this age group.[15,16] Among Texas public and certain private schools, the proportion of kindergartners (96.93 percent) and seventh graders (98.85 percent) with complete MMR vaccination in the 2018-2019 school year decreased from the prior year, and the proportion of conscientious exemptions increased to 1.99 percent of kindergartners and 0.8 percent of seventh graders.[17] The proportion of kindergartners with complete MMR vaccination exceeded the Healthy People 2020 target of 95 percent.[18]

Influenza

The influenza, or flu, vaccine protects against the influenza virus, a viral illness which causes hundreds of thousands of hospitalizations and up to tens of thousands of deaths each year.[19] Though the flu vaccine may not always prevent flu infection, it may reduce the severity of illness and the risk of children dying from the flu. The CDC recommends annual flu vaccines to everyone six months and older. Adults age 65 and older are particularly vulnerable to the flu, accounting for up to 85 percent of flu-related deaths and over half of flu-related hospitalizations.[20] As such, it is important individuals in this age group receive the flu vaccine annually.

For the 2018-2019 flu season, Texas had comparable flu vaccination rates compared to the national average across all age groups.[21] However, Texas did see an increase in flu vaccination coverage from the prior flu season across all age groups, with the majority being a significant increase. Despite this increase, all age groups failed to meet the Healthy People 2020 target of 70 percent, with vaccination coverage estimates of 61.8 percent for children (six months to 17 years) and 43.2 percent for adults (18 years and older).[22,23] Adults 65 and older did have a much higher vaccination rate than adults 18 to 64, 67.5 percent compared to 37.7 percent.[24]

The flu vaccine given during pregnancy may reduce illness severity in pregnant women, as well as protect their babies after birth.[25] This is important since the vaccine is not recommended for infants under six months of age. Nationally, pregnant women with public insurance or those that were uninsured had lower flu vaccination rates each year compared to pregnant women with private insurance from 2012 to 2017, with all groups continuing to fall below the Healthy People 2020 goal of 80 percent.[26]

Tetanus, Diphtheria, and Acellular Pertussis

Tdap and DTaP vaccines both protect against tetanus, diphtheria, and acellular pertussis (whooping cough). Tdap is for those aged seven and older, and DTaP is for children under seven.[27] Tetanus, caused by bacteria, can cause symptoms such as jaw cramping ("lockjaw"), muscle spasms and stiffness, trouble swallowing, and may even lead to death.[28] Diphtheria is also caused by a bacteria and can cause difficulty breathing and swallowing, paralysis, and death.[29] Whooping cough is a contagious, bacterial disease which can cause violent coughing and can be deadly for infants.[30] The CDC recommends three doses of DTaP for babies with two additional booster shots prior to age seven; Tdap for preteens, pregnant women in their third trimester, and adults who have never had Tdap; and a dose of Td (tetanus and diphtheria only) every 10 years for adults.[31]

Texas had a whooping cough incidence rate lower than the national rate in 2018 (4.07 versus 4.77 per 100,000 population, respectively), but Texas' 1,167 cases accounted for 7.5 percent of all cases nationally due to its population size.[32] According to the CDC, nearly all children who receive all five DTaP doses are fully protected against whooping cough within the first year after the last dose, and roughly 75 percent of infants under two months born to women who received Tdap during pregnancy are protected from whooping cough.[33] Tetanus is rare in the United States, and cases tend to be among unvaccinated people and those who

have not followed the recommended booster schedule.[34] Diphtheria is also very rare in the United States due to vaccination, with fewer than five cases in the past 10 years.[35]

In 2017, 81.2 percent of children 19 to 35 months old in Texas had received four or more doses of DTaP compared to the national average of 83.2 percent.[36] This fell below the Healthy People 2020 target of 90 percent.[37] Among Texas public and certain private schools in the 2018-2019 school year, the proportion of kindergartners (96.69 percent) with complete DTaP vaccination decreased and the proportion of seventh graders (97.03 percent) increased from the prior year.[38] The proportion of conscientious exemptions increased to 1.92 percent of kindergartners and 1.22 percent of seventh graders. The proportion of kindergartners with complete DTaP vaccination met the Healthy People 2020 goal of 95 percent.[39] Though the proportion of women who received Tdap vaccination during pregnancy increased each year from 2014 to 2017 in the United States, nearly half of pregnant women in 2017 did not receive the vaccine during their pregnancy.[40]

Human Papillomavirus

HPV is the most common sexually transmitted infection, and it can cause genital warts and cancers of the cervix, vulva, vagina, penis, anus, and back of the throat.[41] A recent survey found that the majority of adults in the United States "did not know that HPV causes oral, anal, and penile cancers."[42] The CDC recommends HPV vaccination for 11- and 12-year-olds, anyone not yet vaccinated through age 26, and some adults through age 45 who are not already vaccinated, as they may still benefit from the vaccine.[43]

The annual cost of HPV-associated cancer treatment has been estimated to be about $1 billion in 2010 United States dollars.[44] In 2013, cancer treatment for HPV-related cancers cost Medicaid over $51 million.[45] In Texas, HPV-associated anal cancer incidence rates increased significantly from 1995 to 2015, as did HPV-associated oropharyngeal cancer incidence rates in men.[46] HPV-associated cervical cancer incidence rates decreased in Texas women from 1995 to 2015.

Among Texas adolescents ages 13 to 17 in 2017, an estimated 57.8 percent had received at least one dose of any HPV vaccine and 39.7 percent were up-to-date; these rates were a significant increase from 2016.[47] Despite this increase, Texas rates were below the 2017 estimated national rates of 65.5 percent for at least one dose and 48.6 percent up-to-date, as well as below the Healthy People 2020 target for 80 percent of adolescents ages 13 to 15 to have received the recommended

number of HPV vaccine doses.[48,49] In 2017, 13 percent of Texas adults ages 18 to 49 had received at least one dose of HPV, up from 9.1 percent the prior year.[50] Of those adults, 42 percent had completed all doses of the vaccination series, up from 37.1 percent the prior year.

Strategies to Increase Vaccination Rates

To increase vaccination rates, barriers to and disparities in vaccination must be addressed. For children, barriers to vaccination include caregiver concerns about side effects, autism, or the large number of injections; moral or religious beliefs; costs or other factors which impede access to health care; and a lack of information.[51] Further, in 2003, the state education code was amended to allow for conscientious exemptions to vaccinations, and, in the years since, requests for vaccine exemptions have increased greatly.[52] Barriers to adult vaccination include low priority, lack of information, fear, and other accessibility issues such as cost or lack of transportation.[53]

One strategy to increase vaccination rates would be to tighten policies regarding vaccine exemptions. "Easy nonmedical vaccine exemption policies" make states up to 190 percent more likely to experience a measles outbreak compared to states with stricter policies.[54] Following a measles outbreak, California removed nonmedical vaccine exemptions in 2016.[55] An analysis concluded this policy change was associated with a subsequent increase in MMR vaccination.

To make vaccines more accessible to children, the TVFC Program offers all of the vaccines described in this section (and others) at a low cost to children (ages 0-18) who meet certain eligibility requirements.[56] Similarly, the ASN Program provides low-cost vaccines for uninsured adults over 18.[57] Vaccines are provided to the nearly 3,000 TVFC providers and over 500 ASN providers at no cost.[58,59]

Improving access to vaccination may include expanding hours or allowing walk-in or same-day appointments.[60] For example, federally qualified health care centers and rural health care centers enrolled in the TVFC and ASN programs offer expanded hours for immunizations.[61] Studies have shown these types of strategies result in increased adult vaccination rates and may also be an effective intervention for parents.[62,63]

To address lack of information about vaccines and lack of access, it is vital for health care providers to discuss concerns, recommend, and even offer vaccinations to their patients or caregivers of patients. In a recent survey, pregnant women

were twice as likely to receive a Tdap vaccination if a medical professional offered to vaccinate (70.4 percent), compared to those who just received a recommendation for the vaccination (36.9 percent).[64] Less than 1 percent of women who were not offered the vaccine and did not receive a recommendation for the vaccine were vaccinated.

One study showed the attitudes of both parents and non-parents about vaccination could be altered positively by their health care providers informing them of the dangers of not vaccinating their children.[65] Because parental attitudes about vaccines can reliably predict their child's immunization status—with parents who demonstrated higher vaccine hesitancy more likely to have children who were not up-to-date on the recommended vaccine schedule—interventions targeted at changing parental attitudes should be implemented.[66]

Policy Recommendations

The Legislature, the Governor, and executive branch agencies should consider monitoring the impact of exemptions on vaccination rates and the health of Texans.

In the past five years, the number of individuals for whom conscientious exemption affidavits were requested in Texas have increased every year, increasing overall from 48,472 in 2015 to 77,329 in 2019, representing a nearly 60 percent increase.[67] Statewide, the mean proportion of students by school district with a conscientious exemption was 1.2 percent; the proportions vary within Texas by geographic location.[68] In 2019, metropolitan, non-border counties had a higher mean proportion of students with conscientious exemptions (1.4 percent) compared to metropolitan, border counties (0.2 percent) and non-metropolitan counties overall (1.0 percent). However, the top four counties were in non-metropolitan, non-border counties, with the proportion of students with conscientious objections ranging from 3.9 percent to 10.4 percent.

The Legislature, the Governor, and executive branch agencies should ensure access to vaccination and vaccine outreach for vulnerable populations by supporting evidence-based strategies to increase vaccination rates in the state.

In its 2018 biennial report regarding reducing vaccine-preventable diseases, DSHS outlined its strategies to increase vaccine coverage rates in the state. Among these

strategies were safety net programs (TVFC and ASN), educational outreach, and stakeholder engagement.[69]

As of January 2020, there were 2,974 TVFC providers in 236 Texas counties and 560 ASN providers in 165 counties (92.9 percent and 65.0 percent of the 254 Texas counties, respectively).[70,71] The majority of counties without at least one enrolled provider were in non-metropolitan areas (94.4 percent of counties with no TVFC provider, and 87.6 percent of counties with no ASN provider).

Texas Immunization Coalitions, supported by the Immunization Partnership and DSHS, are one approach to increase vaccination access and educational outreach at the local level through stakeholder engagement. DSHS can provide funding, training, and resources, as well as has a downloadable toolkit for such coalitions on its website.[72]

2. Maternal Health

Maternal and early child health affects new mothers and infants and has ramifications throughout an individual's life. Recent legislative sessions have shown increasing attention to the importance of maternal health issues, identifying areas of concern and implementing solutions to address the state's shortcomings.

The following section illustrates the current landscape of maternal, infant, and early child health in Texas, using national rates as a comparison. There are notable disparities between outcomes in maternal mortality and chronic health conditions that affect maternal health in Texas.[73] Black women have higher rates of maternal mortality than any other group, and black and Hispanic women are more likely to have chronic health conditions affecting pregnancy and birth. Chronic health conditions can have a cumulative effect on fetuses and maternal health, and chronic health conditions can worsen with pregnancy. For women on Medicaid, they often lose access to health care for those conditions two months after giving birth, since they would not have insurance normally.

The SHCC recognizes the impacts that strong maternal and early childhood care can have on the lives of Texas mothers and babies, throughout their lives. The SHCC believes that the state can maximize these impacts by streamlining the application process for public health coverage, ensuring that new mothers continue to receive the care they need from the providers they trust, and ensuring that these providers are fairly compensated for the vital care they deliver.

Health Conditions and Pregnancy

There are several health conditions that occur before and/or during pregnancy that can affect maternal and fetal health. Obesity prior to pregnancy is a known risk factor for developing hypertension, diabetes, and other complications during pregnancy.[74] The proportion of mothers with an obese body mass index pre-pregnancy has increased 26.3 percent from 2008 to 2017. Pre-pregnancy obesity is most prevalent among black and Hispanic mothers. Rural and suburban counties are also more likely to have a higher percentage of pre-pregnancy obesity among mothers than urban counties.

Hypertension and diabetes have also been increasing among Texas mothers. In 2016, the rate of maternal diabetes was 5.7 percent and the rate of hypertension

was 7.5 percent.[75] Black women have the highest rate of hypertension, and Hispanic women have the highest rate of maternal diabetes. High blood pressure before and during pregnancy is associated with placental abruption, gestational diabetes, preterm delivery, low birthweight, and infant death.[76]

Preeclampsia is hypertension that onsets after the twentieth week of pregnancy and has been associated with cardiovascular disease across the lifespan.[77] African American women are more likely to develop preeclampsia than other women.[78] Additionally, women who are over 40, have a history of high blood pressure or kidney disease, are obese, or have a family history of preeclampsia are also more likely to develop preeclampsia. All hypertension during pregnancy is associated with an increased risk of chronic kidney disease and diabetes throughout the life course.[79]

According to the CDC, pregnant women are twice as likely to be hospitalized if they get the flu, and it is recommended that pregnant women receive the flu vaccination and Tdap at the beginning of the third trimester.[80] In 2016, 58.2 percent of women in the Texas Pregnancy Risk Assessment Monitoring System (PRAMS) reported receiving a flu shot in the 12 months before delivery, and 67.9 percent reported receiving a Tdap vaccine.[81]

Maternal mortality in Texas has recently been a topic of great interest. In 2018, members of the Maternal Mortality and Morbidity Task Force reviewed maternal mortality cases from 2012.[82] They found that maternal mortality had been over-reported. They confirmed that 34 cases of maternal death were pregnancy-related and occurred during or within 42 days of birth. The task force also found that the leading causes of maternal mortality were cardiovascular and coronary conditions, obstetric hemorrhage, infection or sepsis, and cardiomyopathy. The task force found that pregnancy-related mortality was 2.3 times higher for black women than non-Hispanic white women.

Findings from the Maternal Mortality and Morbidity Task Force and DSHS 2018 report indicate that the following factors were associated with an increased risk of maternal mortality: age 40 years or older; late or no prenatal care; chronic health diseases such as pre-pregnancy obesity, diabetes, and hypertension; smoking during pregnancy; and delivery by cesarean section.[83]

In 2012, 68.5 percent of maternal deaths were women enrolled in Medicaid during their pregnancy.[84] From 2012 to 2015, 56 percent of maternal deaths occurred 60

days or more postpartum. Medicaid coverage for pregnant women ends after 60 days postpartum.

Cesarean Sections

As gestational age decreases, the risk of adverse respiratory outcomes increases.[85] Therefore, elective delivery before 39 weeks is not recommended unless there is demonstrated fetal lung maturity. Early deliveries (before 39 weeks) are associated with significantly increased risk of neonatal death, as well as increased risks of respiratory complications and admission to the neonatal intensive care unit. Repeat cesareans are also associated with higher risk of maternal morbidities, including placenta accrete, which is when the placenta does not properly detach from the uterus and results in blood loss. Texas has a rate of 35 percent of live births delivered by cesarean section, ranking eighth highest in the United States.[86] The national rate is 32 percent. In 2011, House Bill 1983 was passed by the Texas Legislature.[87] This bill made delivery before 39 weeks that was not medically necessary ineligible for Medicaid reimbursement. Texas saw a 14 percent decrease in elective early delivery, as well as an approximate gain of six ounces in birthweight and five days in gestational age.

Prenatal Care and Outcomes

Prenatal care is recognized as an important factor in maternal health and infant outcomes. In the 2016 Texas PRAMS report, 80.5 percent of women reported getting prenatal care as early as they wanted, and 79.7 percent of women received prenatal care in the first trimester.[88] For comparison, nationally, 77.1 percent of women initiated prenatal care in their first trimester in 2016.[89] Nationally, 68.1 percent of women enrolled in Medicaid initiated prenatal care in the first trimester, compared with 87.0 percent of women with private insurance.[90] In Texas, the rate of women who were enrolled in the STAR Medicaid program and received timely prenatal care was 86.6 percent.[91] The STAR Medicaid program is the managed care program for pregnant women and low-income children and families. Timely prenatal care was defined as receiving care in the first trimester or within the first 42 days of enrollment. Nationally, Medicaid is the payer for 43.0 percent of births.[92] In 2016, 53.0 percent of births in Texas were paid for by Medicaid.[93]

Postpartum Health

Attending postpartum care is essential to managing conditions such as hypertension, diabetes, postpartum depression, and substance abuse.[94] In the 2016

PRAMS survey, 86.6 percent of women reported having a postpartum checkup for themselves.[95] According to the Centers for Medicare and Medicaid Services, 61.3 percent of Medicaid enrollees attended timely postpartum care in 2018.[96] Timely postpartum care is defined as 21 to 56 days after delivery. The rate of postpartum care for Texas women enrolled in STAR Medicaid plans in 2017 was 68.3 percent.[97]

Postpartum depression is an issue affecting many mothers. Postpartum depression is associated with adverse cognitive and emotional outcomes.[98] However, Texas does not have statewide measures or monitoring of postpartum depression. In 2019, the 86th Legislature, Regular Session, passed House Bill 253, which creates a five-year plan to improve screening for postpartum depression and increase public awareness.[99]

Policy Recommendations

The Legislature, the Governor, and executive branch agencies should monitor the effect of Senate Bill 750, 86th Legislature, Regular Session, 2019, on maternal health care and the quality of services provided to women in Texas.

Echoing the Maternal Mortality and Morbidity Task Force and DSHS 2018 report, the SHCC recognizes the need to "[i]ncrease access to health services during the year after pregnancy and throughout the interconception period to improve the health of women, facilitate continuity of care, enable effective care transitions, and promote safe birth spacing."[100] Currently, Medicaid coverage for pregnant women ends two months postpartum.

The Healthy Texas Women program was expanded through Senate Bill 750, 86th Legislature, Regular Session, 2019.[101] Healthy Texas Women Plus adds to the Healthy Texas Women benefit package by covering major health conditions that contribute to maternal mortality and morbidity in Texas, including:

- Postpartum depression and other mental health conditions (services include individual, family, and group psychotherapy services, as well as peer specialist services);
- Cardiovascular and coronary conditions (services include imaging studies and blood pressure monitoring, as well as anticoagulant, antiplatelet, and antihypertensive medications); and

- Substance use disorders, including drug, alcohol, and tobacco misuse (services include screenings, brief interventions, treatment referrals, outpatient substance use counseling, smoking cessation services, medication-assisted treatment, and peer specialist services).[102]

The effect of this expansion in coverage under the Healthy Texas Women program should be monitored in order to examine the impact that it has on the mortality and morbidity rates of women in Texas. This examination should also include measuring how many women become enrolled in the Healthy Texas Women program and how many Healthy Texas Women providers there are in the state.

The Legislature should create a carve-in for the Healthy Texas Women program to be integrated with managed care.

The Maternal Mortality and Morbidity Task Force's third recommendation was to "[p]rioritize care coordination and management for pregnant and postpartum women."[103] The SHCC proposes to partly achieve this recommendation by creating a more streamlined transition from Medicaid and the Children's Health Insurance Program to the Healthy Texas Women program. The SHCC also proposes providing mechanisms to ensure that women are aware of the Healthy Texas Women program. These changes would promote better utilization and continuity of care for women in the Healthy Texas Women program. The SHCC expects that such a change would result in better overall health outcomes and increased patient and provider satisfaction.

The Legislature should ensure that Texas providers are fairly reimbursed for Medicaid services.

In the 2017-2022 Texas State Health Plan, the SHCC identified an increase in the Medicaid reimbursement rate for physicians as a vital strategy for improving access to care in the state. Likewise, the state can improve access to prenatal and maternity care, especially for low-income women, by raising Medicaid payments to match Medicare rates where appropriate. There is evidence that shows increased reimbursement to Medicaid providers for primary care is associated with improved appointment availability without increased wait times.[104] Such a change is expected to increase the adequacy of networks, create opportunities for covered women to choose a more convenient provider, and increase the utilization of maternal care access.

The Legislature and executive branch agencies should support a review of the application process for Medicaid for pregnant women and streamlining this process where possible.

The SHCC acknowledges that there have been important improvements in the Medicaid application process; however, further improvements can still be made. Optimizing the application process for mobile devices is one area for improvement. Often, low-income people might not have a laptop but often have a phone. Additionally, there may be areas to streamline the process for women giving birth multiple times on Medicaid or who were also enrolled in Medicaid as a child.

3. Vaping

Vaping has been increasing in recent years, particularly amongst teens. These products are referred to as electronic nicotine delivery systems (ENDS). There are challenges when evaluating the impact of ENDS use. Because of their recent emergence, there is limited research on how these products affect health, especially in the long-term.[105]

To preserve the health of current and future generations of Texans, the SHCC encourages the state to ensure that these products are marketed and sold responsibly. Specifically, the SHCC encourages the state to educate students about the health impacts of ENDS use, limit targeted marketing of these products to minors, and adopt the proposal of the American Medical Association and the Texas Medical Association to prohibit the sale of flavored ENDS products.

Background

According to a review in the New England Journal of Medicine, vaping may be less harmful than tobacco smoking, but both cause detrimental health effects.[106] The amount of nicotine, flavorings, and added chemical agents vary greatly between ENDS, and this product diversity makes it difficult to evaluate the health effects of ENDS. While ENDS products have been advertised as a means to quit traditional smoking, there are no devices approved by the Food and Drug Administration for this purpose.[107]

There is some evidence that these products are associated with higher risk of lung disease and asthma compared with never smokers.[108] When compared with never smokers, e-cigarette users also have a higher risk of chronic bronchitis, emphysema, and chronic obstructive pulmonary disease.

Additionally, there is the effect of nicotine addiction. The nicotine in ENDS has the same effect as nicotine in traditional tobacco products.[109] Nicotine is toxic to developing fetuses, and it can harm adolescent brain development. Nicotine can raise heart rate, damage lungs, and contribute to insulin resistance.

ENDS also affect oral health. Vaping can cause dry mouth and soften teeth enamel.[110] This can make people more prone to cavities, tooth loss, and gum disease.

In 2018, 5.2 percent of adults surveyed in the Texas Behavioral Risk Factor Surveillance System indicated that they were current ENDS users, and 22.0 percent indicated that they had ever used an ENDS product.[111] Nationwide, while cigarette use by youth has decreased, ENDS use has drastically increased in the last several years.[112] According to the National Youth Tobacco Survey, approximately 3.6 million youth were using ENDS products in 2018, and that number rose to over 5 million in 2019.[113] Nearly 1 million youth use ENDS products daily, and about 1.6 million use these products 20 or more days a month.

In a study of vaping among adolescents, those who used e-cigarettes with nontraditional flavors were more likely to continue vaping and to take more puffs six months later when compared with adolescents that vaped traditional flavors like menthol, mint, or tobacco.[114] There are a wide variety of nontraditional flavors, including fruit and dessert flavors. The brand JUUL entered the market in 2015 and is particularly popular with youth because the products are small and look like a USB drive.[115] JUULs contain a very high level of nicotine, and it is one of the few brands that uses nicotine salts, which allow for a high level of nicotine to be inhaled while being less irritating.[116] In the 2019 National Youth Tobacco Survey, the majority of current ENDS users reported JUUL as their preferred brand.[117]

According to a recent National Public Radio article, the Food and Drug Administration's partial ban that focuses on flavored cartridges has led to teens switching to disposable vaping products.[118] Disposable vape products have similar flavorings to JUUL and are increasing in popularity among youth.

In 2019, there was a dramatic increase in the number of e-cigarette, or vaping, product use-associated lung injuries (EVALIs).[119] As of January 21, 2020, there has been a total of 2,711 EVALI cases or deaths nationally. Currently, Vitamin E acetate has been strongly linked to EVALI. Vitamin E acetate is often an additive in tetrahydrocannabinol (THC) ENDS. Frequently, it is found in illicit THC vapes and e-cigarettes. The CDC recommends avoiding all THC ENDS products.

Texas Vaping Data

In Texas, young adults are more likely to use ENDS products than older adults.[120] The 2017 results from the Texas Youth Risk Behavior Survey indicate that 41.2 percent of students reported having ever used an electronic vapor product, and that rose to 48.7 percent in 2019.[121] In 2017, 10.3 percent of high school students surveyed reported using one or more ENDS in the past 30 days. In 2019, that number rose to 18.7 percent. In 2017, there was a significant difference between

males and females, with 7.0 percent of females reporting ENDS use in the last 30 days compared to 13.1 percent of males, but by 2019 that had leveled out to 19.9 percent of females and 19.4 percent of males. In 2019, white students had the highest rate of ENDS use at 30.9 percent, followed by Hispanic students at 14.5 percent, black students at 9.8 percent, and 14.3 percent of other students. Additionally, 15.3 percent of students who currently used ENDS and were under 18 years of age reported getting their ENDS products in a store during the past 30 days.

As of March 2, 2020, there were 319 possible EVALI cases in Texas.[122] Of these, 132 are confirmed cases, 119 are probable cases, and 4 deaths have been reported. Moreover, 25 percent of possible or confirmed cases were youth under the age of 18, and 88 percent of cases with available information reported use of illicit products with THC.

Policy Recommendations

The Legislature, the Governor, and executive branch agencies should ensure that evidence-based programs covering the effects and risks of vaping are included in school health curriculum.

The Legislature should support policies and programs that provide vaping education in schools. Community and school-based programs have also been shown to be effective at reducing tobacco use among teens and adolescents.[123] For example, the CATCH (Coordinated Approach to Child Health) My Breath program is a prevention curriculum for middle school students.[124] Another program is Say What!, which is funded by DSHS through Texas State University. This program trains teen ambassadors to lead tobacco prevention projects in their communities.[125]

The Legislature, the Governor, and executive branch agencies should support state and local adult smoking cessation education and prevention campaigns.

The Legislature should support policies and programs that provide vaping education to adults. Currently, there are DSHS-funded community coalitions, which include three organizations in six counties.[126] One example is the Bay Area Council on Drugs and Alcohol. This council provides several services, including counseling, recovery support services, education, and community presentations.[127] DSHS-funded community coalitions use the CDC's Best Practices for Comprehensive Tobacco Control Programs and the Substance Abuse Mental Health Services

Administration's Strategic Prevention Framework.[128] In 2014, nine organizations over 12 counties were awarded funds by DSHS, and that number was reduced to six organizations over seven counties in 2017 due to budget reductions.

The Legislature, the Governor, and executive branch agencies should support policies that limit targeted marketing of ENDS products, particularly to children and teens.

In 2014, over 18 million students were exposed to e-cigarette ads, which is around 70 percent of all middle and high school students.[129] The advertisements are in retail stores, online, and in print. Research has shown that the rise in ENDS products use was correlated with a significant increase in ENDS advertising.[130] A study from 2019 demonstrated that vape and e-cigarette advertising in retail stores was associated with initiation of using these products in youth and young adults, and TV marketing was also associated with initiation in young adults.[131] ENDS products, and JUUL in particular, have significant online and social media presence.[132]

There is significant causal evidence showing that advertising and promotion, as well as depictions in movies, of tobacco products leads to use of these products by youth and young adults.[133] Additionally, almost all adult daily smokers started smoking before age 18 (88 percent). Restricting the marketing of ENDS products, similar to how the Food and Drug Administration restricts advertising of tobacco products, may lead to reduction of ENDS use by adolescents.

The Legislature, the Governor, and executive branch agencies should support policies that raise the price of ENDS products to deter use by adolescents.

The Texas Medical Association recommends imposing an excise tax on ENDS products.[134] Legislative and policy activities that raised the price of tobacco products were shown to have a significant impact on smoking, especially on teens and young adults.[135] Adolescents generally have less disposable income than adults; therefore, taxes are more likely to affect their purchasing when compared with adults.

The Legislature, the Governor, and executive branch agencies should support policies that ban the sale of flavored ENDS products, including disposable cartridges.

The American Medical Association and Texas Medical Association recommend banning all flavored tobacco products.[136,137] In response to the EVALI outbreak, the Food and Drug Administration has moved to ban the manufacture and sale of nontraditionally flavored vape products (anything other than tobacco or menthol).[138] This initiative is specifically to prevent the use of these products by teens, as teens are more likely to use nontraditional flavors.

4. The Importance of Nutrition and Physical Activity in Texas

The coronavirus pandemic has served as a sullen reminder of a simple fact: many Texans suffer from life-threatening chronic conditions, and these conditions exacerbate other health issues. The following section of this plan details how nutrition and physical activity behaviors affect overall health and describes multiple groups' statuses for these behaviors. Given the information presented below, the SHCC identifies the improvement of Texans' nutrition and physical activity behaviors as critical.

Specifically, the SHCC believes that community-based interventions are a promising practice for achieving behavior change and, ultimately, population health. However, the SHCC believes that existing programs should undergo rigorous, state-supported evaluation prior to their broad replication. The SHCC also supports the initiation of coalitions in local communities, especially in rural areas. To further achieve the goal of a healthy Texas, the SHCC recommends that the state work to affect healthy choices by requiring physical activity and health instruction in schools and ceasing the sale of sugar sweetened beverages and candy in government buildings, public university campuses, and public school vending machines.

Nutrition, Physical Activity, and Overall Health

A healthy diet and getting enough physical activity are essential to a healthy lifestyle across the lifespan. For children and adolescents, good nutrition facilitates normal growth and development, increases the likelihood of a healthy body weight, and leads to a strong immune system.[139,140] Children and adolescents who engage in regular physical activity have a lower risk of depression and improvements in bone health, cardiometabolic health, cardiorespiratory and muscular fitness, cognition, and weight status.[141] Furthermore, the likelihood of developing heart disease and diabetes is higher for children and adolescents who are overweight or obese.[142] Adults who eat healthy and engage in regular physical activity have a lower risk of death and are less likely to develop heart disease, stroke, and type two diabetes.[143,144] Regular physical activity for adults also reduces the likelihood of anxiety, dementia, and depression and leads to an improvement in cognition, quality of life, and sleep.[145]

Poor nutrition and lack of physical activity are key risk factors for developing preventable chronic diseases, including heart disease, stroke, diabetes, and obesity.[146,147] Nationally, 60 percent of adults have a chronic disease and 40 percent have at least two chronic diseases.[148] In addition, 18.9 percent of children and adolescents nationwide have one health condition and 17.5 percent have at least two health conditions.[149]

Unhealthy eating and not getting enough physical activity can also lead to high blood pressure and high blood cholesterol, which are key risk factors for heart disease and stroke.[150,151] Although a study by the CDC found that the prevalence of high blood pressure decreased for children and adolescents aged 12 to 19 nationwide between 2001 and 2016, the study still found that about one in seven children and adolescents aged 12 to 19 nationwide had elevated blood pressure or high blood pressure between 2013 and 2016.[152]

Chronic diseases have substantial economic costs in the United States. Chronic and mental health conditions account for 90 percent of the $3.5 trillion that is spent annually on health care.[153] Annual health care costs are $214 billion for heart disease and stroke,[154] $237 billion for diabetes,[155] and $147 billion for obesity.[156] Additionally, lost productivity due to premature death from heart disease and stroke costs $137 billion annually,[157] and reduced productivity from diabetes costs $90 billion annually.[158]

Preventable chronic diseases linked to poor nutrition and lack of physical activity were among the leading causes of death to Texas residents in 2016.[159] Diseases of the heart (heart disease) were the leading cause of death, accounting for 22.8 percent of all deaths. Cerebrovascular diseases (stroke) were the third most common cause of death, accounting for 5.6 percent of all deaths. Diabetes mellitus (diabetes) was the seventh leading cause of death, accounting for 2.8 percent of all deaths.

Overweight and obesity are prevalent in the Texas population. Between 2016 and 2017, 13.8 percent of children and adolescents aged 10 to 17 years were overweight and 18.5 percent were obese.[160] When examining only high school students in the state, 18.0 percent were overweight and 18.6 percent were obese in 2017.[161] Moreover, high school students were more likely to be overweight or obese in 2017 than in 2001 when 14.6 percent were overweight and 14.0 percent were obese.[162] In addition, 69.4 percent of adults were overweight or obese in 2017, with 33.0 percent being obese.[163]

The 2015-2020 edition of the *Dietary Guidelines for Americans* recommends a healthy diet pattern throughout the lifespan that incorporates an array of nutrient-dense foods from all of the food groups in appropriate amounts.[164] Such a diet pattern includes eating a variety of vegetables, fruits, whole grains, fat-free or low-fat dairy products, protein foods, and oils, while limiting added sugars, sodium, saturated fats, trans fats, and alcohol. National results indicate that most individuals do not follow a healthy diet pattern. Less than 10 percent of adolescents and adults eat an adequate amount of fruits and vegetables, and 90 percent of individuals at least two years of age consume more sodium than is recommended.[165]

The *Physical Activity Guidelines for Americans* recommend at least 60 minutes of moderate-to-vigorous physical activity per day for children and adolescents between the ages of six and 17.[166] Such physical activity should include vigorous-intensity aerobic, muscle-strengthening, and bone-strengthening activities at least three days per week. Adults should engage in at least 150 minutes of moderate-intensity aerobic physical activity or 75 minutes of vigorous-intensity aerobic physical activity per week. Adults should also perform at least two days per week muscle-strengthening activities that include a moderate or higher level of intensity and engage every major muscle group. National results indicate that most individuals do not get enough physical activity. Only 20 percent of high school students and 25 percent of adults meet the recommended levels of physical activity.[167]

Status of Nutrition in Texas

Children

According to the 2015-2016 results from the School Physical Activity and Nutrition Project, 55.4 percent of Texas fourth graders reported consuming fruits at least two times on the day prior to the survey, with boys (55.5 percent) and girls (55.4 percent) reporting similar rates of doing so.[168] When examining by race/ethnicity, whites/other races (56.3 percent) and Hispanics (55.7 percent) reported similar rates of consuming fruits at least two times on the day before the survey, while African Americans (52.0 percent) reported the lowest rate of doing so.

Moreover, 31.9 percent of Texas fourth graders reported consuming vegetables at least three times on the day prior to the survey, with boys (32.4 percent) and girls (31.4 percent) reporting similar rates of doing so.[169] Whites/other races (35.1 percent) reported the highest proportion of consuming vegetables at least three

times on the day before the survey, followed by Hispanics (31.2 percent) and African Americans (26.5 percent).

Results also indicate that 36.4 percent of Texas fourth graders reported consuming at least one regular soda on the day prior to the survey, with a higher proportion of boys (39.1 percent) reporting such than girls (33.5 percent).[170] A slightly higher proportion of African Americans (42.1 percent) reported consuming at least one regular soda on the day before the survey than Hispanics (39.0 percent), while whites/other races (29.8 percent) reported the lowest proportion.

Adolescents

The 2017 results from the Texas Youth Risk Behavior Survey indicate that 28.2 percent of Texas high school students reported eating fruits at least two times per day within the seven days prior to the survey.[171] No significant differences were reported by age, gender, grade level, or race/ethnicity. Results also indicate that 11.8 percent of Texas high school students reported eating vegetables at least three times per day within the seven days prior to the survey. While there were no significant differences reported by gender or grade level, high school students 18 years of age and older (16.8 percent) were significantly more likely to report eating vegetables at least three times per day than those between the ages of 16 and 17 (10.9 percent), and other races (23.9 percent) were significantly more likely to report such than whites (10.4 percent) and Hispanics (10.2 percent).

Only 7.7 percent of Texas high school students reported eating fruits at least two times per day and vegetables at least three times per day within the seven days prior to the survey.[172] Significant differences were reported by age, gender, and race/ethnicity. High school students 18 years of age and older (12.2 percent) were significantly more likely to report eating fruits at least two times per day and vegetables at least three times per day than those between the ages of 16 and 17 (6.0 percent). Males (9.3 percent) were significantly more likely to report this dietary behavior than females (5.8 percent), and other races (18.2 percent) were significantly more likely to report such than whites (6.0 percent) and Hispanics (6.6 percent). No significant differences were reported by grade level.

In addition, 18.0 percent of Texas high school students reported drinking at least one soda within the seven days prior to the survey.[173] While there were no significant differences reported by age, grade level, or race/ethnicity, males (22.5 percent) were significantly more likely to report drinking at least one soda than females (13.4 percent).

Adults

According to the 2017 results from the Texas Behavioral Risk Factor Surveillance System, 64.8 percent of Texas adults reported consuming fruits at least once per day.[174] Adults between 45 and 64 years of age (67.9 percent) were significantly more likely to report consuming fruits at least once per day than those between the ages of 18 and 29 (57.2 percent). Moreover, adults 65 years of age and older (74.2 percent) were significantly more likely to report consuming fruits at least once per day than those between the ages of 18 and 29 and those between the ages of 30 and 44 (61.9 percent). No significant differences were reported by gender or race/ethnicity. Results also indicate that 85.0 percent of Texas adults reported consuming vegetables at least once per day. While there were no significant differences reported by age or gender, whites (90.4 percent) and other races (90.8 percent) were significantly more likely to report consuming vegetables at least once per day than Hispanics (74.4 percent).

Additionally, 38.6 percent of Texas adults reported consuming fruits and vegetables at least five times per day.[175] Adults between 45 and 64 years of age (43.7 percent) and adults 65 years of age and older (42.9 percent) were significantly more likely to report consuming fruits and vegetables at least five times per day than those between the ages of 18 and 29 (30.4 percent). Results by gender indicate that females (42.5 percent) were significantly more likely to report consuming fruits and vegetables at least five times per day than males (34.5 percent). No significant differences were reported by race/ethnicity.

Status of Physical Activity in Texas

Children

The 2015-2016 results from the School Physical Activity and Nutrition Project indicate that only 9.3 percent of Texas fourth graders met the recommended physical activity guidelines.[176] A slightly higher proportion of boys (11.0 percent) met the recommended physical activity guidelines than girls (7.6 percent). Results by race/ethnicity indicate that 16.3 percent of whites/other races met the recommended physical activity guidelines compared to 7.8 percent of African Americans and 5.6 percent of Hispanics.

Results also indicate that 64.5 percent of Texas fourth graders reported participating on at least one sports team in the past year, with boys (71.5 percent) reporting a higher participation rate than girls (57.2 percent).[177] When examining

by race/ethnicity, whites/other races (69.5 percent) and African Americans (67.2 percent) reported similar rates of participation on at least one sports team, while Hispanics (60.7 percent) reported the lowest participation rate.

Adolescents

The 2017 results from the Texas Youth Risk Behavior Survey indicate that 25.2 percent of Texas high school students reported being physically active for at least 60 minutes per day on each of the seven days prior to the survey.[178] While there were no significant differences reported by age or grade level, males (31.6 percent) were significantly more likely to report being physically active for at least 60 minutes per day than females (18.6 percent), and whites (30.9 percent) were significantly more likely to report such than Hispanics (20.5 percent).

Results also indicate that 19.0 percent of Texas high school students reported not being physically active for at least 60 minutes per day on any of the seven days prior to the survey.[179] Similar results were reported by age and grade level where high school students 18 years of age and older (25.1 percent) were significantly more likely to report not being physically active for at least 60 minutes per day than those 15 years of age and younger (14.9 percent), and twelfth graders (23.7 percent) were significantly more likely to report such than ninth graders (14.0 percent). No significant differences were reported by gender or race/ethnicity.

Additionally, 48.4 percent of Texas high school students reported playing on at least one sports team in the past year.[180] While there were no significant differences reported by age, gender, or race/ethnicity, ninth graders (54.9 percent) were significantly more likely to report participating on a sports team than tenth graders (42.7 percent) and twelfth graders (43.4 percent).

Adults

According to the 2017 results from the Texas Behavioral Risk Factor Surveillance System, 67.9 percent of Texas adults reported participating in a physical activity or exercise in their leisure time in the past month.[181] Adults between 18 and 29 years of age (73.6 percent) were significantly more likely to report participating in a physical activity or exercise in their leisure time than those between the ages of 45 and 64 (64.5 percent) and those 65 years of age and older (62.9 percent). Whites (71.6 percent) were significantly more likely to report participating in a physical activity or exercise in their leisure time than Hispanics (63.2 percent). No significant difference was reported by gender.

In addition, 42.1 percent of Texas adults met the aerobic recommendations for moderate or vigorous physical activity.[182] While there were no significant differences reported by age or gender, whites (47.4 percent) were significantly more likely to have met the aerobic recommendations for moderate or vigorous physical activity than Hispanics (36.3 percent). Results also indicate that 29.2 percent of Texas adults met the muscle-strengthening recommendations. Adults between 18 and 29 years of age (39.5 percent) and adults between 30 and 44 years of age (34.3 percent) were significantly more likely to have met the muscle-strengthening recommendations than those between the ages of 45 and 64 (21.2 percent) and those 65 years of age and older (22.1 percent). Males (33.9 percent) were significantly more likely to have met the muscle-strengthening recommendations than females (24.8 percent). No significant differences were reported by race/ethnicity.

Furthermore, 16.8 percent of Texas adults met the aerobic and muscle-strengthening recommendations.[183] Adults between 18 and 29 years of age (20.8 percent) were significantly more likely to have met the aerobic and muscle-strengthening recommendations than those between the ages of 45 and 64 (14.1 percent), and males (19.7 percent) were significantly more likely to have done so than females (14.0 percent). No significant differences were reported by race/ethnicity.

Policy Recommendations

The Legislature, the Governor, and executive branch agencies should support the scientific evaluation of community-based interventions for nutrition and physical activity.

Community-based interventions for nutrition and physical activity have the ability to provide measurable data regarding the effectiveness of such interventions on improving nutrition, physical activity, and mental health, as well as reducing the occurrence of obesity and other chronic diseases. The Mayor's Fitness Council of San Antonio is an example of a community-based intervention for nutrition and physical activity. The Mayor's Fitness Council of San Antonio aims to reduce obesity among the residents of San Antonio by increasing awareness and connecting residents to opportunities that may improve their nutrition, physical activity, and mental health.[184] Brighter Bites, which has locations in Austin, Dallas, and Houston, is an example of a community-based intervention for nutrition.[185] Brighter Bites increases access to fresh produce and provides educational materials on nutrition.[186] To determine the effectiveness of community-based interventions, such

as those previously mentioned, it is imperative to support their scientific evaluation. Doing so would lead to valuable information regarding whether the targeted efforts of the interventions have been successful and, if so, where the interventions could be implemented strategically throughout the state.

The Legislature, the Governor, and executive branch agencies should support the initiation of coalitions in local communities, especially in rural areas.

To promote eating a healthy diet and engaging in regular physical activity throughout the state, it is important to recognize that the needs of local communities differ and that local communities play a vital role in connecting with their residents. In addition, to avoid the duplication of efforts and to align the interests of multiple entities, collaboration should be encouraged in local communities. Such collaboration could be encouraged through the use of seed grants for coalitions that are initiated in local communities, especially in rural areas.

The Legislature should require that students enrolled in prekindergarten through grade 12 perform at least 30 minutes of moderate or vigorous physical activity daily through the school district's physical education curriculum. The Legislature should require that school districts provide an exemption for students unable to meet this requirement due to illness or disability and for students that meet or exceed this requirement through documented participation in an extracurricular activity with a moderate or vigorous physical activity component.

The required amount of physical activity for students enrolled at school districts in the state differs based on grade level. For example:

- Students in full-day prekindergarten through grade five must perform at least 30 minutes of moderate or vigorous physical activity daily through either the school district's physical education curriculum or structured activity during recess.[187] A school district may require that students perform at least 135 minutes of moderate or vigorous physical activity per school week as an alternative if the district determines that the requirement of moderate or vigorous physical activity daily is impractical. In addition, to the extent practicable, students enrolled in prekindergarten on less than a full-day basis must perform the same type and amount of physical activity as students enrolled in full-day prekindergarten.

- Students in grades six through eight must perform at least 30 minutes of moderate or vigorous physical activity daily for at least four semesters through the school district's physical education curriculum. A school district may require that students perform at least 225 minutes of moderate or vigorous physical activity per two school week period as an alternative if block scheduling is used for the grade level in which students are enrolled.

- Students in grades nine through 12 must have at least one physical education credit to graduate.[188] Students may earn a maximum of four physical education credits.[189,190]

Based on the current requirements, only students in full-day prekindergarten through grade five are required to perform physical activity daily. Moreover, the required amount of physical activity decreases as students transition from elementary school to middle school and then from middle school to high school. To increase the likelihood that students engage in regular physical activity, it is important that all students enrolled in prekindergarten through grade 12 receive at least 30 minutes of moderate or vigorous physical activity daily through the school district's physical education curriculum.

The Legislature should require that students enrolled in grades nine through 12 at school districts in the state earn one health education credit in order to graduate. The Legislature should require that this health education credit include proper instruction on how to attain good nutrition and engage in regular physical activity throughout the life course.

Currently, the state does not require health education for students in grades nine through 12.[191] However, school districts may decide to require a health education credit for students to graduate high school.[192] Due to the importance of eating a healthy diet and engaging in regular physical activity throughout the life course, it is imperative that all students in grades nine through 12 receive health education irrespective of which school district they attend.

The Legislature and the Governor should consider banning the sale of sugar sweetened beverages and candy in government buildings, public university campuses, and public school vending machines.

The 2015-2020 edition of the *Dietary Guidelines for Americans* recommends a healthy diet pattern throughout the lifespan that limits added sugars and sodium.[193] To help individuals limit their intake of added sugars and sodium, consideration

may be given to banning the sale of sugar sweetened beverages and candy in government buildings, public university campuses, and public school vending machines. By having such a ban, certain groups of Texans, including government employees and students, would have less access to products that contain added sugars and sodium and, thus, may be more likely to follow a healthy diet pattern. Such a ban by the state might also lead to other sectors taking similar steps to promote healthy eating.

5. Rural Health in Texas

Rural areas of Texas face dual challenges: poorer health outcomes than their urban counterparts and fewer health care resources. Also, hospitals in rural areas are facing perpetual and heightening threats to their financial solvency, threatening rural Texans' access to vital care. With the coronavirus wreaking havoc across the state and pushing its hospital system to the brink, the need for addressing rural health and health care in the state has never been clearer.

The SHCC supports efforts to reinforce and expand the accessibility of health care in rural areas. In response to the coronavirus pandemic, Texas loosened regulations of telehealth and telemedicine, and the SHCC believes that those changes which were safe and successful should be made permanent. The SHCC believes that Texas must seek ways to expand health care funding, with the goal of keeping rural hospitals and local practices open and staffed. Finally, the SHCC believes that the state should continue to support loan repayment programs that incentivize providers to practice in rural areas.

Health Outcomes in Rural Areas

Nationally, rural areas have a lower life expectancy than urban areas.[194] Those in rural areas are more likely to smoke, less likely to exercise, and have less nutritional diets than those in suburban areas.[195] Rural residents are also more likely to report being physically inactive. These factors contribute to higher mortality rates and higher rates of chronic diseases in rural areas. Rural residents are more likely to have hypertension, diabetes, arthritis, and high cholesterol than urban residents. Rural areas also have higher age-adjusted mortality for heart disease, cancer, chronic respiratory disease, and stroke.[196] Rural children are more likely to be obese than urban children.[197] In 2014, the age-adjusted, all-cause mortality was 830.5 per 100,000 in rural communities and 703.5 in urban communities.[198] In 2013, rural residents were more likely to die due to unintentional injury, drug poisoning, and suicide than urban residents.

Particularly relevant to Texas is rural, border health. Border communities often have high rates of poverty, low insurance coverage, lower access to health care, and poor housing and water systems.[199] The majority of border counties, nationally, qualify as health professional shortage areas or medically underserved areas.

There are racial and ethnic disparities in rural areas, and there are also disparities within the same racial/ethnic group between rural and urban areas. In rural communities, racial and ethnic minorities are more likely to be uninsured than whites.[200] This same report found that non-Hispanic blacks are more likely to be obese than any other racial group and American Indians/Alaskan Natives have the highest rates of smoking. Additionally, African Americans and Hispanics in rural areas are less likely to have access to health care or health insurance compared with the same racial groups in urban areas.[201]

Challenges for the Elderly in Rural Areas

Nationally, the rural population is older than the urban population. The median age is 51 years in rural areas and 45 in urban areas.[202] Rural communities also have a higher proportion of people aged 65 and older, as this age group comprises 18.4 percent of the population in rural areas compared to 14.5 percent in urban areas. According to the Texas Demographic Center, rural counties experienced the most significant increases in median age from 2010 to 2018.[203] For instance, 18 percent of rural counties saw an age increase of two to four years, and 16 percent saw an increase of more than four years. Metro counties saw an age increase of two to four years in 13 percent of counties and more than four years in only 2 percent of counties. Elderly adults are at higher risk of chronic disease, and many manage two or more chronic conditions.[204] Because of this, older adults often require more complex health care that may be more difficult to receive in rural areas.

Challenges for Low-Income and Uninsured Populations in Rural Areas

Texas has the highest uninsured rate in the United States. In 2017, 25.3 percent of the rural population under the age of 65 was uninsured, compared with 22.6 percent of the urban population.[205] Rural households also report an average lower income than urban households. In 2016, the median income was $46,000 for rural households and $62,000 for urban households.[206] The poverty rate was 16.9 percent in rural areas and 13.6 percent in urban areas, and the food insecurity rate was 15.8 percent in rural communities and 14.5 percent in urban communities. Low-income communities are more likely to lack access to fresh foods and have built environments that are less conducive to physical activity.[207] "Built environment" refers to the manmade environment and how it affects peoples' lives; an example would be the number of sidewalks affecting peoples' ability to walk safely. Income and poverty have long been established to be associated with health and mortality.

In summation, people that live in rural areas have poorer health outcomes when compared to their suburban and urban counterparts. These issues are highlighted by the lower incomes and lower insurance rates in rural areas. Additionally, folks in these areas are often older than the state average. These issues make rural health complex and highlight why the issues surrounding facilities and providers in the next sections are particularly important.

Hospital Closures and Nursing Facilities

Access to health care has remained the most significant concern in rural health over the last several decades.[208] The most important elements of access being to emergency care, primary care, and lack of health insurance. From 2005 to 2019, 118 rural hospitals in the United States closed.[209] Since 2010, 26 of these hospitals were in Texas.[210] Hospital closures in rural areas negatively impact access to care and potentially health outcomes as well. Hospital closures lead to loss of access to emergency rooms, making emergency medical transport even more important.[211] For patients that rely on hospitals for specialty care or referrals, they lose that access as well. In particular, communities often lose access to obstetric services, mental health care, and diagnostic imaging when hospitals close. Communities that lose hospitals have a difficult time recruiting employers and industries to the area.

Hospital closures can lead to increases in the amount of time patients must travel.[212] Longer travel times can lead to negative health outcomes, especially for conditions like traumatic injuries and stroke.

There has also been a significant amount of nursing home closures since 2015 (555 closures).[213] According to a Leading Age report, Texas had 65 nursing home closures between 2015 and 2019, with 40 percent of these closures being in rural areas.

In 2018, Texas had the highest number of uninsured people in any state, and Texas has not expanded Medicaid through the Affordable Care Act (ACA).[214] If Texas had expanded Medicaid, 1,553,000 people in the state would have been eligible for Medicaid in 2018. People of color are more likely to be low-income and uninsured, so Medicaid expansion affects them more significantly.[215] States that expanded Medicaid were shown to have reductions in the disparate rates of uninsured people in rural versus urban areas, with insurance rates becoming closer.[216] Additionally, the ACA expansion of Medicaid is associated with reduced probabilities of hospital closures.[217] In particular, rural hospitals saw "significantly improved total,

operating, and Medicaid and uncompensated care margins related to the ACA's Medicaid expansion."

Providers

Data from the Health Professions Resource Center at DSHS indicate that there was a 41.9 percent difference between the number of primary care physicians in metropolitan and non-metropolitan Texas counties in 2019. The difference of all direct patient care physicians between metropolitan and non-metropolitan counties was 77.8 percent. In 2019, there were 32 counties in Texas with no primary care physicians and 28 counties with no direct patient care physicians. Health care clinics may close due to physician retirement or because they, like hospitals, are not financially solvent.

Clinic closures in rural Texas can lead to longer drives to access care and delaying care due to the distance. A Texas Observer article highlights this by describing how since the one clinic in Cottle County closed, residents must drive 30 miles to Childress County, the next closest clinic.[218] Residents in rural areas must make hard choices about whether or not to move to obtain better access to care, especially as they age.

Older Providers

As illustrated by data from the Health Professions Resource Center, direct patient care physicians in rural Texas areas tend to be older. In 2019, the average age of direct patient care physicians was 50.7 years in metropolitan counties and 55.3 years in non-metropolitan counties.

As physicians in rural areas age and retire, they may leave practices that have to close because there are no physicians in the area to continue the practice. When the nurse practitioner who ran the only health clinic in Memphis, Texas retired, the clinic closed.[219] Now residents must drive approximately 140 miles to receive care.

Obstetric Services

According to Health Professions Resource Center data, there was a 81.4 percent difference between the number of obstetricians and gynecologists in metropolitan and non-metropolitan Texas counties in 2019. Projections show that the shortage of obstetricians and gynecologists is projected to continue through 2032 in seven of the eight public health regions in Texas.[220]

Nationally, the number of hospitals providing obstetric care has decreased over the last 20 years.[221] This can lead to increased travel time for women in rural areas. A study that looked at reasons for closing obstetric services found that common risk factors included: low number of births, private hospital ownership, low number of family physicians in county, and lower income county.

As obstetric units close, women must drive farther distances to give birth. This can be dangerous for women with high-risk pregnancies or complications. Obstetric unit closures in rural counties, that are not adjacent to urban counties, are associated with higher rates of preterm birth.[222]

Policy Recommendations

The Legislature, the Governor, and executive branch agencies should support the expansion and availability of telehealth and telemedicine, as well as remove barriers to telehealth and telemedicine in rural Texas.

To ensure greater access to health care services, including mental health, the availability of telehealth and telemedicine must expand. There are currently numerous barriers to the practice of telehealth and telemedicine. The current coronavirus pandemic has resulted in the rapid expansion of telehealth and telemedicine services. The Centers for Medicare and Medicaid Services has expanded the number of services eligible for telehealth.[223] Additionally, Governor Abbott issued emergency rules expanding telehealth and telemedicine.[224] A Texas A&M University report identified telemedicine as a way for rural residents to access subspecialist services and for expanding services offered by nurse practitioners and physician assistants.[225] Expanding broadband service in rural areas of Texas may also increase access to telehealth and telemedicine.

The Legislature, the Governor, and executive branch agencies should support new and innovative methods of hospital financing.

Hospital financing is a significant factor in whether a hospital stays in a rural area. By encouraging innovative financing, Texas can create novel solutions to strengthen rural hospitals. In the report from Texas A&M University, facility conversion is identified as a solution for hospitals.[226] By evaluating services, hospitals can best adjust their services to meet the needs of the community. Additionally, facilities can formalize relationships with other facilities to provide other services.

The Legislature, the Governor, and executive branch agencies should monitor the impact of the coronavirus pandemic on the number of uninsured people in Texas.

Prior to the coronavirus pandemic, Texas had the highest number of uninsured people of any state. More than 5.2 million people in Texas, or about 18.4 percent of the state's population, were uninsured in 2019.[227] An estimated 659,000 adults in Texas lost coverage due to job loss during the pandemic.[228] As this is a rapidly changing situation, leaders must continue to track and determine the impact of the pandemic on the number of uninsured people in the state.

The Legislature, the Governor, and executive branch agencies should support expanding the state's loan repayment programs to include more health professions.

The Texas Higher Education Coordinating Board has loan repayment programs for physicians, nurses, and mental health professionals who practice in underserved areas.[229] For more information on the expansion of the Loan Repayment Program for Mental Health Professionals, see the next chapter of this update regarding the mental health workforce shortage. By expanding the loan repayment programs to include more health professions, the number of people practicing other health professions in underserved areas could increase. This could also incentivize people to enter a health profession.

6. The Mental Health Workforce Shortage

Over the past several legislative sessions, Texas has made great strides to address the mental health of its citizens and improve the mental health care system in the state. Despite these advances, additional improvement is necessary. Indeed, the recent coronavirus pandemic has exposed the fragility of the state's mental health care system and highlighted how quickly additional demand for services can overwhelm providers.

The SHCC supports the recently created Texas Child Mental Health Care Consortium and believes that it and other efforts at improving children's mental health care must continue to be prioritized. The SHCC also seeks to improve the practice environment of mental health providers, both by making mental health careers more attractive to students and by improving the practice environment in the state.

Background

Nationally, almost half of adults (46.4 percent) will experience a diagnosable mental disorder in their lifetime.[230] On an annual basis, nearly one in four adults (26.2 percent) in the United States experience mental illness and about one in 17 (5.8 percent) experience a serious mental illness.[231] Half of diagnosable mental disorders begin by the age of 14 and three-fourths begin by the age of 24.[232] Moreover, an estimated 14 to 20 percent of young people annually have mental, emotional, and behavioral disorders.[233]

According to the 2018 National Survey on Drug Use and Health, an estimated 47.6 million adults aged 18 or older (19.1 percent) in the United States reported experiencing mental illness in the past year.[234] An estimated 11.4 million adults (4.6 percent) reported experiencing serious mental illness during the past year. Results also indicate that 3.5 million children and adolescents aged 12 to 17 (14.4 percent) reported experiencing a major depressive episode in the past year. An estimated 2.4 million children and adolescents (10.0 percent) reported experiencing a major depressive episode with severe impairment during the past year.

The 2018 survey results also indicate that, among adults who experienced mental illness in the United States, just 43.3 percent reported that they received mental health care in the past year.[235] Only 64.1 percent of adults who experienced serious mental illness reported that they received mental health care in the past year.

Among children and adolescents aged 12 to 17 who experienced a major depressive episode, just 41.4 percent reported that they received treatment for depression.

A national study conducted by the Center for Studying Health System Change found that 66.8 percent of primary care physicians were unable to refer their patients to high-quality outpatient mental health services.[236] This percentage of unavailability is much higher than the percentages reported by primary care physicians for other common referrals, including high-quality specialist referrals (33.8 percent), high-quality imaging services (29.8 percent), and nonemergency hospital admissions (16.8 percent). Primary care physicians reported that the unavailability of high-quality outpatient mental health services was due to lack of health insurance coverage or inadequate health insurance coverage, a shortage of providers, and health plan barriers.

Despite the established need for mental health services, a mental health workforce shortage is evident nationwide. According to the Health Resources and Services Administration, over 119.5 million people in the United States live in the 5,565 health professional shortage areas for mental health.[237] Areas designated by the Health Resources and Services Administration as health professional shortage areas for mental health may be based on the ratio of population to psychiatrist, the ratio of population to core mental health provider (includes psychiatrists, clinical psychologists, clinical social workers, psychiatric nurse specialists, and marriage and family therapists), or both of these ratios.

- If based on the ratio of population to psychiatrist, geographic designations must have a ratio of 30,000 to 1. Or, in areas with high needs, geographic designations or population designations must have a ratio of 20,000 to 1.

- If based on the ratio of population to core mental health provider, geographic designations must have a ratio of 9,000 to 1. Or, in areas with high needs, geographic designations or population designations must have a ratio of 6,000 to 1.

- If based on the ratios of both population to psychiatrist and population to core mental health provider, geographic designations must have a population to psychiatrist ratio of 20,000 to 1 and a population to core mental health provider ratio of 6,000 to 1. Or, in areas with high needs, geographic designations or population designations must have a population to psychiatrist ratio of 15,000 to 1 and a population to core mental health provider ratio of 4,500 to 1.

Most health professional shortage areas for mental health are designated based on the ratio of population to psychiatrist.[238] Estimates show that an additional 6,476 mental health providers would be needed to remove the existing health professional shortage area designations for mental health.

Demand for mental health services is projected to increase nationwide due to the aging population.[239] The number of older adults with mental and behavioral health problems is projected to increase by 11 million from 1970 to 2030. Moreover, the aging of the national population requires behavioral health service providers with special knowledge and skills.[240]

The Health Resources and Services Administration issued national-level supply and demand projections for several behavioral health occupations from 2016 to 2030 that incorporate estimates of unmet need for behavioral health services. Based on these projections, there will be an estimated shortage of 34,940 addiction counselors,[241] 21,150 adult psychiatrists,[242] 14,300 clinical, counseling, and school psychologists,[243] and 40,140 mental health counselors[244] nationwide in 2030. These projections also indicate that there will be an estimated surplus of 3,720 child and adolescent psychiatrists,[245] 1,650 marriage and family therapists,[246] 2,440 psychiatric nurse practitioners,[247] 1,500 school counselors,[248] and 200,280 social workers[249] nationwide in 2030.

Workforce-based explanations for an inadequate supply of mental health and addiction providers at-large generally focus on insufficient numbers of providers, high turnover, low compensation, a lack of diversity, and limited competency in evidence-based treatments.[250] Describing the mental health workforce shortage quantitatively can be problematic, as relevant data have not been universally collected and there is no agreed-upon definition of adequate supply.[251] However, efforts to describe the mental health workforce shortage should consider both the population's need for mental health services and the number of providers available to deliver these services.

Texas' Need for Mental Health Services

As noted above, one part of describing a workforce shortage involves demonstrating the needs of the population for mental health services. A standard definition of mental health need is not available at the state or national level.

Children

No reliable statewide survey data on mental health needs exist for children younger than high school age. However, data from the Behavioral Health Services Section at the Texas Health and Human Services Commission indicate that 44,031 children who were 13 years of age or younger received mental health services from local mental health authorities in Texas during state fiscal year 2017.[252] The top five diagnostic groups were attention deficit disorder (53 percent), adjustments/other non-psychotic (9 percent), disruptive behavior disorder (8 percent), affective disorders - other (8 percent), and affective disorders - major depression (6 percent).

Adolescents

According to the 2017 Texas Youth Risk Behavior Survey, 34.2 percent of Texas high school students reported feeling so sad or hopeless almost every day for at least two weeks in the past year that they stopped doing some usual activities, with females (43.7 percent) being significantly more likely to report these feelings than males (24.7 percent).[253] Results also indicate that 17.6 percent of Texas high school students reported seriously considering a suicide attempt in the past year and 14.5 percent reported making a plan in the past year for how they would attempt suicide. Females were significantly more likely to report these events than males. In addition, 12.3 percent of Texas high school students reported attempting suicide at least once in the past year and 4.5 percent reported requiring medical treatment after doing so, with no significant differences reported by gender. No significant differences were reported by age, grade level, or race/ethnicity for any of the above measures.

The percentage of Texas high school students who reported feeling sad or hopeless, making a suicide plan, attempting suicide, and requiring medical treatment following a suicide attempt increased significantly from 2007 to 2017.[254] Conversely, the percentage of Texas high school students who reported seriously considering a suicide attempt did not increase significantly from 2007 to 2017. When compared to high school students nationwide, Texas high school students were more likely in 2017 to report attempting suicide and requiring medical treatment following a suicide attempt. No significant differences were found between Texas high school students and high school students nationwide in the likelihood of reporting feeling sad or hopeless, seriously considering a suicide attempt, or making a suicide plan in 2017.

Adults

The 2018 results from the Texas Behavioral Risk Factor Surveillance System indicate that 20.4 percent of Texas adults reported having poor mental health for five or more days in the past 30 days.[255,256] Adults between 18 and 29 years of age (25.9 percent) were significantly more likely to report having poor mental health for five or more days than those between the ages of 45 and 64 (19.5 percent) and those 65 years of age and older (13.7 percent). Moreover, adults between 30 and 44 years of age (21.3 percent) and adults between 45 and 64 years of age were significantly more likely to report having poor mental health for five or more days than those 65 years of age and older. Results by gender indicate that females (22.8 percent) were significantly more likely to report having poor mental health for five or more days than males (17.9 percent). No significant differences were reported by race/ethnicity. Additionally, 11.7 percent of Texas adults reported having poor mental health for 14 or more days in the past 30 days. No significant differences were reported by age, gender, or race/ethnicity.

Texas' Mental Health Workforce

In addition to patient need, a shortage of providers determines the insufficiency of the mental health workforce. The supply of providers can be conceptualized as being composed of two broad determinants. The first is the entire number of providers qualified to serve in mental health, and the second is the number of those providers committed to providing patient care and the percentage of their productive time committed to doing so.[257]

The Texas Primary Care Office at DSHS uses the population to psychiatrist ratio that is at least 30,000 to 1 or, in areas with high needs, 20,000 to 1 to apply for health professional shortage areas for mental health through the Health Resources and Services Administration. As of June 2020, 236 of the 254 counties (92.9 percent) in Texas were wholly or partially designated as a health professional shortage area for mental health.[258] Moreover, as of September 2019, 173 counties (68.1 percent) in Texas had no psychiatrists.

The state's mental health workforce shortage is expected to worsen, as the workforce is aging and many providers are nearing retirement age. At the same time, educational institutions in the state and the nation are not producing enough new graduates to meet projected demand. Given the nationwide mental health workforce shortage, it is unlikely that Texas can meet its staffing needs by recruiting providers from other states.[259]

DSHS issued a report in 2020 projecting the supply and demand for all physicians and 35 physician specialties in Texas from 2018 through 2032.[260] Statewide results from this report indicate that there will be an estimated shortage of 1,043 full-time equivalent psychiatrists by 2032.

In addition to a shortage of providers, other sociodemographic factors contribute to the state's inadequate mental health workforce. For example, mental health providers are not distributed evenly across the state, resulting in differential access to care by region, especially in rural areas and along the border. Further, the mental health provider workforce does not reflect the state's growing racial/ethnic diversity, resulting in the continued need for culturally competent mental health care.

Overview of Mental Health Workforce by Profession

The tables below are based on licensure data that the Health Professions Resource Center at DSHS receives annually from the respective state licensing board for the following professions: clinical nurse specialists, community health workers or promotores, licensed baccalaureate social workers, licensed chemical dependency counselors, licensed clinical social workers, licensed master social workers, licensed professional counselors, licensed psychological associates, licensed psychologists, licensed specialists in school psychology, marriage and family therapists, nurse practitioners, provisionally licensed psychologists, and psychiatrists.

Counts include only providers who were licensed with their Texas board and actively working in their profession. Clinical nurse specialists and nurse practitioners include only those who indicated they were employed in the field of nursing and had a specialty in psychiatric/mental health. Psychiatrists include only those who indicated they provided direct patient care. Analyses include all providers for whom the respective data were available.

Table 1. Number of Providers and Population to Provider Ratio of Mental Health Workforce by Profession, Texas, 2019

Profession	Number of Providers	Population to Provider Ratio
Clinical Nurse Specialists	152	192,061.0
Community Health Workers or Promotores	4,122	7,082.3
Licensed Baccalaureate Social Workers	4,516	6,464.4
Licensed Chemical Dependency Counselors	5,900	4,948.0
Licensed Clinical Social Workers	8,508	3,431.3
Licensed Master Social Workers	11,134	2,622.0
Licensed Professional Counselors	20,933	1,394.6
Licensed Psychological Associates	840	34,753.9
Licensed Psychologists	4,775	6,113.8
Licensed Specialists in School Psychology	3,522	8,288.8
Marriage and Family Therapists	2,813	10,378.0
Nurse Practitioners	1,002	29,135.0
Provisionally Licensed Psychologists	145	201,332.9
Psychiatrists	2,280	12,804.1

Using 2019 population projections from the Texas Demographic Center and the total number of providers in Texas, licensed professional counselors had the lowest population to provider ratio statewide in 2019, followed by licensed master social workers and licensed clinical social workers. Conversely, provisionally licensed psychologists had the highest population to provider ratio statewide in 2019,

followed by clinical nurse specialists who indicated a specialty in psychiatric/mental health and licensed psychological associates.

Table 2. Percentage of Providers and Population to Provider Ratio of Mental Health Workforce by Profession for Most and Least Populous Counties, Texas, 2019

Profession	Percentage of Providers - Five Most Populous Counties	Population to Provider Ratio - Five Most Populous Counties	Percentage of Providers - 249 Least Populous Counties	Population to Provider Ratio - 249 Least Populous Counties
Clinical Nurse Specialists	61.8%	138,427.0	38.2%	278,984.9
Community Health Workers or Promotores	53.6%	5,887.8	46.4%	8,462.9
Licensed Baccalaureate Social Workers	32.9%	8,762.4	67.1%	5,338.5
Licensed Chemical Dependency Counselors	46.6%	4,731.7	53.4%	5,136.9
Licensed Clinical Social Workers	64.2%	2,382.3	35.8%	5,312.3
Licensed Master Social Workers	59.3%	1,972.4	40.7%	3,566.5
Licensed Professional Counselors	49.5%	1,255.5	50.5%	1,531.0
Licensed Psychological Associates	51.0%	30,402.2	49.0%	39,274.6
Licensed Psychologists	65.0%	4,189.4	35.0%	9,695.1

Profession	Percentage of Providers - Five Most Populous Counties	Population to Provider Ratio - Five Most Populous Counties	Percentage of Providers - 249 Least Populous Counties	Population to Provider Ratio - 249 Least Populous Counties
Licensed Specialists in School Psychology	49.1%	7,521.5	50.9%	9,029.6
Marriage and Family Therapists	57.7%	8,012.4	42.3%	13,609.0
Nurse Practitioners	56.0%	23,194.5	44.0%	36,691.9
Provisionally Licensed Psychologists	60.0%	149,564.8	40.0%	278,984.9
Psychiatrists	63.0%	9,055.1	37.0%	19,194.7

Texas' mental health workforce is not evenly distributed throughout the state. In 2019, the state's five most populous counties (Harris, Dallas, Tarrant, Bexar, and Travis) had roughly 44.6 percent of the population. However, 10 out of 14 mental health professions had over half of the workforce in these five counties alone. Moreover, for 13 mental health professions, the state's five most populous counties had a combined population to provider ratio that was lower than the ratio for the remainder of the state.

Table 3. Growth Trends of Mental Health Workforce by Profession, Texas, 2014-2019

Profession	Average Annual Growth Rate - Number of Providers	Average Annual Growth Rate - Population to Provider Ratio
Clinical Nurse Specialists	(5.0%)[ii]	(7.1%)
Community Health Workers or Promotores	6.5%	4.5%
Licensed Baccalaureate Social Workers	(0.0%)	(2.0%)
Licensed Chemical Dependency Counselors[iii]	Not Available	Not Available
Licensed Clinical Social Workers	5.4%	3.7%
Licensed Master Social Workers	5.7%	3.9%
Licensed Professional Counselors	4.7%	3.1%
Licensed Psychological Associates	(3.4%)	(5.1%)
Licensed Psychologists	2.4%	0.9%
Licensed Specialists in School Psychology	2.7%	1.2%
Marriage and Family Therapists	0.8%	(0.6%)
Nurse Practitioners	21.6%	16.0%

[ii] Parentheses in this table indicate a decrease.

[iii] Data to calculate annual growth rates of licensed chemical dependency counselors between 2014 and 2019 were unavailable. However, available data show that the number of active licensed chemical dependency counselors in Texas has increased 17.8 percent since 2014. Available data also show that, relative to population growth, the size of the licensed chemical dependency counselor workforce has improved by 8.8 percent over the past five years.

Profession	Average Annual Growth Rate - Number of Providers	Average Annual Growth Rate - Population to Provider Ratio
Provisionally Licensed Psychologists	(3.5%)	(11.3%)
Psychiatrists	3.0%	1.5%

Among the 13 mental health professions for whom annual growth rates between 2014 and 2019 were available, nine professions had an increase in the average annual growth rate for the number of providers in Texas. When considering population growth, only eight of these nine mental health professions had an improvement in the size of the workforce over these five years.

Table 4. Number of Counties with No Providers of Mental Health Workforce by Profession, Texas

Profession	2014	2019
Clinical Nurse Specialists	208	218
Community Health Workers or Promotores	155	146
Licensed Baccalaureate Social Workers	55	55
Licensed Chemical Dependency Counselors	78	78
Licensed Clinical Social Workers	119	114
Licensed Master Social Workers	87	74
Licensed Professional Counselors	45	40
Licensed Psychological Associates	147	157
Licensed Psychologists	144	145
Licensed Specialists in School Psychology	113	102
Marriage and Family Therapists	132	145
Nurse Practitioners	206	185
Provisionally Licensed Psychologists	223	221
Psychiatrists	175	173

Many counties in Texas do not have any providers for at least one mental health profession. The number of counties in the state with no providers increased for four mental health professions between 2014 and 2019, while the number of counties in the state with no providers decreased for eight mental health professions. There was no change in the number of counties in the state with no providers for two mental health professions between 2014 and 2019.

Table 5. Percentage of Mental Health Workforce by Profession Eligible for Retirement in 10 Years, Texas, 2019

Profession	56-65 Years	Over 65 Years	Total[iv]
Clinical Nurse Specialists	32.9%	59.9%	92.8%
Community Health Workers or Promotores	18.6%	4.8%	23.4%
Licensed Baccalaureate Social Workers	25.5%	11.5%	37.0%
Licensed Chemical Dependency Counselors	28.6%	18.3%	46.9%
Licensed Clinical Social Workers	19.2%	19.1%	38.3%
Licensed Master Social Workers	11.6%	7.3%	18.9%
Licensed Professional Counselors	18.8%	16.0%	34.9%
Licensed Psychological Associates	26.2%	24.0%	50.2%
Licensed Psychologists	18.6%	26.6%	45.3%
Licensed Specialists in School Psychology	12.7%	12.1%	24.8%
Marriage and Family Therapists	21.6%	33.7%	55.3%
Nurse Practitioners	14.5%	5.7%	20.2%
Provisionally Licensed Psychologists	9.0%	3.4%	12.4%

[iv] Calculations in the total column are based on unrounded numbers.

Profession	56-65 Years	Over 65 Years	Total[iv]
Psychiatrists	21.5%	24.1%	45.6%

Texas faces the challenge of an aging mental health workforce. Within 10 years, nine out of 14 mental health professions will have over one-third of the current workforce eligible for retirement. Of these nine mental health professions, three will have over half of the current workforce eligible for retirement in 10 years.

Table 6. Percentage of Mental Health Workforce by Profession Among Racial/Ethnic Categories, Texas, 2019

Profession	Black/ African American	Hispanic/ Latino	White/ Caucasian	Other
Clinical Nurse Specialists	9.9%	13.2%	72.2%	4.6%
Community Health Workers or Promotores	21.3%	64.2%	11.1%	3.4%
Licensed Baccalaureate Social Workers	14.6%	26.9%	56.4%	2.1%
Licensed Chemical Dependency Counselors	21.1%	19.0%	57.1%	2.8%
Licensed Clinical Social Workers	11.4%	16.5%	67.7%	4.3%
Licensed Master Social Workers	17.8%	24.3%	53.3%	4.6%

Profession	Black/ African American	Hispanic/ Latino	White/ Caucasian	Other
Licensed Professional Counselors	10.3%	17.2%	68.8%	3.7%
Licensed Psychological Associates	4.4%	16.2%	76.9%	2.5%
Licensed Psychologists	5.5%	10.3%	79.1%	5.0%
Licensed Specialists in School Psychology	8.1%	20.3%	68.0%	3.6%
Marriage and Family Therapists	5.8%	11.3%	77.9%	5.0%
Nurse Practitioners	30.8%	11.8%	47.7%	9.7%
Provisionally Licensed Psychologists	13.0%	7.4%	68.5%	11.1%
Psychiatrists	6.9%	9.4%	56.3%	27.4%

The racial/ethnic distribution of Texas' mental health workforce differed greatly from that of the Texas population in 2019. The composition of Texas' population was estimated to be 41.3 percent white/Caucasian, 39.6 percent Hispanic/Latino, 11.9 percent black/African American, and 7.1 percent from other races/ethnicities. Yet, whites/Caucasians were overrepresented in 13 out of 14 mental health professions when compared to the Texas population, while Hispanics/Latinos and blacks/African Americans were underrepresented in 13 and eight mental health professions, respectively.

Policy Recommendations

The Legislature, the Governor, and executive branch agencies should support efforts by school districts to increase access to mental health services for students.

Increasing the number of counselors and psychologists employed by school districts in the state is one way that school districts may increase access to mental health services for students. Generally, the recommended student to provider ratio differs based on the profession. For example:

- The American School Counselor Association recommends a student to school counselor ratio of 250 to 1.[261]
- The National Association of School Psychologists recommends a student to school psychologist ratio between 500 to 1 and 700 to 1.[262]

According to the Texas Education Agency, there were 12,835.18 full-time equivalent counselors and 1,958.99 full-time equivalent licensed specialists in school psychology/psychologists employed by school districts in Texas during the 2018-2019 school year.[263] Based on the statewide enrollment of 5,431,910 students, there was a student to counselor ratio of 423.2 to 1 and a student to licensed specialist in school psychology/psychologist ratio of 2,772.8 to 1 for the 2018-2019 school year.[264]

As the statewide ratios for counselors and licensed specialists in school psychology/psychologists employed by school districts exceed the ratio recommended by the respective professional association listed above, it is important that school districts throughout the state consider increasing the number of counselors and psychologists that they employ. Moreover, additional providers employed by school districts would better ensure that students have access to mental health services in the school setting.

Another way that school districts in the state may increase access to mental health services for students is to partner with community mental health centers. Currently, school districts are not required to provide mental health services to students or to partner with community mental health centers in providing such services. As not all school districts have prioritized providing mental health services, many students throughout the state may not have access to mental health services in the school setting.

Due to the challenge of providing mental health services and the limited resources of many school districts, particularly in rural areas, it is important that school districts not be burdened with creating their own infrastructure for providing mental health services. In addition, solutions should be developed that leverage existing services. As community mental health centers already have the staff, training, and experience necessary to help students, partnering with them would allow school districts to take advantage of existing services in a cost-effective manner. Furthermore, it may not be necessary for every school district to have a full-time mental health provider. Partnering with community mental health centers would allow school districts, especially those that have not prioritized providing mental health services, to increase access to cost-effective mental health services for students.

The Legislature, the Governor, and executive branch agencies should continue to support the work of the Texas Child Mental Health Care Consortium.

Senate Bill 11, 86th Legislature, Regular Session, 2019, established the Texas Child Mental Health Care Consortium.[265] Members of the consortium include 13 health-related institutions of higher education, the Texas Health and Human Services Commission, the Texas Higher Education Coordinating Board, and three nonprofit organizations that focus on mental health care.[266] These nonprofit organizations currently include the Meadows Mental Health Policy Institute, the Hogg Foundation for Mental Health, and the Texas Council of Community Health Centers.[267] The consortium is governed by an executive committee.[268]

The purpose of the consortium is to:

- Leverage the expertise and capacity of the 13 health-related institutions of higher education to address urgent mental health challenges and improve the mental health care system in the state in relation to children and adolescents; and

- Enhance the state's ability to address the mental health care needs of children and adolescents through collaboration of the 13 health-related institutions of higher education.[269]

The consortium is tasked with the following initiatives:

- Establishing a network of comprehensive child psychiatry access centers; and

- Establishing or expanding telemedicine or telehealth programs to identify and assess behavioral health needs and provide access to mental health care services.[270]

In addition, the executive committee is authorized to provide funding to any of the 13 health-related institutions of higher education for the purpose of expanding the state's child mental health workforce.[271] Such funding may be provided to expand the child psychiatry workforce and/or to add a child and adolescent psychiatry fellowship.

As the initiatives of the Texas Child Mental Health Care Consortium have the ability to improve access to mental health services for children and adolescents throughout the state, it is imperative that the work of the consortium continue to be supported. Such support will better ensure that the state is able to address the mental health care needs of children and adolescents.

The Legislature, the Governor, and executive branch agencies should continue to support the work of the Statewide Behavioral Health Coordinating Council.

The 2016-17 General Appropriations Act, House Bill 1, 84th Legislature, Regular Session, 2015 (Article IX, Section 10.04), established the Statewide Behavioral Health Coordinating Council.[272] Members of the council include representatives of state agencies and institutions of higher education that receive state funding to provide behavioral health services. The purpose of the council is to ensure a strategic statewide approach to behavioral health services.[273] The council is primarily charged with the following duties:

- Developing and monitoring the implementation of a five-year statewide behavioral health strategic plan;

- Developing a biennial coordinated statewide behavioral health expenditure proposal; and

- Annually publishing an updated inventory of behavioral health programs and services that are funded by the state that includes a description of how those programs and services further the purpose of the statewide behavioral health strategic plan.[274]

In the *Texas Statewide Behavioral Health Strategic Plan, Fiscal Years 2017-2021*, the behavioral health workforce shortage was identified as one of the gaps in the

state's behavioral health system.[275] As the Statewide Behavioral Health Coordinating Council is addressing the state's mental health workforce shortage, it is imperative that the work of the council continue to be supported. Such support will allow the council to further develop strategies that may improve access to the state's behavioral health system.

The Legislature, the Governor, and executive branch agencies should support efforts to increase the funding and stipends available to students of the mental health professions as they complete their education and training.

Completing the education and training required to become a mental health provider is a timely and expensive process. To lessen the financial burden faced by students of the mental health professions, consideration should be given to expanding the funding and stipends available to them as they complete their education and training. By expanding such funding and stipends, more individuals may be incentivized to select a mental health profession, likely leading to an increase in the state's mental health workforce.

The Legislature, the Governor, and executive branch agencies should support the expansion of the Loan Repayment Program for Mental Health Professionals.

To recruit individuals to the state's mental health workforce and to retain the existing mental health workforce, it is important to expand practice incentives for mental health providers. One practice incentive that could be expanded is the Loan Repayment Program for Mental Health Professionals that is administered by the Texas Higher Education Coordinating Board.[276] The eligibility criteria for this program could be expanded to include additional practice specialties, practice areas, and/or types of recipients that receive care. For example:

- The practice specialties of mental health providers could be expanded to include licensed psychological associates, licensed specialists in school psychology, provisionally licensed psychologists, licensed baccalaureate social workers, licensed master social workers, and/or community health workers or promotores.[277]

- The practice location of mental health providers could be expanded to include areas not designated by the Health Resources and Services Administration as health professional shortage areas for mental health.[278]

- The types of recipients that receive care from mental health providers could be expanded to include individuals who receive mental health services but are not:
    - Enrolled in Medicaid;
    - Enrolled in the Texas Children's Health Insurance Program;
    - Committed to a secure correctional facility operated by or under contract with the Texas Juvenile Justice Department; and/or
    - Confined in a secure correctional facility operated by or under contract with any division of the Texas Department of Criminal Justice.

The funding for the Loan Repayment Program for Mental Health Professionals could also be expanded. Doing so could improve the efficacy of the program, as new program participants may be able to enroll in the program sooner and the overall number of mental health providers participating in the program may increase.

By expanding the eligibility criteria and/or funding for the Loan Repayment Program for Mental Health Professionals, the ability to recruit and retain mental health providers would be strengthened. Moreover, given that the state's mental health workforce is aging and many providers are nearing retirement age, it is imperative that measures are taken to encourage and incentivize individuals to select a mental health profession.

The Legislature, the Governor, and executive branch agencies should support expanding the reciprocity of licenses for mental health providers between states.

The process of obtaining a license in a new state can be difficult for licensed mental health providers who are transitioning from one state to another. This process can require a considerable amount of time to complete and be cumbersome to navigate due to states having different requirements. To ease the process for licensed mental health providers seeking to relocate to Texas and become licensed by the state, it is important to expand the reciprocity standards between states. Doing so may lead to an increase in the state's mental health workforce and, thus, greater access to mental health services in the state.

The Legislature, the Governor, and executive branch agencies should support the increase of reimbursement rates for mental health providers.

The current payment system is a key barrier that affects the recruitment and retention of mental health providers in the state. As the current payment system fails to adequately reimburse mental health providers, many providers are not able to sustain providing mental health services and/or expand their capacity of doing so. To lessen this barrier, consideration should be given to increasing reimbursement rates for mental health providers. By increasing such rates, the state would strengthen its ability to recruit and retain mental health providers, as well as better ensure access to mental health services throughout the state.

7. Challenges in Clinical Training Site Availability of Texas' Schools of Health Professions

A sufficiently robust workforce is necessary for achieving a health care system that maximizes the current health of Texans and ensures the prevention of future disease. The SHCC has long supported efforts to improve the education and retention of health care professionals in the state. The SHCC continues to do so by supporting incentives for the state's next generation of providers, especially mental health care providers, and supporting actions that responsibly remove barriers to practice.

Background

In the previous 2019-2020 State Health Plan Update, educational programs were surveyed for the availability of clerkships and clinical training sites for allopathic physicians, osteopathic physicians, physician assistants, and nurse practitioners. Student training is a necessary and core component of health and allied health professions education. It exposes students to the invaluable experience of observing and participating in patient care. This is integral training for the next generation of the health professions workforce. But these experiences are generally not holistically considered by policy planners.

For the 2021-2022 State Health Plan Update, the previous survey of clinical training sites was expanded to more health and allied health professions. The following professions were included in the survey: licensed professional counselors, marriage and family therapists, licensed chemical dependency counselors, licensed specialists in school psychology, social workers, occupational therapists, physical therapists, pharmacists, dentists, and dental hygienists. These training experiences have different names, including: practicums for licensed professional counselors, marriage and family therapists, and licensed chemical dependency counselors; internships for licensed specialists in school psychology and social workers; fieldwork for occupational therapists and physical therapists; and clinical training for pharmacists, dentists, and dental hygienists. Professional associations were consulted to gain insight as to the issues and barriers in the workforce pipeline.

Health Professions Education

Allied health professionals provide integral health care services. These professions require specialized education, training, and certifications. The educational and clinical training of these professions is an important aspect to better understand the workforce supply. As demonstrated in the table below, the Bureau of Labor Statistics projects growth above the rate for all professions for all of the health care occupations listed, except for pharmacists.[279] This illustrates the need for ensuring the educational pipeline for these health professions.

Table 7. Bureau of Labor Statistics Projections on Profession Growth, Nationally

Profession	Projected Percent Increase from 2018 to 2028
Mental Health Counselors	22%
Marriage and Family Therapists	22%
Substance Abuse Counselors	22%
Psychologists (includes school psychologists)	14%
Social Workers	11%
Occupational Therapists	18%
Physical Therapists	22%
Pharmacists	0%
Dentists	7%
Dental Hygienists	11%
All Health Care Occupations	14%
All Occupations	5%

Additionally, there are other factors, including shortages and turnover in health professions. Ensuring the educational pipeline is important to addressing these issues. Staff shortages, high caseloads, and poor supervision are some of the

struggles faced by social workers.[280] There is a significant amount of literature documenting the effect of job related stress and burnout among social workers, and how burnout can lead to turnover and social workers leaving the field. Turnover affects the quality and consistency of services provided. Similarly, substance abuse counselors have high staff turnover.[281] This turnover can disrupt service delivery and harm implementation of initiatives.

There is also a shortage of school psychologists in Texas and nationwide which compounds the concern that the number of retiring school psychologists may be outpacing entering school psychologists.[282] The National Association of School Psychologists recommends a ratio of school psychologists to students be between 1:500 and 1:700. No region meets this recommendation in Texas, and the 2017-2018 statewide ratio was 1:2,792.

The physical therapist job shortage is projected to increase in Texas from 2008 to 2030.[283] There is a projected shortage of 16,346 physical therapist jobs in Texas for 2030. Similarly, Texas is also projected to have a shortage of occupational therapists in 2030.[284] By 2030, Texas is projected to have a shortage of 5,675 occupational therapist jobs.

Survey of Clinical Site Availability in Texas

In March 2013, a national survey was conducted to understand the difficulties that institutions face in recruiting and maintaining clinical sites.[285] This survey included questions on challenges in the ability to identify, recruit, and maintain clinical training sites; the use of incentives, monetary and otherwise, to do so; and perceived competition for sites. In 2018, Texas replicated the national survey by asking all allopathic physician, osteopathic physician, physician assistant, and nurse practitioner programs in Texas to participate for the 2019-2020 State Health Plan Update. In 2020, the survey was replicated for the 2021-2022 State Health Plan Update by asking all licensed professional counselor, marriage and family therapist, licensed chemical dependency counselor, school psychologist, social work, occupational therapist, physical therapist, pharmacy, dentist, and dental hygienist programs in Texas to participate, and the results of this survey are described below.

Adequacy of Clinical Opportunities and Supervisors

Table 8. Level of Concern Regarding Adequacy of Practicum Opportunities for Responding Programs

Profession	Very Concerned	Moderately Concerned	Not Concerned	Total Number of Programs
Licensed Professional Counselor	0	4	7	12
Marriage and Family Therapist	1	1	3	5
Licensed Chemical Dependency Counselor	0	3	6	9
School Psychology	2	3	2	7
Social Work	0	8	1	9
Occupational Therapy	1	3	0	4
Physical Therapy	1	3	5	6
Pharmacy	4	0	0	4
Dentist	0	1	1	2
Dental Hygienist	1	4	3	8

The table above illustrates the level of concern that different programs have regarding the adequacy of practicum opportunities. All four responding pharmacy programs are very concerned. The majority of many mental health professions,

including licensed professional counselors, marriage and family therapists, and licensed chemical dependency counselors, are not concerned.

Table 9. Level of Concern Regarding Adequacy of Preceptors/Supervisors for Responding Programs

Profession	Very Concerned	Moderately Concerned	Not Concerned	Total Number of Programs
Licensed Professional Counselor	0	7	5	11
Marriage and Family Therapist	1	2	2	5
Licensed Chemical Dependency Counselor	0	6	3	9
School Psychology	4	3	0	7
Social Work	2	5	2	9
Occupational Therapy	1	2	1	4
Physical Therapy	1	5	3	9
Pharmacy	3	1	0	4
Dentist	1	1	0	2
Dental Hygienist	1	4	3	8

The table above illustrates the level of concern programs have regarding the adequacy of preceptors and supervisors for training sites. The majority of school psychology and pharmacy programs are very concerned. The majority of licensed

professional counselor, licensed chemical dependency counselor, social work, occupational therapy, physical therapy, dentist, and dental hygienist programs are moderately or very concerned.

Competition

The table below illustrates the impact of competition on enrollment. The majority of licensed chemical dependency, occupational therapy, and physical therapy programs responded that competition within the profession limits enrollment. The majority of occupational therapy programs indicated that competition outside of the profession also limits enrollment.

Table 10. Effect of Internal and External Competition on Enrollment for Responding Programs

	Competition with other schools within my profession for available sites			Competition with schools outside my profession for available sites		
Profession	**Limits Enrollment**	**No Impact**	**Positively Benefits Enrollment**	**Limits Enrollment**	**No Impact**	**Positively Benefits Enrollment**
Licensed Professional Counselor	4	5	2	5	5	1
Marriage and Family Therapist	1	1	3	1	1	3
Licensed Chemical Dependency Counselor	7	2	0	1	8	0
School Psychology	2	5	0	1	6	0
Social Work	3	3	0	3	3	0
Occupational Therapy	4	0	0	3	1	0
Physical Therapy	5	4	0	1	8	0

	Competition with other schools within my profession for available sites			Competition with schools outside my profession for available sites		
Profession	**Limits Enrollment**	**No Impact**	**Positively Benefits Enrollment**	**Limits Enrollment**	**No Impact**	**Positively Benefits Enrollment**
Pharmacy	2	0	1	1	2	0
Dentist	0	2	0	0	2	0
Dental Hygienist	2	4	1	2	4	1

Factors Affecting Creating New Sites

The table below illustrates the factors affecting the ability of programs to create new training sites. The aggregate category of "common affiliation agreements, liability, immunizations, background checks, and related legal issues" was identified as very important to creating new sites, as well as training and orientation of supervisors.

Table 11. Factors Affecting Programs' Ability to Create New Training Sites of Responding Programs

	Very Important	Important	Moderately Important	Of Little Importance	Unimportant
Common Affiliation Agreements, Liability, Immunizations, Background Checks, and Related Legal Issues	38	17	8	2	0
Training and Orientation of Supervisors	28	22	9	5	1
Changes in Reimbursement Impacting Practice[v]	13	8	8	17	12

[v] Not applicable to social workers.

Selected Results by Profession

Mental Health Professions

- Marriage and family therapy (four of five marriage and family therapy programs) was the specialty most difficult to find sites for.

Social Workers

Regarding difficulty finding sites, the following were identified as specialties/sites that were difficult to find:[vi]

- Government organizations (three of five programs);
- Sexual orientation and gender identity (three of five programs);
- Veterans (three of five programs); and
- Addiction/rehab/sobriety (three of five programs).

Occupational Therapists and Physical Therapists

Changes in reimbursement practices was indicated by all occupational therapy programs as a factor limiting enrollment. The following was the practice site most difficult to find sites in:

- Mental health facilities (three of four programs).

Nine physical therapy programs responded to the survey. There was difficulty finding sites in the following practice area indicated by the majority of programs:

- Hospital – inpatient/acute (six of nine programs).

Seven of nine physical therapy programs said that changing reimbursement practices affects their ability to develop new sites.

[vi] Only five programs responded to this question.

Pharmacists

The following were identified as specialties that the majority of programs have difficulty finding sites for:

- Hospitals (three of three programs); and
- Ambulatory care (three of three programs).

Dentists

Both responding dental schools also indicated that student access to electronic health records is important or very important to developing new sites.

Post-Graduate Training Required for Licensure

The availability of post-graduate training also presents a workforce pipeline issue. Licensed professional counselors, marriage and family therapists, licensed chemical dependency counselors, and licensed clinical social workers must complete internship hours post-graduation. To complete these internship hours, graduates must first obtain their internship or associate license. Obtaining these internships can be a financial barrier to completing the internship or associate hours. If supervision costs money, or if certain types of interns cannot bill insurance or Medicare/Medicaid, then graduates may have limited options to completing their internship and face a barrier to becoming fully licensed. Limited supervisors and supervision sites are also barriers to becoming fully licensed in these professions.

Nine of 24 responding programs indicated that they assist students with finding post-graduate internships. Moreover, 18 of 24 schools indicated that they tracked students' licensure status post-graduation. They did so by surveying students, checking licensure files, and checking National Counselor Examination test results. Programs were asked to indicate what percentage of students they estimated dropped out of the field before gaining licensure. Eight programs responded, and responses ranged from "less than 10 percent" to 40 percent. When asked about the perceived barriers to licensure, the following were the most common answers:

- Cost of supervision (11 of 24 programs); and
- Lack of pay while completing internship hours (15 of 24 programs).

Policy Recommendations

The Legislature, the Governor, and executive branch agencies should support activities that provide stipends and funding for students as they complete their training.

Completing health professions training can present a financial barrier, especially for mental health professions. Increased opportunities for funding may increase the number of students entering and graduating health professions programs.

The Legislature, the Governor, and executive branch agencies should support actions to allow for the remote supervision of health profession students.

Remote supervision would allow for an increased range for supervision of students. Many health professions schools are located in more urban areas. Remote supervision would allow for students to live in rural areas while completing their training, even if there are not supervisors in those areas. As an example, the state of Alaska allows for remote supervision, but it must be approved on an individual basis by the Board of Professional Counselors.[286]

List of Acronyms

Acronym	Full Name
ACA	Affordable Care Act
ASN	Adult Safety Net
CDC	Centers for Disease Control and Prevention
DSHS	Texas Department of State Health Services
DTaP	Diphtheria, tetanus, and acellular pertussis
ENDS	Electronic nicotine delivery systems
EVALI	E-cigarette, or vaping, product use-associated lung injury
HPV	Human papillomavirus
MMR	Measles, mumps, and rubella
PRAMS	Pregnancy Risk Assessment Monitoring System
SHCC	Statewide Health Coordinating Council
Tdap	Tetanus, diphtheria, and acellular pertussis
THC	Tetrahydrocannabinol
TVFC	Texas Vaccines for Children

Appendix A. Statewide Health Coordinating Council Roster

Gubernatorial Appointees	Role
Ayeez Lalji, D.D.S. Chair, Sugar Land	Health Care Professional
Elizabeth Protas, P.T., Ph.D. Vice Chair, League City	Public Member
David Allen, D.N.P., R.N., C.C.N.S.-B.C., C.C.R.N San Antonio	Hospital Representative
Carol Boswell, Ed.D., R.N., C.N.E., A.N.E.F., F.A.A.N. Andrews	University Representative
Salil Deshpande, M.D. Houston	HMO Representative
Chelsea Elliott Austin	Public Member
Elva LeBlanc, Ph.D. Fort Worth	Community College Representative
Melinda Rodriguez, P.T., D.P.T. San Antonio	Health Care Professional
Courtney Sherman, D.N.P., M.P.H., M.H.A., A.P.R.N., W.H.N.P.-B.C., C.P.H. Fort Worth	Nurse Representative
D. Bailey Wynne, M.H.A., R.Ph., C.H.E.S. Dallas	Public Member
Nancy Yuill, Ph.D., R.N. Sugar Land	University Representative
Shaukat Zakaria Houston	Public Member
Yasser Zeid, M.D. Tyler	Health Care Professional

State Agency Members	Representing
Jimmy Blanton, M.P.Aff. Austin	Texas Health and Human Services Commission
Trina Ita, M.A. Austin	Texas Health and Human Services Commission
Lara Lamprecht, Dr.PH. Austin	Texas Department of State Health Services
Stacey Silverman, Ph.D. Austin	Texas Higher Education Coordinating Board

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