



# Strategic Staffing Analysis and Workforce Plan

## For the Planning Period 2021-2025

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As Required by

Texas Government Code

Section 2056.0021

Health and Human Services System

May 2020



**TEXAS**  
Health and Human  
Services

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*Prepared by: System Support Services  
Human Resources*

# 1. Executive Summary

The Health and Human Services (HHS) System Strategic Staffing Analysis and Workforce Plan is an integral part of HHS' staffing plan. Workforce planning is a business necessity due to a number of factors, including:

- constraints on funding;
- increasing demand for HHS services;
- increasing number of current employees reaching retirement age resulting in fewer, less experienced workers available as replacements; and
- increasing competition for highly skilled employees.

HHS agencies are proactively addressing this challenge by preparing for the future and reducing risks. Designed for flexibility, the HHS System Strategic Staffing Analysis and Workforce Plan allows HHS executive management to make staffing adjustments according to the changing needs of HHS agencies.

State leaders in Texas recognize the importance of workforce planning. As part of their strategic plans, state agencies are required under the Texas Government Code, Section 2056.0021, to develop a workforce plan in accordance with the guidelines developed by the State Auditor's Office (SAO). To meet these requirements, this Schedule attachment to the HHS System Strategic Plan for the Fiscal Years 2017–2021 analyzes the following key elements for the entire HHS System:

- **Current Workforce Demographics** – Describes how many employees work for the and HHS agencies, where they work, what they are paid, how many of them are return-to-work retirees, how many have left HHS, how many may retire, and whether or not minority groups are underutilized when compared to the state Civilian Labor Force (CLF) for Equal Employment Opportunity (EEO) job categories. The workforce is examined by gender, race, age and length of state service.
- **Expected Workforce Challenges** – Describes anticipated staffing needs based on population trends, projected job growth and other demographic trends. A detailed examination of each identified shortage occupation was conducted to identify and understand retention and recruitment problems.
- **Strategies to Meet Workforce Needs** – Describes recruitment and retention strategies that address expected workforce challenges for shortage occupation jobs.

The following is the detailed HHS System Strategic Staffing Analysis and Workforce Plan.

## 2. Health and Human Services

The Health and Human Services System, as reflected in Article II of the General Appropriations Act, consists of the two agencies described below:

- Health and Human Services Commission (HHSC). HHSC began services in 1991. The agency administers programs previously administered by the Texas Department of Human Services. HHSC provides leadership to the HHS agencies, manages the day-to-day operations of state supported living centers and state hospitals, and administers programs that deliver benefits and services, including:
  - ▶ Medicaid for families and children.
  - ▶ Long-term care for people who are older or who have disabilities.
  - ▶ Supplemental Nutrition Assistance Program food benefits and Temporary Assistance for Needy Families cash assistance.
  - ▶ Behavioral health services.
  - ▶ Services to help keep people who are older or who have disabilities in their homes and communities.
  - ▶ Services for women.
  - ▶ Services for people with special health needs.

The agency also oversees regulatory functions including:

- ▶ Licensing and credentialing long-term care facilities, such as nursing homes and assisted living.
- ▶ Licensing child-care providers.
- Department of State Health Services (DSHS). DSHS includes programs previously administered by the Texas Department of Health, the Texas Commission on Alcohol and Drug Abuse, and the Health Care Information Council. The agency began services on September 1, 2004 and continues to administer programs to promote and protect public health by creating better systems that include prevention, intervention and effective partnerships with communities across the state. The agency works to:
  - ▶ Improve health outcomes through public and population health strategies, including prevention and intervention.
  - ▶ Optimize public health response to disasters, disease threats, and outbreaks.
  - ▶ Improve and optimize business functions and processes to support delivery of public health services in communities.
  - ▶ Enhance operational structures to support public health functions of the state.
  - ▶ Improve recognition and support for a highly skilled and dedicated workforce.
  - ▶ Foster effective partnership and collaboration to achieve public health goals.

- ▶ Promote the use of science and data to drive decision-making and best practices.

## **HHS Vision**

Making a positive difference in the lives of the people we serve.

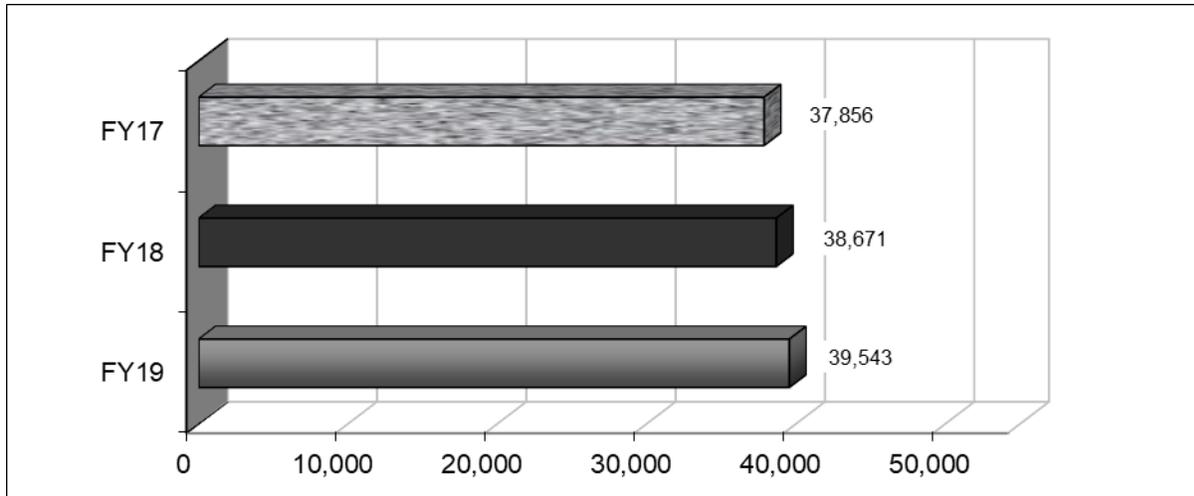
## **HHS Mission**

Improving the health, safety and well-being of Texans through good stewardship of public resources.

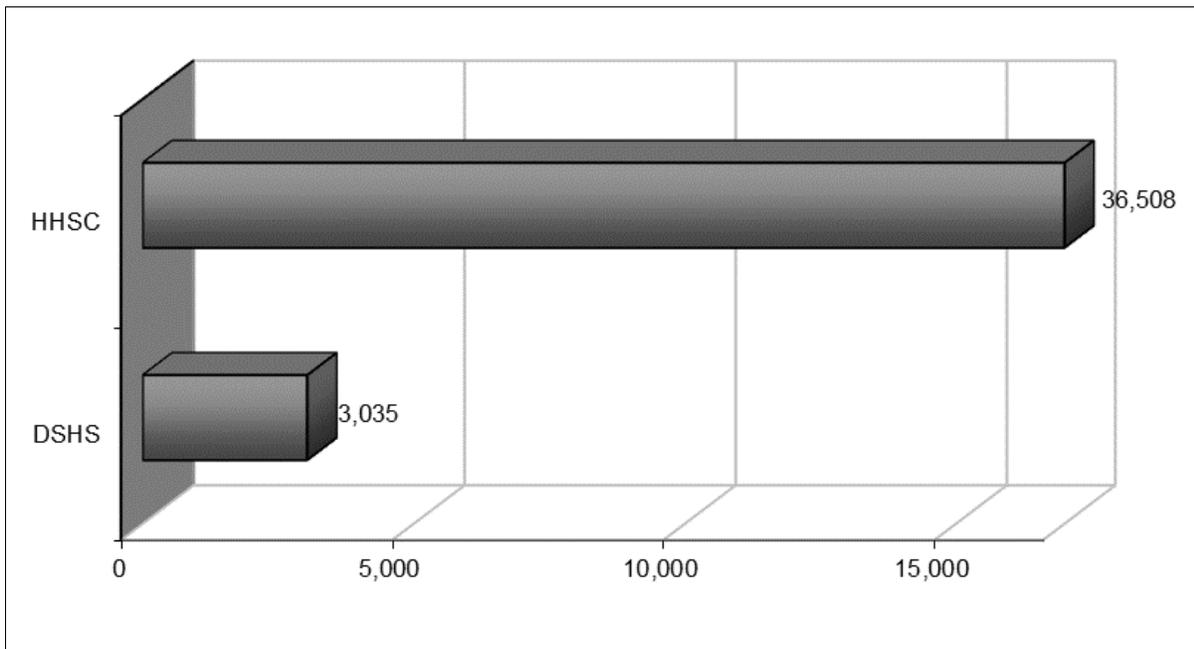
### 3. Workforce Demographics

With a total of 39,543 full-time and part-time employees, the HHS workforce has increased by about four percent (1,687 employees) in the period from August 31, 2017 to August 31, 2019.<sup>1 2 3</sup>

**Figure 1: HHS System Workforce for FY 17 - FY 19**



**Figure 2: HHS System Workforce for FY 19**



## Job Families

Approximately 81 percent of HHS employees (31,923 employees) work in 23 job families.<sup>4</sup>

**Table 1: Largest Program Job Families**

Job Family	Number of Employees
Direct Care Workers <sup>5</sup>	8,306
Eligibility Workers <sup>6</sup>	5,700
Clerical Workers	3,530
Registered Nurses (RNs) <sup>7</sup>	2,139
Program Specialists	2,030
Managers	1,120
Licensed Vocational Nurses (LVNs)	1,007
Rehabilitation Technicians	996
Food Service Workers <sup>8</sup>	877
Program Supervisors	859
System Analysts	712
Custodians	661
Maintenance Workers	576
Inspectors	575
Directors	461
Claims Examiners	449
Security Workers	408
Investigators	364
Contract Specialists	348
Accountants	329
Public Health Technicians	322
Training Specialists	312
Qualified Intellectual Disability Professionals	266

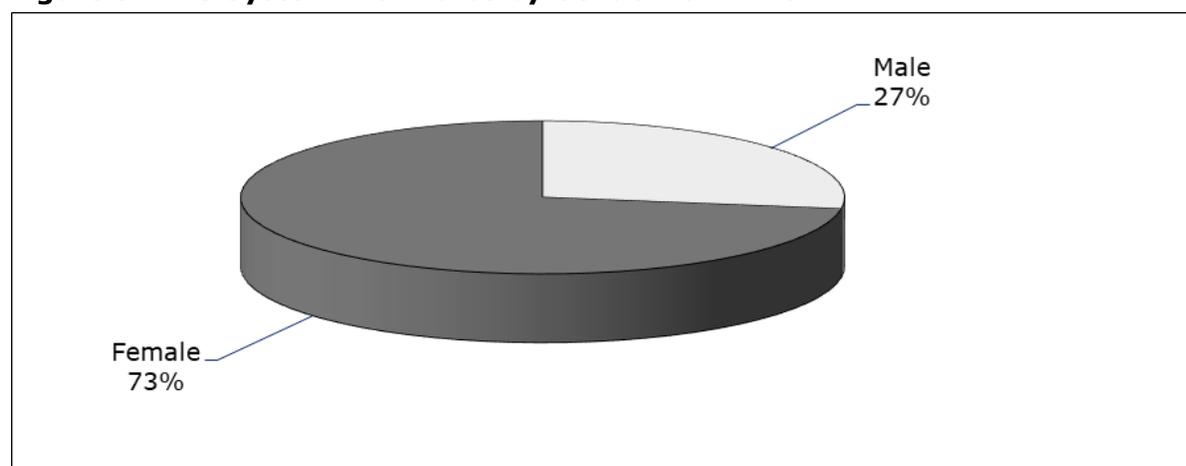
## Gender

Most HHS employees are female, making up about 73 percent of the HHS workforce. This breakdown is consistent across all HHS agencies.<sup>9</sup>

**Table 2: HHS System Workforce Gender for FY 17 – FY 19<sup>10 11 12</sup>**

Gender	FY 17	FY 18	FY 19
Male	28.5%	27.9%	27.4%
Female	71.5%	72.1%	72.6%

**Figure 3: HHS System Workforce by Gender for FY 19**



**Table 3: HHS Agencies by Gender**

Agency	Percentage Male	Percentage Female
HHSC	27.4%	72.6%
DSHS	27.8%	72.2%

## Ethnicity

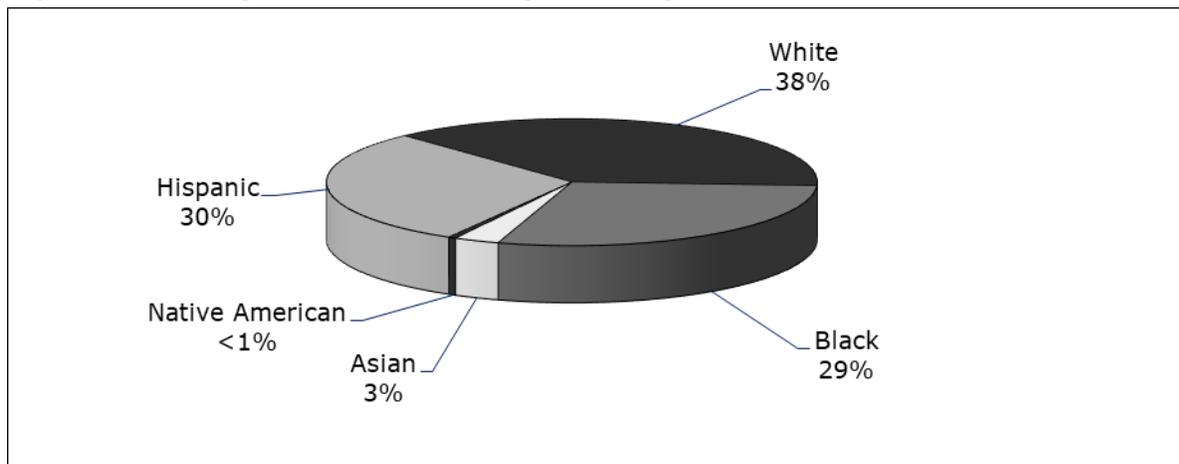
The workforce is diverse, with approximately 38 percent White, 30 percent Hispanic, 29 percent Black, and three percent Asian and Native American. This breakdown is consistent across all HHS agencies.<sup>13</sup>

**Table 4: HHS System Workforce Ethnicity for FY 17 – FY 19<sup>14 15 16</sup>**

Race	FY 17	FY 18	FY 19
White	38.5%	38.0%	37.5%
Black	28.2%	28.6%	28.7%
Hispanic	29.8%	29.6%	29.9%

Race	FY 17	FY 18	FY 19
Native American	.5%	.5%	.4%
Asian	3.0%	3.3%	3.4%

**Figure 4: HHS System Workforce by Ethnicity for FY 19**



**Table 5: HHS Agencies by Ethnicity<sup>17</sup>**

Agency	Percentage White	Percentage Black	Percentage Hispanic	Percentage Native American	Percentage Asian
HHSC	36.6%	29.8%	29.9%	.5%	3.2%
DSHS	47.5%	15.6%	30.6%	.3%	6.0%

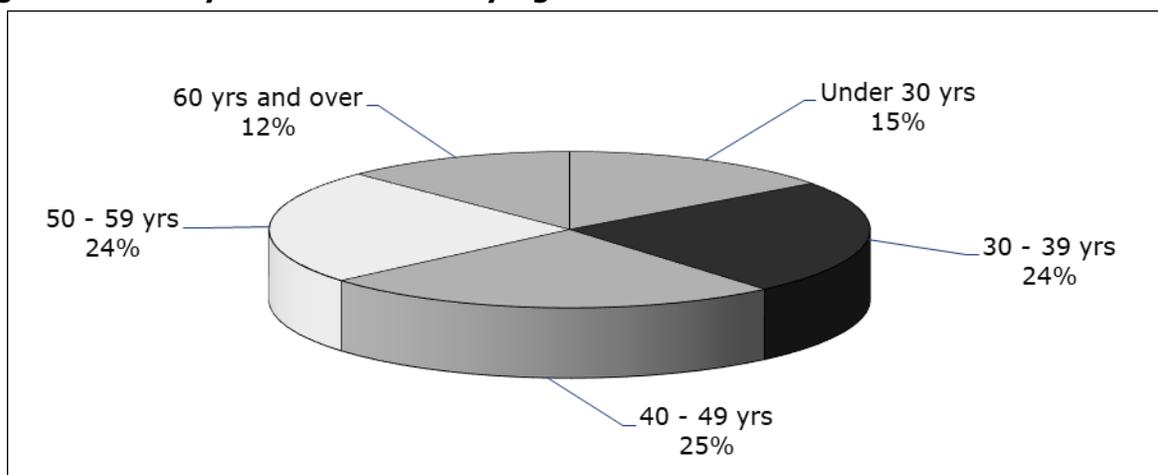
## Age

The average age of an HHS worker is 44 years. This breakdown is consistent across all HHS agencies.<sup>18</sup>

**Table 6: HHS System Workforce Age for FY 17 – FY 19<sup>19 20 21</sup>**

Age	FY 17	FY 18	FY 19
Under 30	14.1%	14.3%	14.6%
30-39	22.6%	23.3%	23.7%
40-49	25.0%	25.1%	25.1%
50-59	25.7%	25.0%	24.6%
Over 60	12.5%	12.2%	12.0%

**Figure 5: HHS System Workforce by Age for FY 19**



**Table 7: HHS Agencies by Age<sup>22</sup>**

Agency	Percentage Under 30	Percentage 30-39	Percentage 40-49	Percentage 50-59	Percentage 60 and over
HHSC	14.9%	23.7%	25.1%	24.6%	11.8%
DSHS	11.1%	24.1%	24.9%	25.6%	14.4%

## Utilization Analysis

Texas law requires that each state agency analyze its workforce and compare the number of Blacks, Hispanics and females employed by the agency to the available state Civilian Labor Force (CLF) for each job category.

The utilization analysis was conducted for each HHS agency using the 80 percent rule. This rule compares the actual number of employees to the expected number of employees based on the available state CLF for Black, Hispanic and female employees. For purposes of this analysis, a group is considered potentially underutilized when the actual representation in the workforce is less than 80 percent of what the expected number would be based on the CLF.

The HHSC Civil Rights Office (CRO) reviewed and conducted analyses for each individual agency's workforce to identify potential underutilization.

The utilization analysis of the HHS agencies for fiscal year 2019 indicated potential underutilization in the HHSC workforce. The following table summarizes the results of the utilization analysis for the HHS System.

**Table 8: HHS System Utilization Analysis Results<sup>23 24 25</sup>**

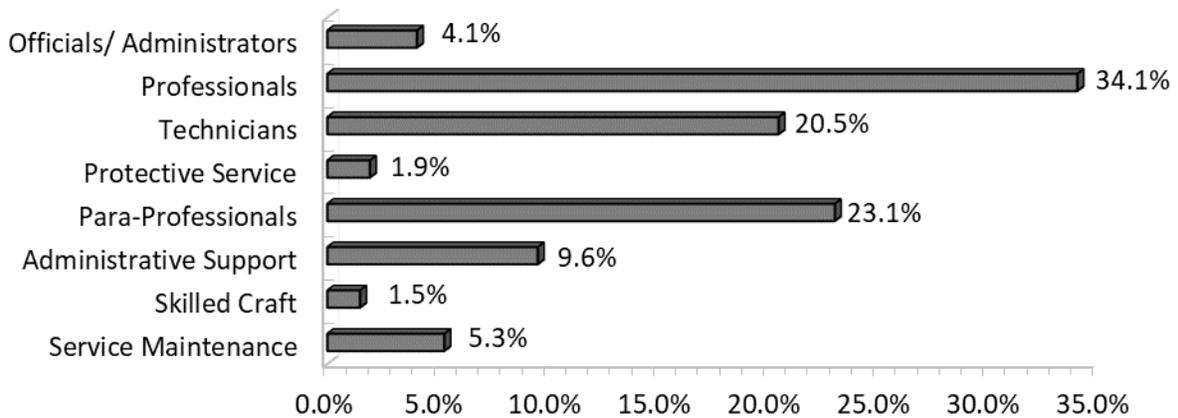
Job Category	HHS System	HHSC	DSHS
Officials/Administrators	No	No	No

Job Category	HHS System	HHSC	DSHS
Professionals	No	No	No
Technicians	No	No	No
Protective Service	No	No	N/A
Administrative Support	No	No	No
Skilled Craft	Black Hispanic Female	Black Hispanic Female	No N/A N/A
Service Maintenance	Hispanic	Hispanic	No

Although potential underutilization was identified in the Skilled Craft job category, it should be noted that that job category comprises 1.5 percent of the HHS System workforce.

The other job category showing potential underutilization is Service Maintenance, which comprises 5.3 percent of the HHS System workforce.

**Figure 6: HHS System – Percent of Employees by Job Category**



## Veterans

About five percent of the workforce (1,832 employees) are veterans. HHSC has the lowest percentage of veterans at 4.5 percent (1,643 employees) and DSHS has the highest at 6.2 percent (189 employees).<sup>26</sup>

**Table 9: HHS System Workforce by Veterans Status<sup>27</sup>**

Agency	Number of Veterans	FY 19 Percentage
HHSC	1,643	4.5%
DSHS	189	6.2%
HHS System	1,832	4.6%

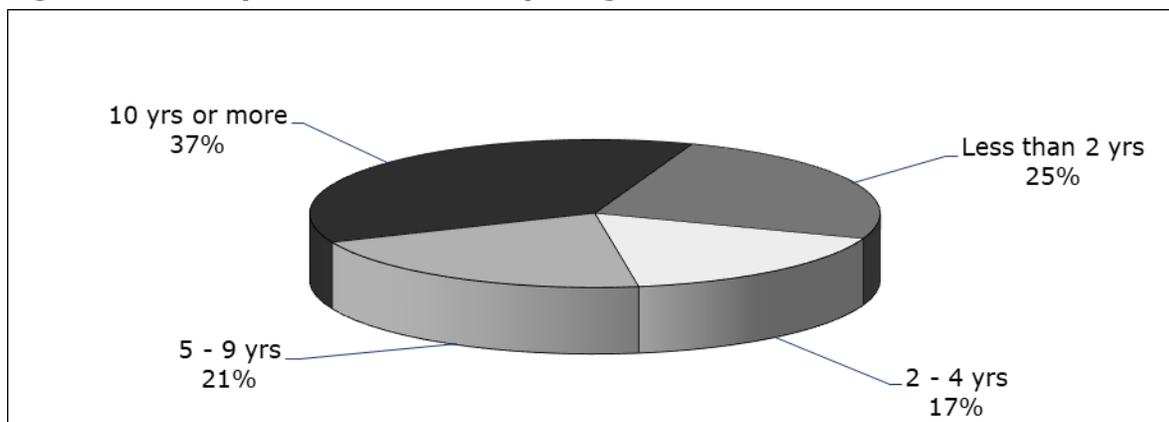
## State Service

Approximately 37 percent of the workforce has 10 or more years of state service. About a quarter of the workforce have been with the state for less than two years. This breakdown is consistent across all HHS agencies.<sup>28</sup>

**Table 10: HHS System Workforce Length of State Service for FY 17 – FY 19<sup>29 30 31 32</sup>**

State Service	FY 17	FY 18	FY 19
less than 2 years	19.1%	21.1%	25.4%
2-4 years	19.8%	19.1%	16.5%
5-9 years	22.5%	21.5%	20.7%
10 years or more	38.6%	38.3%	37.4%

**Figure 7: HHS System Workforce by Length of State Service<sup>33</sup>**



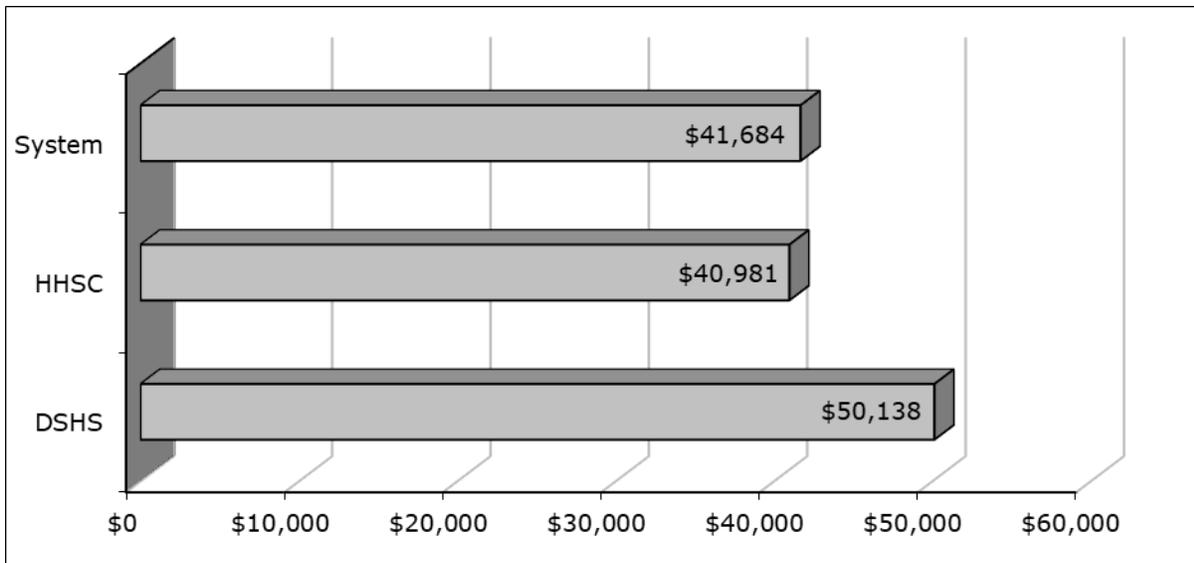
**Table 11: HHS Agencies by Length of State Service<sup>34</sup>**

Agency	Percentage Less than 2 yrs.	Percentage 2-4 yrs.	Percentage 5-9 yrs.	Percentage 10 yrs. or more
HHSC	25.8%	16.5%	20.9%	36.8%
DSHS	19.8%	17.2%	18.6%	44.4%

## Average Annual Employee Salary

On average, the annual salary for an HHS System employee is \$41,684.<sup>35</sup>

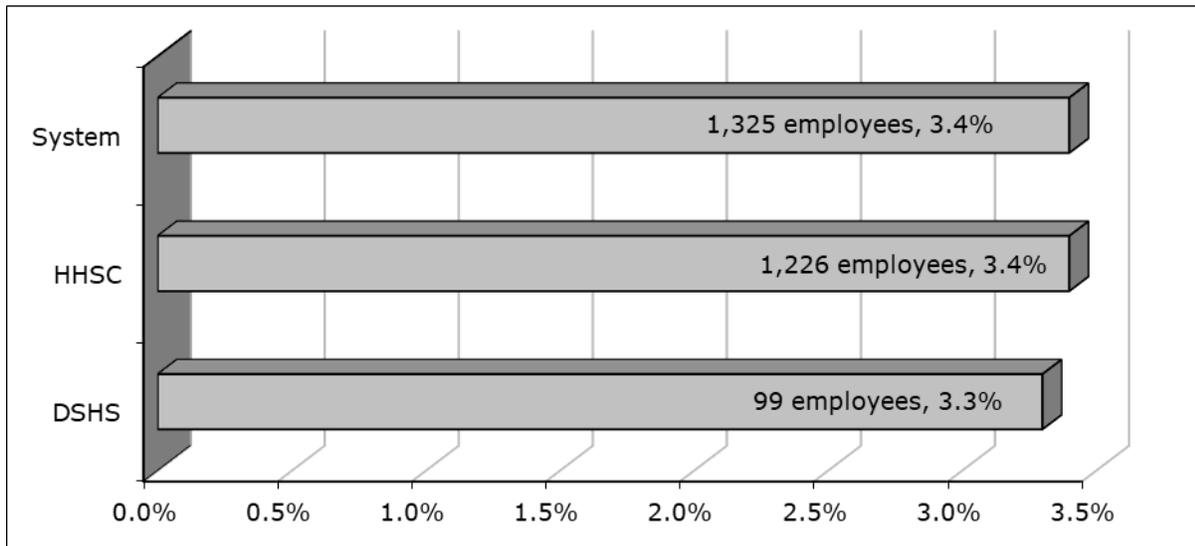
**Figure 8: HHS Average Annual Salary by Agency**



## Return-to-Work Retirees

HHS agencies hire retirees to support both ongoing operational needs and to assist in implementing new initiatives. When recruiting for shortage occupations, special skill required positions or for special projects, retirees provide a good source of relevant program-specific knowledge. Rehired retirees constitute about three percent of the total HHS workforce.<sup>36</sup>

**Figure 9: HHS Return-to-Work Retirees by Percent of Workforce**



HHS management understands that demographic trends over the next decade will increasingly impact recruitment from typical sources. Retired workers who have institutional knowledge will be needed to pass their expertise to others.

Dealing with an aging workforce will require HHS agencies to attract more people to apply for work, encourage them to work longer and help make them more productive. Creative strategies will need to be devised to keep older workers on the job, such as hiring retirees as temps; letting employees phase into retirement by working part time; having experienced workers mentor younger employees; promoting telecommuting, flexible hours and job-sharing; and/or urging retirement-ready workers to take sabbaticals instead of stepping down.

Legislative changes have posed additional challenges for recruiting retired workers. Beginning September 1, 2009, the amount of time a retired employee must wait before returning to state employment increased from 30 to 90 days. In addition, state agencies that hire return-to-work retirees must pay the Employees Retirement System of Texas (ERS) a surcharge that is equal to the amount of the State's retirement contribution for an active employee.

Of special concern to HHS is the possibility that the current practice of rehiring retirees may inhibit talented staff from moving into management or other senior positions. To address this problem and ensure HHS considers and documents the selection of retirees, the System has adopted a policy that requires the hiring authority to consult with HHS Human Resources before offering a supervisory position to a retiree.

## 4. Turnover

The HHS System turnover rate for fiscal year 2019 was 27.69 percent, about seven percent higher than the statewide turnover rate of 20.3 percent.<sup>37 38</sup>

**Table 12: HHS System Workforce - Turnover for FY 17 – FY 19 (excludes inter-HHS agency transfers)** <sup>39</sup>

Agency	FY 17	FY 18	FY 19
HHS System	24.9%	27.3%	27.6%

Of the two HHS agencies, HHSC experienced the highest turnover rate (28.3 percent).<sup>40</sup>

**Table 13: Turnover by HHS Agency for FY 19 (includes inter-HHS agency transfers and excludes legislatively mandated transfers)**

Agency	Average Annual Headcount	Total Separations	Turnover Rate
HHSC	38,883	11,006	<b>28.3%</b>
DSHS	3,165	597	<b>18.9%</b>
<b>Grand Total</b>	<b>42,048</b>	<b>11,603</b>	<b>27.6%</b>

Turnover at HHS agencies was highest for Males at HHSC (at 30.2 percent) and lowest for Females at DSHS (at 18.4 percent). Turnover across ethnic groups ranged from a high of 34.7 percent for Native American employees to a low of 21.3 percent for Asian employees.<sup>41</sup>

**Table 14: HHS Agency Turnover by Gender for FY 19 (includes inter-HHS agency transfers and excludes legislatively mandated transfers)**

Agency	Gender	Average Annual Headcount	Total Separations	Turnover Rate
HHSC	Female	28,125	7,785	27.7%
	Male	10,681	3,221	30.2%
DSHS	Female	2,267	418	18.4%
	Male	888	179	20.2%
HHS System	<b>Female</b>	<b>30,392</b>	<b>8,203</b>	<b>27.0%</b>
	<b>Male</b>	<b>11,569</b>	<b>3,400</b>	<b>29.4%</b>

**Table 15: HHS Agency Turnover by Ethnicity for FY 19 (includes inter-HHS agency transfers and legislatively mandated transfers)excludes**

Agency	White Turnover Rate	Black Turnover Rate	Hispanic Turnover Rate	Native American Turnover Rate	Asian Turnover Rate
HHSC	25.9%	34.4%	26.2%	34.6%	21.4%
DSHS	17.6%	23.0%	18.8%	36.4%	20.9%
<b>HHS System</b>	<b>25.1%</b>	<b>33.9%</b>	<b>25.7%</b>	<b>34.7%</b>	<b>21.3%</b>

Of the total losses during fiscal year 2019, approximately 76 percent were voluntary separations and 24 percent were involuntary separations.<sup>42 43</sup> Voluntary includes resignation, transfer to another agency and retirement. Involuntary includes dismissal for cause, resignation in lieu of separation, reduction in force and separation at will.<sup>44</sup>

**Table 16: Reason for Separation**

Type of Separation	Reason	Separations	Percentage <sup>45</sup>
<b>Voluntary</b>	Personal reasons	6,979	59.72%
	Transfer to another agency	787	6.73%
	Retirement	1,070	9.16%
<b>Involuntary</b>	Termination at Will	73	.62%
	Resignation in Lieu	261	2.23%
	Dismissal for Cause	2,446	20.93%
	Reduction in Force	2	.02%

Certain job families have significantly higher turnover than other occupational series, including direct care workers<sup>46</sup> at 50.2 percent, food service workers<sup>47</sup> at 39.9 percent, laboratory technicians at 31.8 percent, and licensed vocational nurses (LVNs) at 30.5 percent.<sup>48</sup>

**Table 17: FY 19 Turnover for Significant Job Families<sup>49</sup>**

<b>Job Title</b>	<b>Average Annual Headcount</b>	<b>Separations</b>	<b>Turnover Rate</b>
Direct Care Workers <sup>50</sup>	9,393	4,718	50.2%
Food Service Workers <sup>51</sup>	987	394	39.9%
Laboratory Technicians	50	16	31.8%
Licensed Vocational Nurses (LVNs)	1,101	336	30.5%
Psychologists <sup>52</sup>	243	68	28.0%
Social Workers	206	56	27.3%
Provider Investigators	158	40	25.3%
Eligibility Workers <sup>53</sup>	5,889	1,456	24.7%
CCL and RCCL Specialists <sup>54</sup>	370	91	24.6%
Chemists	59	14	23.7%
Medical Technologists	100	21	21.1%
Registered Nurses (RNs) <sup>55</sup>	2,251	473	21.0%
Physicians	99	20	20.3%
Eligibility Clerks <sup>56</sup>	1,127	222	19.7%
Psychiatrists	126	24	19.0%
Guardianship Specialists	86	16	18.7%
Epidemiologists	102	17	16.6%
Nurse Practitioners <sup>57</sup>	67	11	16.5%
Veterinarians	19	3	16.0%
Health Physicists	66	9	13.7%
Dentists	29	3	10.3%
Registered Therapists <sup>58</sup>	117	12	10.2%
Sanitarians	122	12	9.9%
Microbiologists <sup>59</sup>	140	13	9.3%
Architects	22	2	9.0%

## 5. Retirement Projections

Currently, about 10 percent of the HHS workforce is eligible to retire and leave state employment. About 2.6 percent of the eligible employees retire each fiscal year. If this trend continues, approximately 13 percent of the current workforce is expected to retire in the next five years.<sup>60</sup>

**Table 18: HHS System Retirements - Percent of Workforce (FY 15 – FY 19)**

Fiscal Year	Retirement Losses	Retirement Turnover Rate
2015	1,396	2.4%
2016	1,469	2.6%
2017	989	2.4%
2018	1,175	2.9%
2019	1,069	2.6%

**Table 19: HHS System First-Time Retirement Eligible Projection (FY 19 – FY 24)**

Agency	FY 19		FY 20		FY 21		FY 22		FY 23		FY 24	
HHSC	540	1.5%	837	2.4%	988	2.7%	1,099	3.0%	1,004	2.8%	1,113	3.0%
DSHS	71	2.3%	120	4.0%	93	3.1%	95	3.1%	97	3.2%	104	3.4%
<b>Grand Total</b>	<b>611</b>	<b>1.5%</b>	<b>993</b>	<b>2.5%</b>	<b>1,081</b>	<b>2.7%</b>	<b>1,194</b>	<b>3.0%</b>	<b>1,101</b>	<b>2.8%</b>	<b>1,217</b>	<b>3.1%</b>

The loss of this significant portion of the workforce means the HHS agencies will lose some of their most knowledgeable workers, including many employees in key positions. Effective succession planning and employee development will be critical in ensuring there are qualified individuals who can replace those leaving state service.

## 6. Critical Workforce Skills

The current climate of the information age, advances in technology, increasing population for the state, consolidation of services, right-sizing and outsourcing will continue to place increased emphasis on the demand for well-trained and skilled staff.

The outsourcing and self-service automation of major HR functions, such as employee selection, have made it critical for HHS managers and employees to improve and commit to a continual learning of human resource policy, employee development, conflict resolution, time management, project management and automation skills.

It is important for HHS to employ professionals who have the skills necessary for the development, implementation and evaluation of the health and human services programs. These skills include:

- Analytic/assessment skills;
- Policy development/program planning skills;
- Communication skills;
- Cultural competency skills;
- Basic public health sciences skills;
- Financial planning and management skills;
- Contract management skills; and
- Leadership and systems-thinking skills.

As the Spanish speaking population in Texas increases, there will be an increased need for employees with bilingual skills, especially Spanish-English proficiency.

In addition, most management positions require program knowledge. As HHS continues to lose tenured staff, effective training will be needed to ensure that current employees develop the skills necessary to transfer into management positions.

To promote this staff development, HHS must continue to grow the skills and talents of managers as part of a plan for succession. HHS has demonstrated this belief by establishing a HHS Leadership Academy, a formalized interagency training and mentoring program that provides opportunities to enhance the growth of high-potential managers as they take on greater responsibility in positions of leadership. The primary goals of the academy are to:

- prepare managers to take on higher and broader roles and responsibilities;
- provide opportunities for managers to better understand critical management issues;
- provide opportunities for managers to participate and contribute while learning; and
- create a culture of collaborative leaders across the HHS system.

Through this planned development of management skills and the careful selection of qualified staff, HHS will continue to meet the challenges posed by increased retirements.

## 7. Environmental Assessment

### The Texas Economy

Texas added approximately 254,100 jobs in 2019. Texas job growth weakened slightly from 2.4 to 2.0 percent in 2019.<sup>61</sup>

On March 19, 2020, Governor Abbot issued an executive order mandating the closure of nonessential businesses in Texas due to the novel coronavirus (COVID-19) pandemic. Prior to the March 2020 shutdown of the Texas economy, the Federal Reserve Bank of Dallas forecasted 2020 Texas job growth of 2.1 percent.<sup>62</sup> It is unclear to what extent pandemic-related closures will affect this job forecast, though it could have a profound impact on the recruitment and retention challenges facing HHS.

### Poverty in Texas

As the number of families living in poverty increases for the state, the demand for services provided by the HHS System will also increase.

The U.S. Department of Health and Human Services defined the poverty level for 2019 according to household/family size as follows:

- \$25,750 or less for a family of four;
- \$21,330 or less for a family of three;
- \$16,910 or less for a family of two; and
- \$12,490 or less for individuals.<sup>63</sup>

It is estimated that 14.9 percent of Texas residents live in families with annual incomes below the poverty level. This rate is slightly higher than the national poverty rate of 11.8 percent.<sup>64</sup>

### Unemployment

Another factor that directly impacts the demand for HHS System services is unemployment. In Texas, the August 2019 statewide unemployment rate was 3.5 percent, slightly below the national rate of 3.7 percent.<sup>65</sup> Due to the State mandate for social distancing surrounding the novel coronavirus pandemic and ensuing loss of jobs and/or hours worked, 2020 unemployment will likely rise, thus increasing the demand for HHS system services.

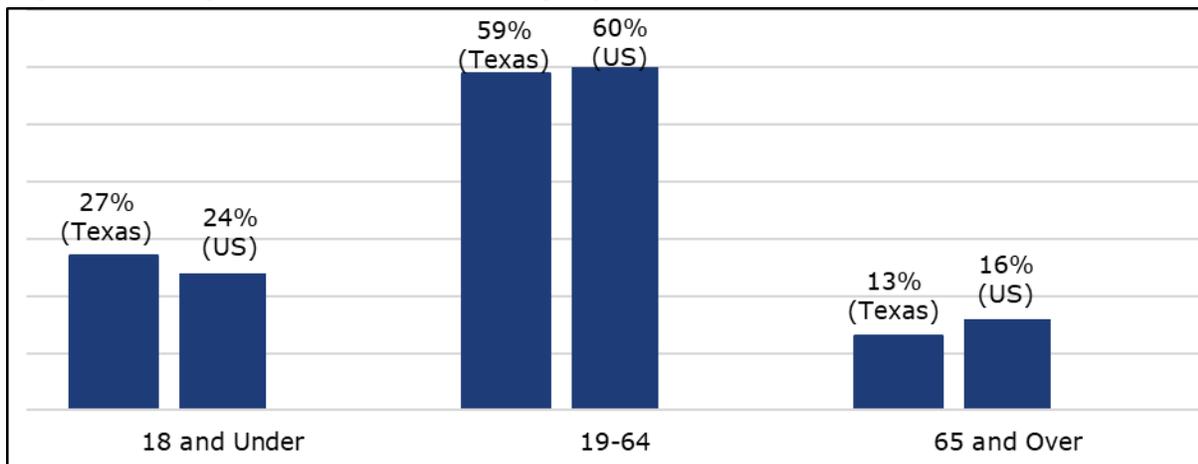
### Other Significant Factors

According to the annual report produced by the Texas Demographic Center, every year since 2006, Texas has added more population than any other state. As of July 2018, the estimated population for Texas was over 28 million, which represents a

14.9 percent increase from the census count in April 2010. Texas added over 3.55 million people between 2010 and 2018.<sup>66</sup>

The distribution of age groups in Texas closely mirrors that of the nation, with the largest percentage of Texas residents (59 percent) being between ages 19 to 64, followed by those 18 and under (27 percent) and those 65 and over (13 percent).<sup>67</sup>

**Figure 10: Population Distribution by Age**



According to long term population projections by the Texas State Data Center, it is estimated that by 2050, Texans older than age 65 will triple in size from 2010-2050, approaching 7.9 million.<sup>68</sup>

## 8. Expected Workforce Challenges

HHS will need to continue to recruit and retain health and human services professionals, such as psychiatrists, physicians, psychologists, nurse practitioners, registered nurses, licensed vocational nurses, registered therapists, dentists, sanitarians, health physicists, and medical technicians. Certain jobs will continue to be essential to the delivery of services throughout the HHS System.

Many of the jobs are low paying, highly stressful and experience higher than normal turnover, such as eligibility services staff, child care licensing and residential licensing specialists, direct care workers (direct support professionals and psychiatric nursing assistants) and food service workers.

Additionally, the demand for certain public health positions (such as epidemiologists, laboratory staff, and public health and prevention specialists) is expected to increase as the pandemic response to COVID-19 continues to evolve.

### **Direct Care Workers (Direct Support Professionals and Psychiatric Nursing Assistants)**

There are about 8,306 direct care workers employed in HHS state hospitals and state supported living centers. These positions require no formal education to perform the work, but employees are required to develop people skills to effectively interact with patients and residents. The physical requirements of the position are difficult and challenging due to the nature of the work. The pay is low, with an average hourly rate of \$12.67.<sup>69</sup>

The overall turnover rate for employees in this group is very high, at about 50 percent annually.<sup>70</sup> Taking into account these factors, state hospitals and state supported living centers have historically experienced difficulty in both recruiting and retaining these workers. Little change is expected.

### **Direct Support Professionals**

There are 5,694 direct support professionals in state supported living centers across Texas, representing approximately 14 percent of the System's total workforce.<sup>71</sup> These employees provide 24-hour direct care to almost 3,000 people who reside in state supported living centers. They directly support these individuals by providing services including basic hygiene needs, dressing and bathing, general health care, and dining assistance. They support life-sustaining medical care such as external feeding and lifting individuals with physical challenges. A trained and experienced direct care staff is essential to ensure resident safety, health and well-being.

There are no formal education requirements to apply for a job in this series; however, extensive on-the-job training is required. It takes six to nine months for a new direct support professional to become proficient in the basic skills necessary to carry out routine job duties.

Employees who perform this work must interact with residents on a daily basis. The work is performed in shifts throughout the day and night. The pay is low and the work is difficult and physically demanding.

A typical HHS direct support professional is 38 years old and has about six years of state service.<sup>72</sup>

Turnover for direct support professionals is very high, at about 54 percent. This is one of the highest turnover rates of any job category in the System, reflecting the loss of about 3,455 workers during fiscal year 2019. Within this job family, entry-level Direct Support Professional Is experienced the highest turnover at approximately 68 percent. Turnover rates by location ranged from 43 percent at El Paso State Supported Living Center to 75 percent at the Brenham State Supported Living Center.<sup>73</sup>

The average hourly salary rate for these employees is \$12.68 per hour.<sup>74</sup> The State Auditor's Office 2018 market index analysis found the average state salary for Direct Support Professional I and IIIs to range from 14 to 10 percent behind the market rate.<sup>75</sup>

### **Psychiatric Nursing Assistants**

There are approximately 2,612 psychiatric nursing assistants employed in HHS state hospitals.<sup>76</sup> These positions require high school education or equivalency to perform the work; however, there is extensive on-the-job training.

Workers are assigned many routine basic care tasks in the state hospitals that do not require a license to perform, such as taking vital signs, and assisting with bathing, hygiene and transportation. These employees are required to interact with patients on a daily basis. They are likely to be the first to intervene during crisis situations, and are the frontline staff most likely to de-escalate situations to avoid the need for behavioral interventions. They also have a higher potential for on-the-job injuries, both from lifting requirements and intervention during crisis situations. Further complicating this situation, many of the applicants for these entry-level positions lack the experience needed to work with patients and often lack the physical ability necessary to carry out their job duties.

The work is performed in shifts throughout the day and night. The work is difficult and the pay is low. Psychiatric nursing assistants earn an average hourly wage of \$12.62 per hour. The State Auditor's Office 2018 market index analysis found the average state salary for a Psychiatric Nursing Assistant I was 14 percent behind the market rate.<sup>77 78</sup>

The average psychiatric nursing assistant is about 39 years old and has an average of seven years of state service.<sup>79</sup>

Turnover for psychiatric nursing assistants is very high at about 42 percent, reflecting the loss of 1,263 workers during fiscal year 2019. Within this job family, entry-level Psychiatric Nursing Assistant Is experienced the highest turnover at 56 percent. Turnover rates by location ranged from 17 percent at Austin State Hospital to 68 percent at the Big Spring State Hospital.<sup>80</sup>

HHS is currently experiencing difficulty filling vacant psychiatric nursing assistant positions. Vacant positions are going unfilled for many months. Positions at the Big Spring State Hospital are remaining vacant, on average, for almost six months.<sup>81</sup>

HHS is developing a staffing pool at certain state hospitals to reduce the need for overtime as well as an Intensive Observation Unit to reduce the need for 1:1 staffing for high risk individuals.

Recruitment and retention of these employees remains a major challenge for the System.

## **Food Service Workers**

HHS employs approximately 877 food service workers.<sup>82</sup>

Working conditions can be very demanding and there are no formal education requirements. Since meals are prepared seven days a week, some of these employees are required to work on night and weekend shifts.

The average hourly rate paid to food service workers is \$11.10.<sup>83</sup> Turnover in food service worker positions is very high, at about 40 percent during fiscal year 2019.<sup>84</sup> The State Auditor's Office 2018 market index analysis found the average state salary for Food Service Workers ranged from one to 12 percent behind the market rate; Food Service Managers ranged from four to 15 percent behind the market rate; and Cooks ranged from two to seven percent behind the market rate.<sup>85</sup>

Retention and recruitment of these workers remains a major challenge for the System.

## **Food Service Workers at State Supported Living Center**

There are 555 food service workers employed in HHS state supported living centers throughout Texas.<sup>86</sup>

The typical food service worker is about 45 years of age and has an average of approximately nine years of state service.<sup>87</sup>

Turnover in these food service worker positions is very high, at 42 percent. Turnover is at nearly 69 percent at the Corpus Christi State Supported Living Center.<sup>88</sup>

## **Food Service Workers at State Hospitals**

There are 312 food service workers employed at HHS state hospitals and centers throughout Texas.<sup>89</sup>

The typical food service worker is about 46 years of age and has an average of about seven years of state service.<sup>90</sup>

Turnover in these food service worker positions is high, at 36 percent. Turnover was nearly 44 percent at the Terrell State Hospital.<sup>91</sup>

## **Food Service Workers at TCID**

There are ten food service workers employed in the Texas Center for Infectious Disease (TCID).<sup>92</sup>

The typical food service worker is about 43 years of age and has an average of approximately seven years of state service.<sup>93</sup>

Turnover in these food service worker positions is very high, at 48 percent.<sup>94</sup>

## **Eligibility Services Staff**

Across the state, there are about 7,767 employees supporting eligibility determinations within the System, accounting for about 20 percent of the HHS System workforce.<sup>95</sup>

The majority of these individuals (7,284 employees or 94 percent) are employed as Texas works advisors, medical eligibility specialists, hospital based workers, eligibility clerks and eligibility supervisors.<sup>96</sup>

Overall turnover for Eligibility Services Staff is higher than the state average rate of about 20 percent (at about 23 percent), with Texas works advisors experiencing the highest turnover at 25 percent, followed by medical eligibility specialists at 24 percent and eligibility clerks at 20 percent.<sup>97 98</sup>

## **Texas Works Advisors**

There are over 4,700 Texas works advisors within HHS that make eligibility determinations for SNAP, TANF, CHIP and Medicaid for children, families and pregnant women. The typical Texas works advisor is 41 years of age and has an average of about seven years of service.<sup>99</sup>

Turnover for these employees is high at about 25 percent, representing a loss of 1,250 workers in fiscal year 2019. Certain regions of Texas experienced higher turnover than others, including Northwest/West Texas at 35 percent and the Metroplex at 34 percent. Entry-level Texas Works Advisor Is experienced the highest turnover at 45 percent.<sup>100</sup>

In addition, HHS has experienced difficulty finding qualified candidates for new worker positions. Due to this shortage of qualified applicants, vacant positions go unfilled for an average of almost five months, with vacant positions in Upper East Texas remaining unfilled for an average of a little more than nine months.<sup>101</sup>

Salary is one factor that may be contributing to the System's difficulty recruiting and retaining eligibility workers.

Recruitment and retention of these employees remain a continuing challenge for HHS.

## **Medical Eligibility Specialists**

Within HHS, there are 654 medical eligibility specialists determining financial eligibility for Medicaid for Elderly and People with Disabilities (MEPD). Medical

eligibility specialists have, on average, about eight years of state service, with an average age of 42.<sup>102</sup>

Turnover for these employees is high at about 24 percent, representing the loss of 161 employees in fiscal year 2019. Entry-level Medical Eligibility Specialist Is experienced the highest turnover, at 43 percent.<sup>103</sup>

Retention of these specialists is an ongoing challenge.

### **Hospital Based Workers**

HHS has about 283 hospital based workers stationed in nursing facilities, hospitals, and clinics rather than in eligibility offices to determine eligibility for the SNAP, TANF, CHIP and Medicaid programs. These highly-tenured workers have an average of about 13 years of state service (about 54 percent of these employees have 10 or more years of state service), with an average age of 45.<sup>104</sup>

Turnover for these employees is currently below the state average (of 20 percent) at about 16 percent.<sup>105 106</sup>

### **Eligibility Clerks**

HHS employs about 1,070 eligibility clerks in various clerical, administrative assistant and customer service representative positions. The typical eligibility clerk is 48 years of age and has an average of 10 years of state service.<sup>107</sup>

The turnover rate for eligibility clerks is high at about 20 percent, representing the loss of about 222 employees (about one percent higher rate than reported for fiscal year 2017).<sup>108 109</sup> Eligibility Specialist Clerk IIIs made up the majority of these losses at about 77 percent, with these positions often remaining unfilled for an average of about four and a half months.<sup>110 111</sup>

Recruitment and retention for these jobs are ongoing challenges.

### **Eligibility Supervisors**

Over 500 eligibility supervisors are employed within HHS. These highly-tenured supervisors have an average of 17 years of state service (about 77 percent of these employees have 10 or more years of state service), with an average age of 46.<sup>112</sup>

Though turnover for these employees is well managed at about 12 percent, this represents a two percent higher turnover rate than reported for fiscal year 2017.<sup>113 114</sup>

Within the next five years, over 35 percent of these employees will be eligible to retire.<sup>115</sup>

HHS will need to develop effective succession plans and creative recruitment strategies to replace these highly skilled and tenured employees.

## **Child Care Licensing (CCL) and Residential Child Care Licensing (RCCL) Specialists**

There are 345 CCL and RCCL specialists employed within the System who monitor, investigate and inspect child day-care facilities and homes, residential child care facilities, child-placing agencies and foster homes.<sup>116 117</sup> In addition, they conduct child abuse/neglect investigations of children placed in 24-hour childcare facilities and child placing agencies licensed or certified by Residential Child Care Licensing.

The typical specialist is 39 years of age and has an average of eight years of state service. Nearly half of these employees have less than five years of state service.<sup>118</sup>

CCL and RCCL specialist turnover is high at 25 percent.<sup>119</sup>

Retention of these employees is an ongoing challenge.

### **Guardianship Staff**

Within the Office of Guardianship Services (OGS), the HHS System employs 81 Guardianship Specialists and Supervisors who are responsible for providing guardianship services to eligible clients.<sup>120</sup> Staff continuously assess and determine whether guardianship is the most appropriate and least restrictive alternative necessary to ensure the consumer's health and safety.

Retention and turnover continue to be a challenge, since these positions require specialized skills and salaries are not comparable with that paid by other agencies and the private sector.

### **Guardianship Specialists**

There are 68 guardianship specialists employed at HHS.<sup>121</sup>

The typical System guardianship specialist is about 45 years old and has an average of about 11 years of state service. Nearly half of the employees have 10 years or more of state service.<sup>122</sup>

The overall turnover rate for System guardianship specialists is high, at 21 percent annually, which is slightly above the state average turnover rate of 20 percent.<sup>123</sup>  
<sup>124</sup>

Vacant System guardianship specialist positions often go unfilled for many months due to a shortage of qualified applicants available for work.<sup>125</sup> These vacancy problems are expected to worsen as employees approach retirement. About 19 percent of these tenured and highly skilled employees will be eligible to retire in the next five years.<sup>126</sup>

### **Guardianship Supervisors**

There are 13 guardianship supervisors working for HHS.<sup>127</sup>

System guardianship supervisors have, on average, about 17 years of state service, with an average age of about 51 years.<sup>128</sup>

Though the turnover rate for these highly tenured guardianship supervisors is currently well managed at about eight percent, HHS may face significant recruitment challenges in the next few years to replace these highly skilled and tenured employees who are eligible for retirement. With about 23 percent of these employees are currently eligible to retire, this rate will increase in the next five years to about 46 percent.<sup>129 130</sup>

## **Provider Investigators**

There are about 146 provider investigators with HHS Regulatory Services.<sup>131</sup> These employees investigate reports of abuse, neglect, and exploitation of adults and children with mental illness or intellectual, developmental, and physical disabilities. Investigations occur in a variety of settings such as facilities, group homes, and private residences.

The typical provider investigator is 40 years of age and has an average of eight years of state service. About 47 percent of these employees have less than five years of state service.<sup>132</sup>

Provider investigator positions have a high turnover rate. During fiscal year 2019, provider investigator turnover was slightly higher than the state average at 25 percent, though turnover for entry-level Provider Investigator Is was much higher at 41 percent.<sup>133 134</sup>

## **Protective Services Intake Specialists**

There are approximately 20 protective services intake specialists with HHS Regulatory Services.<sup>135 136</sup> Intake specialists answer calls and process complex inquiries, complaints, and incidents related to abuse, neglect, and exploitation involving Nursing Facilities, Assisted Living Facilities, Day Activity and Health Services (DAHS), ICF/ID Facilities, Home Health and Hospice Agencies, Prescribed Pediatric Extended Care Center (PPECC) and Health Care Quality providers.

Protective services intake specialists are about 41 years of age and have an average of eight years of state service. About 25 percent of intake specialists have less than two years of state service.<sup>137</sup>

Turnover for intake specialists is at the same rate as the state average turnover rate of 20 percent.<sup>138 139</sup>

HHS is currently experiencing difficulty filling vacant protective services intake specialist positions. Vacant positions are going unfilled, on average, for two months due to a shortage of qualified applicants available for work.<sup>140</sup>

## **Architects**

Within HHS, there are 17 Architect IIs who perform architectural plan reviews and conduct initial and annual surveys and complaint/incident investigations on state licensure, and (when applicable) federal certification requirements for nursing facilities, assisted living facilities, Day Activity and Health Services facilities,

Intermediate Care Facilities for Individuals with Intellectual Disabilities and in-patient Hospice facilities.<sup>141</sup>

These HHS Architect IIs have, on average, 8 years of state service, with an average age of 58 years. Over 75 percent of these employees have five or more years of state service.<sup>142</sup>

HHS Architect IIs earn an average annual salary of \$63,647.<sup>143</sup> The State Auditor's Office 2018 market index analysis found the average state salary for Architect IIs to be four percent behind the market rate.<sup>144</sup>

Though the turnover for these employees is currently well managed at 10 percent, with a vacancy rate of 26 percent, vacant positions often go unfilled for over nine months due to a shortage of qualified applicants available for work.<sup>145 146</sup>

Though only 12 percent of these employees are currently eligible to retire, over 40 percent will be eligible to retire in the next five years.<sup>147</sup>

HHS will need to develop creative recruitment strategies to replace these highly skilled employees.

## **License and Permit Specialists**

There are 59 license and permit specialists within HHS. Over 90 percent of HHS license and permit specialists work in Regulatory Services, performing complex, journey-level, licensing and permitting work related to the licensing of mental health professionals.<sup>148</sup>

The typical HHS license and permit specialist is about 44 years of age and has an average of 12 years of state service. Nearly 50 percent of these employees have 10 or more years of state service.<sup>149</sup>

Turnover for these specialists is slightly below the state average at 19 percent.<sup>150</sup> With a vacancy rate of about 12 percent, vacant positions often go unfilled for about four months due to a shortage of qualified applicants available for work.<sup>151</sup>

HHS license and permit specialists earn an average annual salary of \$40,918.<sup>152</sup> The State Auditor's Office 2018 market index analysis found the average state salary for License and Permit Specialist Is to be four percent behind the market rate.<sup>153</sup> This disparity may be affecting HHS' ability to recruit qualified applicants for open positions.

Recruitment of these employees is an ongoing challenge.

## **Quality Assurance Specialists**

There are 21 Quality Assurance Specialist IIIs and IVs employed within the HHSC Regulatory division. These specialists provide technical guidance and assistance to field staff, document quality assurance reviews and communicate those findings to appropriate program staff. They are responsible for analyzing quality assurance findings and performance data to identify trends or patterns and coordinating case readings and other quality assurance and developmental activities.<sup>154</sup>

These specialists are, on average, about 41 years of age and have an average of 10 years of state service. Over 40 percent of these employees have 10 or more years of state service.<sup>155 156</sup>

Turnover for these specialists is slightly below the state average at 17 percent.<sup>157</sup> With a vacancy rate of about 13 percent, vacant positions often go unfilled for over 10 months due to a shortage of qualified applicants available for work.<sup>158</sup>

These quality assurance specialists earn an average annual salary of \$50,119. The State Auditor's Office 2018 market index analysis found the average state salary for Quality Assurance Specialist IIIs and IVs to be 11 percent behind the market rate.<sup>159</sup> This disparity may be affecting HHS' ability to recruit qualified applicants for open positions.

Recruitment of these employees is an ongoing challenge.

## **Social Workers**

There are 212 social workers employed by HHS, with the majority (68 percent) housed in state hospitals across the state.<sup>160</sup>

Turnover for these social workers is high at 27 percent.<sup>161</sup>

One reason for this high turnover is the large disparity between private sector and HHS salaries. System social workers earn an average annual salary of \$44,491.<sup>162</sup> This salary falls significantly below the market rate. The State Auditor's Office 2018 market index analysis found the average state salary for Social Worker Is, IIs, and IIIs ranged from two to eight percent behind the market rate. In addition, the average annual salary for social workers nationally is \$59,300 and \$58,430 in Texas.<sup>163 164</sup>

These problems are expected to worsen as employees approach retirement. While 12 percent of these employees are currently eligible to retire, this number increases to about 23 percent in the next five years.<sup>165</sup>

### **Social Workers at State Supported Living Centers**

About 17 percent of HHS social workers (36 employees) work at state supported living centers across the state.<sup>166</sup> These employees serve as a liaison between the resident's legally authorized representative and others to assure ongoing care, treatment and support through the use of person-centered practices. They gather information to assess a resident's support systems and service needs, support the assessment of the resident's rights and capacity to make decisions, and assist with the coordination of admissions, transfers, transitions and discharges.

The typical social worker at these facilities is about 48 years old and has an average of 11 years of state service.<sup>167</sup>

The average turnover rate for these social workers is higher than the state average of 20 percent (at 27 percent), with positions often remaining unfilled for an average of over six months before being filled.<sup>168 169</sup>

## **Social Workers at State Hospitals**

There are 145 social workers at HHS state hospitals.<sup>170</sup> These employees are critical to managing patient flow in state hospitals and taking the lead role in communicating with patient families and community resources. Social workers provide essential functions within state hospitals that include conducting psychosocial assessments, therapeutic treatment and case coordination for individuals receiving services from HHS in-patient psychiatric hospitals and the Waco Center for Youth.

State hospital social workers are about 43 years old and have an average of nine years of state service.<sup>171</sup>

The overall turnover rate for these social workers is high at around 29 percent, with the Austin State Hospital experiencing turnover of more than 50 percent.<sup>172</sup>

## **Public Health Social Workers**

About 15 percent of HHS social workers (31 employees) work in Public Health Regions across the state.<sup>173</sup> These employees provide case management consultation for families with children who have health risks, conditions or special health care needs.

The typical public health social worker is about 46 years old and has an average of 10 years of state service.<sup>174</sup>

The average turnover rate for these social workers is currently well managed at nine percent.<sup>175</sup>

With a high vacancy rate of 28 percent, and with nearly 30 percent of these employees being eligible for retirement within the next five years, recruitment and retention of these workers remains a challenge.<sup>176</sup>

## **Registered Therapists at State Supported Living Centers**

HHS employs 294 registered therapists in state supported living centers across Texas.<sup>177</sup> These therapists are employed in a variety of specializations, including speech-language pathologists, audiologists, occupational therapists and physical therapists. Full staffing of these positions is critical to direct-care services.

These highly skilled employees have, on average, about nine years of state service, with an average age of 46.<sup>178</sup>

Though turnover for these registered therapists is below the state average at 12 percent, HHS is experiencing difficulty filling vacant positions. Positions at the Mexia State Supported Living Center remain unfilled for nearly nine months.<sup>179 180</sup>

HHS may face significant recruitment challenges in the next few years to replace these highly skilled employees who will be eligible for retirement. About eight

percent of these employees are currently eligible to retire, and approximately 22 percent of them will be eligible in the next five years.<sup>181</sup>

HHS will need to develop creative recruitment strategies to replace these highly skilled and tenured employees.

## **Registered Nurses (RNs)**

RNs constitute one of the largest healthcare occupations. With over three million jobs in the U.S., job opportunities for RNs are expected to grow faster than the average for all occupations. It is projected that there will be a need for 371,500 new RN jobs by 2028.<sup>182 183</sup>

HHS employs approximately 2,139 RNs across the state.<sup>184 185</sup> As the demand for nursing services increases, the recruitment and retention of nurses will continue to be a challenge, and the need for competitive salaries will be critical.

Currently, the average annual salary for HHS System RNs is \$61,669.<sup>186</sup> This salary falls below both national and state averages for these occupations. Nationally, the average annual earnings for RNs in 2019 was \$77,460.<sup>187</sup> In Texas, the average annual earnings for RNs in 2019 was \$74,540.<sup>188</sup> In addition, the State Auditor's Office 2018 market index analysis found the average state salary for Nurse I-IVs ranged from five to 14 percent behind the market rate and 10 percent behind the market rate for Public Health Nurse IIs.<sup>189</sup> Posted vacant positions are currently taking about six months to fill.<sup>190</sup>

### **RNs at State Supported Living Centers**

About 31 percent of System RNs (672 RNs) work at HHS state supported living centers across Texas.<sup>191</sup>

The typical state supported living center RN is about 47 years old and has an average of approximately eight years of state service.<sup>192</sup>

The turnover rate for these RNs is considered high at about 21 percent. Turnover is especially high at the El Paso State Supported Living Center (at approximately 48 percent) and the San Antonio State Supported Living Center (at about 33 percent).<sup>193</sup>

In addition, HHS finds it difficult to fill these vacant nurse positions. With a vacancy rate of approximately 14 percent, RN positions often remain open for more than six months before being filled. Some facilities are experiencing even longer vacancy durations. At the Denton, Lubbock, and San Angelo state supported living centers, it takes about 10 months to fill a vacancy.<sup>194</sup>

### **RNs at State Hospitals**

About 38 percent of System RNs (806 RNs) work at state hospitals across the Texas, providing frontline medical care of patients. They provide medications, primary health care and oversee psychiatric treatment.<sup>195</sup>

System nurses at state hospitals are generally required to work shifts and weekends. The work is demanding, requires special skills and staff often work long hours with minimal staffing. The work is also physically demanding, making it increasingly more difficult for the aging nursing workforce to keep up with these work demands. All of these job factors contribute to higher than average turnover rates. Turnover for these RNs is considered high at about 24 percent. Turnover is at nearly 30 percent at the El Paso Psychiatric Center, the San Antonio State Hospital, and the Terrell State Hospital.<sup>196</sup>

The typical RN at a System state hospital is about 48 years old and has an average of approximately nine years of state service.<sup>197</sup>

At these state hospitals, there are always vacant nursing positions that need to be filled. These RN positions often remain open for about five months before being filled. Some hospitals are experiencing longer vacancy durations. At the Big Spring State Hospital and the Waco Center for Youth, it takes over seven months to fill a position.<sup>198</sup>

### **Public Health RNs**

About five percent of System RNs (110 RNs) provide direct care and population-based services in the many counties in Texas that have no local health department, or where state support is needed.<sup>199</sup> These RNs are often the individuals who are on the frontline in the delivery of public health services to rural communities throughout the state, serving as consultants and advisors to county, local and stakeholder groups, and educating community partners. They assist in communicable disease investigation, control and prevention, and are critical to successful public health preparedness and response throughout the state.

Public Health RNs have, on average, about seven years of state service, with an average age of about 49 years.<sup>200</sup>

Overall turnover for these RNs is high (about 28 percent). Certain areas of Texas experienced higher turnover than others, including those in Public Health Region 1 (Lubbock area) and Public Health Region 2/3 (Arlington area) – both at about 27 percent.<sup>201</sup>

### **Nurse Surveyors**

There are 208 RNs employed as nurse surveyors (approximately 10 percent of System RNs).<sup>202</sup> These RNs utilize their expertise to conduct surveys and complaint/incident investigations on state licensure and when applicable, federal certification requirements for nursing facilities, assisted living facilities, Day Activity and Health Services facilities, Intermediate Care Facilities for Individuals with Intellectual Disabilities and in-patient Hospice facilities.

In addition to being licensed to practice as an RN by the Texas Board of Nurse Examiners, Long Term Care nurse surveyors must also obtain the Surveyor Minimum Qualification (SMQT) certification with the first year of employment. The

typical nurse surveyor is about 51 years old with approximately six years of state service.<sup>203</sup>

The turnover rate is considered high at about 22 percent, and it typically takes about five months to fill a vacant position. Recruitment and retention of these RNs remains difficult due to salary constraints. Approximately 19 percent of these highly skilled employees will be eligible to retire from state employment in the next five years.<sup>204 205</sup>

## **Licensed Vocational Nurses (LVNs)**

There are 1001 LVNs employed by HHS.<sup>206</sup> The majority of these employees (about 97 percent) work at state hospitals and state supported living centers across Texas.<sup>207</sup>

About three percent work in Public Health Regions and central office program support, assisting in communicable disease prevention and control and the delivery of population-based services to individuals, families, and communities.

On average, a System LVN is 46 years old and has eight years of state service.<sup>208</sup>

As with RNs, the nursing shortage is also impacting the HHS' ability to attract and retain LVNs. Turnover for LVNs is currently very high at about 31 percent.<sup>209</sup>

Currently, the average annual salary for System LVNs during fiscal year 2019 was \$41,257.<sup>210</sup> This salary falls below both national and state averages for this occupation. Nationally, the average annual earnings for licensed practical nurses and LVNs is \$48,500, and \$47,370 in Texas.<sup>211</sup> The State Auditor's Office 2018 market index analysis found the average state salary for LVN IIs and IIIs were 15 percent behind the market rate.<sup>212</sup>

Recruitment and retention of these highly skilled employees remains a significant challenge.

### **LVNs at State Supported Living Centers**

There are 529 LVNs employed at HHS state supported living centers across Texas. These LVNs are, on average, 46 years old and have an average of approximately eight years of state service.<sup>213</sup>

Turnover for LVNs at state supported living centers is at about 33 percent. The state supported living centers experienced the loss of 192 LVNs in fiscal year 2019. Turnover is extremely high at the El Paso State Supported Living Center (at 72 percent) and the San Angelo State Supported Living Center (at 53 percent).<sup>214</sup>

With a very high vacancy rate of about 28 percent, vacant positions often go unfilled for over six months. Some centers are experiencing even longer vacancy durations. At the Denton, Corpus Christi, and San Angelo state supported living centers it takes about nine months to fill a position.<sup>215</sup>

## **LVNs at State Hospitals**

There are approximately 442 LVNs employed at HHS state hospitals and centers across Texas.<sup>216</sup>

On average, a state hospital LVN is about 45 years old and has eight years of state service.<sup>217</sup>

Turnover for these LVNs is high at about 28 percent. Turnover is especially high at Rusk State Hospital (at 43 percent) and the San Antonio State Hospital (at 34 percent).<sup>218</sup>

State hospitals continue to experience difficulty in recruiting and retaining qualified staff which can be attributed to a shortage in the qualified labor pool. Market competition and budget limitations significantly constrain the ability of state hospitals to compete for available talent.

## **LVNs in Public Health Roles**

About two percent of System LVNs (25 LVNs) work in the Public Health Regions across Texas.

They have, on average, about 11 years of state service, with an average age of about 51 years.<sup>219</sup> The overall turnover for these LVNs is high at 18 percent.<sup>220</sup>

Retention is expected to remain an issue as employment of LVNs is projected to grow 11 percent by the year 2028, faster than the average for all occupations and budgetary limitations will continue to make it difficult for the System to offer competitive salaries.<sup>221</sup>

## **Nurse Practitioners**

HHS employs 70 nurse practitioners throughout the System.<sup>222</sup> Under the supervision of a physician, 68 of these nurse practitioners are responsible for providing advanced medical services and clinical care to individuals at state hospitals and those who reside in state supported living centers across Texas.<sup>223</sup>

These highly skilled employees have, on average, about 9 years of state service, with an average age of 50. Approximately 40 percent of these employees have 10 years or more of state service.<sup>224</sup>

System nurse practitioners earn an average annual salary of \$112,090.<sup>225</sup> This salary falls slightly below the market rate. The State Auditor's Office 2018 market index analysis found the average state salary for nurse practitioners was about nine percent behind the market rate.<sup>226</sup>

The turnover rate for nurse practitioners is about 17 percent, and the vacancy rate is approximately nine percent, with positions remaining vacant for an average of about six months.<sup>227 228</sup>

About 11 percent of nurse practitioners are currently eligible to retire, with this number increasing to 23 percent in the next five years.<sup>229</sup> HHS will need to develop

creative recruitment strategies to replace these highly skilled and tenured employees.

### **Nurse Practitioners at State Supported Living Centers**

HHS employs 26 nurse practitioners at state supported living centers across Texas.<sup>230</sup> These highly skilled employees have, on average, about seven years of state service, with an average age of 50.<sup>231</sup>

The overall turnover rate for these nurse practitioners is high at about 29 percent.<sup>232</sup>

Although the vacancy rate is only about seven percent, vacant positions at state supported living centers typically remain unfilled for about seven months.<sup>233</sup>

Due to the continuing short supply and high demand for these professionals, HHS will need to continue using creative recruitment strategies to replace these employees.

### **Nurse Practitioners at State Hospitals**

HHS employs 42 nurse practitioners at state hospitals across Texas.

These highly skilled employees have, on average, about 11 years of state service, with an average age of 49.<sup>234</sup>

Though turnover for these state hospital employees is currently low at about 10 percent, positions are often remaining unfilled for months.<sup>235 236</sup>

About 12 percent of these highly skilled employees are currently eligible to retire. This number will increase to approximately 24 percent retirement eligibility in the next five years.<sup>237</sup>

### **Dentists at State Supported Living Centers**

The demand for dentists nationwide is expected to increase as the overall population ages. Employment of dentists is projected to grow by seven percent through 2028.<sup>238</sup>

The System employs a total of 30 dentists across the state.<sup>239</sup> Of the 30 dentists employed by the System, over half (57 percent) provide advanced dental care and treatment for residents living at the HHS supported living centers across Texas. The typical dentist at these facilities is about 53 years old and has an average of 10 years of state service.<sup>240</sup>

Facility dentists earn an average salary of \$145,656, which is below the average wage paid nationally (\$178,260), and also lower than the Texas average of \$183,510.<sup>241 242</sup>

Turnover for these dentists is high at about 17 percent.<sup>243</sup> State supported living centers face challenges competing with private sector salaries to fill current vacancies.

It is anticipated that HHS will face significant recruitment challenges in the next few years to replace these highly skilled employees who will be eligible for retirement. About 12 percent of these employees are currently eligible to retire, and this number will increase to about 29 percent in the next five years.<sup>244</sup>

## Physicians

There are currently about 390,680 active physicians and surgeons across the country.<sup>245</sup> Due to the increased demand for healthcare services by the growing and aging population, employment of physicians is projected to grow about seven percent by 2028, faster than the average for all occupations.<sup>246</sup>

HHS employs 83 physicians, with majority (84 percent) employed in HHS state supported living centers, state hospitals and in Public Health Regions.<sup>247</sup>

These highly skilled employees have, on average, about nine years of state service, with an average age of 56. Over 31 percent of these employees have more than 10 years or more of state service.<sup>248</sup>

System physicians are currently earning an average annual salary of \$185,492.<sup>249</sup> This salary is below the average wage paid nationally (\$203,450) and also lower than the Texas average of \$200,590.<sup>250</sup> The State Auditor's Office 2018 market index analysis found the average state salary for Physicians to be five to 10 percent behind the market rate.<sup>251</sup>

Turnover for these physicians is at 22 percent.<sup>252</sup> In addition, the vacancy rate is at 13 percent, with positions remaining vacant for an average of about eight months.<sup>253</sup>

About 18 percent of these highly skilled and tenured employees are currently eligible to retire, with this number increasing to 34 percent in the next five years.<sup>254</sup>

## Physicians at State Supported Living Centers

There are 34 physicians working at state supported living centers across Texas.<sup>255</sup> Full staffing of these positions is critical to direct-care services.

These physicians have, on average, about nine years of state service, with an average age of 57.<sup>256</sup> Local physicians who have established long term private practices often apply as a staff physician at state supported living centers late in their working career to secure retirement and insurance benefits, thus contributing to the reason for the high average age.

Turnover for these physicians is high at 26 percent.<sup>257</sup>

To deal with recruitment and retention difficulties, HHS has often used contract physicians to provide required coverage. These contracted physicians are paid at rates that are well above the amount it would cost to hire physicians at state salaries. Aside from being more costly, the System has experienced other problems with contracted physicians, including a lengthy learning curve, difficulty in obtaining

long-term commitments, difficulty in obtaining coverage, dependability and consistent services levels due to their short-term commitment.

To meet the health needs of individuals residing in state supported living centers, it is critical that HHS recruit and retain qualified physicians. However, due to the short supply and large demand, state supported living centers are experiencing difficulty hiring physicians. With a high vacancy rate of 17 percent, positions are remaining unfilled for an average of almost 10 months.<sup>258</sup>

### **Physicians at State Hospitals**

There are currently 28 physicians at HHS who are providing essential medical care in state hospitals.<sup>259</sup> They take the lead role in diagnosing, determining a course of treatment, making referrals to outside medical hospitals, prescribing medications and monitoring the patients' progress toward discharge. Physician services in state hospitals are essential to the ongoing monitoring and management of an increasing number of complex chronic medical conditions, such as diabetes, seizure disorders, hypertension and chronic obstructive pulmonary disease (COPD). These employees are critical to the System's preparedness and response to medical services provided by the state and to major public health initiatives, such as obesity prevention, diabetes, disease outbreak control and others.

These physicians have, on average, about 11 years of state service, with an average age of about 56. Local physicians who have established long term private practices often apply as physicians at state hospitals late in their working career to secure retirement and insurance benefits, contributing to the high overall age. Only nine full-time physicians are under 50 years of age.<sup>260</sup>

Turnover for these physicians is about 17 percent.<sup>261</sup>

With a vacancy rate of about 13 percent, it takes about seven and a half months to fill a state hospital physician position with someone who has appropriate skills and expertise.<sup>262</sup>

In addition, HHS may face significant challenges in the next few years to replace those employees who are eligible for retirement. About 18 percent of these highly skilled and tenured employees are currently eligible to retire. Within five years, about 36 percent will be eligible to retire.<sup>263</sup> If these employees choose to retire, HHS would lose some of the most experienced medical personnel – those with institutional knowledge and skills that will be difficult to match and even harder to recruit.

Recruitment of qualified candidates, as well as retention of these highly skilled and knowledgeable employees, continues to be a challenge for the System.

### **Physicians in Public Health Roles**

There are eight HHS physicians performing public health services.<sup>264</sup> Physicians serving in public health roles in Public Health Regions and Central Office act as state and regional consultants and advisors to county, local, hospital, and stakeholder groups, and provide subject matter expertise on programs and services. These

physicians provide public health services that are essential to the provision of direct clinical services in areas of the state where local jurisdictions do not provide services in communicable disease control and prevention and population-based services.

Physicians serving in Public Health Regions initiate treatment of communicable diseases; refer, prescribe medication, and monitor treatment. They oversee infectious disease investigation, control, and prevention efforts regionally, and provide direction for public health preparedness and response centrally and in the Public Health Regions. Some of the physicians who serve as Regional Directors are required by statute to also serve as the Local Health Authority (LHA) in counties that do not have a designated LHA. As such, they enforce laws relating to public health; establish, maintain and enforce quarantines; and report the presence of contagious, infectious, and dangerous epidemic diseases in the health authority's jurisdiction. As Regional Medical Directors, physicians in Public Health Regions serve as community leaders and conveyors of health-related organizations and individuals for the purpose of improving the health of all Texans.

These physicians are, on average, about 51 years old, with an average of about nine years of state service.<sup>265</sup>

Turnover for these positions is high at about 24 percent.<sup>266</sup>

While only 13 percent of these physicians are eligible to retire, a quarter of these highly skilled employees are expected to retire in the next five years.<sup>267</sup> HHS will need to develop creative recruitment strategies to replace these highly skilled employees.

## **Psychiatrists**

There are currently about 28,600 psychiatrists nationwide. Increased demand for healthcare services by the growing and aging population is expected to result in a 1.2 percent rate of growth in the state government sector by 2028.<sup>268</sup>

HHS employs 120 psychiatrists throughout the System, with the majority of these psychiatrists (about 83 percent) employed in state hospitals across Texas.<sup>269</sup>

These highly skilled and tenured employees have, on average, about 12 years of state service, with an average age of 54.<sup>270</sup>

System psychiatrists currently earn an average annual salary of \$226,900.<sup>271</sup> The State Auditor's Office 2018 market index analysis found the average state salary for Psychiatrist IIIs to be 10 percent behind the market rate.<sup>272</sup>

Turnover for System psychiatrists is currently at about 19 percent.<sup>273</sup> The vacancy rate is high at about 18 percent, with positions remaining vacant for an average of about eight months.<sup>274</sup>

About 23 percent of these highly skilled and tenured employees are currently eligible to retire, with this number increasing to 43 percent in the next five years.<sup>275</sup>

## **Psychiatrists at State Supported Living Centers**

There are 13 Psychiatrist IIIs assigned to state supported living centers.<sup>276</sup> Full staffing of these positions is critical to providing psychiatric services needed by residents.

These Psychiatrists IIIs have, on average, about six years of state service, with an average age of 53.<sup>277</sup>

With a high vacancy rate of 24 percent, vacant positions in state supported living centers go unfilled for about nine months (Brenham State Supported Living Center has a very high vacancy rate of 67 percent and positions go unfilled for almost a year).<sup>278</sup>

Competing with private sector salaries and an overall shortage of psychiatrists in Texas continue to make it difficult to recruit and retain qualified individuals. To maintain required coverage, HHS has used contracted psychiatrists. These psychiatrists are paid well above the amount it would cost to hire psychiatrists at state salaries (costing in excess of \$200 per hour, compared to the hourly rate of about \$109 paid to agency psychiatrists).<sup>279</sup>

To meet the health needs of individuals residing in state supported living centers, it is critical that HHS fill all budgeted psychiatrist positions and effectively recruit and retain qualified psychiatrists.

## **Psychiatrists at State Hospitals**

There are currently 91 System psychiatrists providing essential medical and psychiatric care in state hospitals.<sup>280</sup> These highly skilled employees take the lead role in diagnosing, determining a course of treatment, prescribing medications and monitoring patient progress. Recruiting and retaining psychiatrists at the state hospitals has been especially difficult for HHS.

These psychiatrists have, on average, about 13 years of state service, with an average age of 54. About 50 percent of these employees have 10 or more years of service.<sup>281</sup>

Annual turnover for these psychiatrists is about 18 percent. Terrell State Hospital reported the highest state hospital turnover rate of about 35 percent.<sup>282</sup>

With an overall high vacancy rate of about 20 percent, most vacant psychiatrist positions go unfilled for months.<sup>283</sup> At some state hospitals, these positions remain vacant for over nine months (at the El Paso Psychiatric Center and Rusk State Hospital). These challenges are expected to continue, as about 24 percent of these highly skilled and tenured employees are currently eligible to retire and may leave at any time. Within five years, this number will increase to 44 percent.<sup>284</sup>

State hospitals continue to face increasing difficulty in recruiting qualified psychiatrists as salaries are not competitive with the private sector, and there is a general shortage of a qualified labor pool.

Due to the complex medical and mental challenges that individuals residing in state hospitals exhibit, it is critical that HHS is able to effectively recruit and retain qualified psychiatrists. Continued targeted recruitment strategies and retention initiatives for these highly skilled professionals must be ongoing.

## **Psychologists**

There are 233 psychologists in HHS, with the majority (97 percent) employed in state supported living centers and state hospitals across the state.<sup>285</sup>

System psychologists earn an average annual salary of \$57,463.<sup>286</sup> This salary falls below the market rate. The State Auditor's Office 2018 market index analysis found the average state salary for Psychologist Is to be 11 percent behind the market rate and Psychologist IIIs to be eight percent behind the market rate.<sup>287</sup>

Turnover for these psychologists is high at 28 percent, with psychologist positions often remaining unfilled for several months before being filled.<sup>288 289</sup>

### **Psychologists at State Supported Living Centers**

About 79 percent of HHS psychologists (181 employees) work at state supported living centers across Texas.<sup>290</sup> These employees participate in quality assurance and quality enhancement activities related to the provision of psychological and behavioral services to state supported living center residents; provide consultation and technical assistance to individuals with cognitive, developmental, physical and health related needs; implement and evaluate behavioral support plans; review the use of psychotropic medication in treating behavior problems; perform chart reviews; and perform observations and assessments relevant to the design of positive interventions and supports for residents.

The typical psychologist at these facilities is about 42 years old and has an average of eight years of state service.<sup>291</sup>

Turnover for these psychologists is high at about 31 percent, reflecting the loss of about 59 workers during fiscal year 2019. Turnover rates by location ranged from 0 percent at the San Antonio State Supported Living Center to 100 percent at the Corpus Christi State Supported Living Center.<sup>292</sup>

With a high vacancy rate for these positions (at approximately 16 percent), psychologist positions often remain open for months before being filled. At the Denton State Supported Living Center, positions have remained vacant for an average of 11 months.<sup>293</sup>

### **Psychologists at State Hospitals**

There are 46 psychologists working at HHS state hospitals, with about 67 percent employed in Psychologist II positions.<sup>294</sup> Full staffing of these positions is critical to providing needed psychological services to patients.

State hospital psychologists play a key role in the development of treatment programs for both individual patients and groups of patients. Their evaluations are

critical to the ongoing management and discharge of patients receiving competency restoration services, an ever-growing patient population in the state hospitals. They also provide testing and evaluation services important to ongoing treatment, such as the administration of IQ, mood, and neurological testing instruments.

These highly skilled and tenured employees have, on average, about 11 years of state service, with an average age of 49.<sup>295</sup>

Turnover for these psychologists is high about 17 percent. Rio Grande State Center experienced the highest turnover at 67 percent.<sup>296</sup>

The vacancy rate for these positions is about eight percent, with positions often remaining unfilled for over five months.<sup>297</sup>

HHS may face significant recruitment challenges in the next few years, as approximately 30 percent of these highly skilled and tenured employees will be eligible for retirement in the next five years.<sup>298</sup>

It is critical that HHS fills all budgeted state hospital psychologist positions and effectively recruit and retain qualified psychologists.

## **Epidemiologists**

HHS employs 103 epidemiologists who provide services in the areas of infectious disease and injury control, chronic disease control, emergency and disaster preparedness, disease surveillance and other public health areas.<sup>299</sup> They provide critical functions during disasters and pandemics and other preparedness and response planning.

As of May 2018, there were approximately 7,600 epidemiologist jobs in the U.S., with a projected job growth rate of 5.3 percent by 2028.<sup>300</sup>

On average, System epidemiologists have about seven years of state service, with an average age of approximately 36 years.<sup>301</sup>

Turnover for System epidemiologists is currently at about 17 percent. This rate is much higher for entry-level Epidemiologist Is, at about 26 percent.<sup>302</sup>

Low pay is a contributing factor in the inability to attract qualified epidemiologist applicants. System epidemiologists are currently earning an average annual salary of \$59,723.<sup>303</sup> This salary is significantly below the average wage paid nationally (\$78,290), and also lower than the Texas average of \$65,610.<sup>304</sup> In addition, the State Auditor's Office 2018 market index analysis found that the average state salary for epidemiologists to be nine percent behind the market rate.<sup>305</sup>

Currently, only about eight percent of these employees are currently eligible to retire, this rate will increase in the next five years to 11 percent. Fourteen percent of senior-level epidemiologists (Epidemiologist III's) are currently eligible to retire. In about five years, 18 percent will be eligible to retire.<sup>306</sup>

HHS will need to closely monitor this occupation due to the nationally non-competitive salaries and a general shortage of professionals performing this work.

## Sanitarians

There are 117 sanitarians employed with HHS.<sup>307</sup> HHS registered sanitarians inspect all dairies, milk plants, food and drug manufacturers, wholesale food distributors, food and drug salvagers in Texas, as well as all retail establishments in the 188 counties not covered by local health jurisdictions and conduct a multitude of environmental inspections such as children's camps and many others. Sanitarians are instrumental in protecting the citizens of Texas from food-borne illness and many dangerous environmental situations and consumer products, including imported foods, drugs and consumer products. The U.S. Food and Drug Administration (FDA) and the Consumer Products Safety Commission (CPSC) have little manpower and therefore depend on the state programs to protect citizens. System sanitarians also respond to a variety of emergencies, including truck wrecks, fires, tornados, floods and hurricanes. They are the first line of defense against a bioterrorist attack on the food supply.

On average, HHS sanitarians are 45 years old and have about 11 years of state service. About 39 percent of these employees have 10 or more years of state service.<sup>308</sup>

Though the turnover rate for HHS sanitarians is currently low at about 10 percent, HHS has experienced difficulty filling vacant positions, with vacant positions often going unfilled for many months due to a shortage of qualified applicants available for work. Turnover for Sanitarians III was higher at almost 21 percent, with vacancies in this classification going unfilled for six months.<sup>309 310</sup>

Historically, HHS has faced special challenges filling vacancies in both rural and urban areas of the state. In addition, the state requirement for sanitarians to be registered and have at least 30 semester hours of science (in addition to 18 hours of continuing education units every two years) has made it increasingly difficult to find qualified individuals.

With 15 percent of sanitarians currently eligible to retire, and 27 percent eligible to retire in the next five years, HHS will need to develop creative recruitment strategies to replace these skilled and highly tenured employees.<sup>311</sup>

## Veterinarians

There are 17 Veterinarians working for DSHS in the Consumer Protection Division, the Division for Laboratory and Infectious Disease Services, and in Public Health Regions across the state.<sup>312</sup> System Veterinarians perform advanced veterinary work and are responsible for the day-to-day management of the Zoonosis Control (ZC) Program.

These highly-skilled and tenured employees have, on average, about 13 years of state service, with an average age of 52.<sup>313</sup>

System Veterinarians make \$89,739.6, which is below the national (\$104,820) and state (\$125,280) average salaries.<sup>314</sup> In addition, the State Auditor's Office 2018

market index analysis found that the average state salary for Veterinarian IIs to be eight percent behind the market rate.<sup>315</sup>

Turnover for Veterinarians is slightly below the state average at 16 percent. Turnover for Veterinarian II's is higher than that of Veterinarian III's, at 18 percent.<sup>316 317</sup>

The agency may face significant recruitment challenges in the next few years to replace these highly-skilled and tenured employees who are eligible for retirement. Currently, 29 percent of Veterinarians are eligible to retire, and over 50 percent of these employees will be eligible to retire in the next five years.<sup>318</sup>

Special efforts should be made to recruit these professional to avoid a critical shortage in the near future.

## **Health Physicists**

Within HHS, there are 63 health physicists, all employed within the Consumer Protection Division.<sup>319</sup> These employees plan and conduct complex and highly advanced technical inspections and license application review of radioactive material, nuclear medicine, industrial x-ray units, general medical diagnostic x-ray units, fluoroscopic units, mammographic units, C-Arm units, radiation therapy equipment, laser equipment, and industrial and medical radioactive materials to assure user's compliance with applicable State and Federal regulations. Health physicists are instrumental in emergency planning for the offsite response of nuclear power plants and are the the first line of defense for radiological disaster response.

HHS health physicists have, on average, 13 years of state service, with an average age of 50 years. Over 50 percent of these employees have 10 or more years of state service.<sup>320</sup>

HHS health physicists earn an average annual salary of \$59,238, which is below the average wage paid nationally (\$76,290), and also lower than the Texas average of \$75,720.<sup>321 322</sup>

Though the turnover for health physicists is currently well managed at 14 percent, vacant positions often go unfilled for many months due to a shortage of qualified applicants available for work.<sup>323 324</sup>

With 30 percent of health physicists at HHS currently eligible to retire, and about 44 percent eligible to retire in the next five years, HHS will need to develop creative recruitment strategies to replace these highly skilled and tenured employees.<sup>325</sup>

## **Public Health and Prevention Specialists**

Within HHS, there are 322 public health and prevention specialists, with the majority of these employees (90 percent) employed at DSHS.<sup>326</sup>

These employees provide technical consultation to local health departments, human and animal health care professionals, government officials, community action groups, and others on a number of public health areas, including the treatment,

prevention and control of zoonotic diseases, rabies risk assessment, and animal control; providing population-based services toward improving access to care for children and pregnant women, promoting breastfeeding, increasing parent-completed developmental screenings, reducing fetoinfant mortality and preventing child fatalities; and providing technical assistance and instruction in cancer reporting methods.

HHS public health and prevention specialists have, on average, 11 years of state service, with an average age of 46 years. Forty-five percent of these employees have 10 or more years of state service.<sup>327</sup>

While overall turnover for public health and prevention specialists at 19 percent is slightly below the state average rate of 20 percent, certain areas within HHS are experiencing significantly higher turnover rates, including Public Health Region 9/10 in the El Paso area (at 28 percent), the Public Health Region 8 in the San Antonio area (at 28 percent), and Public Health Region 4/5 in the Tyler area (at 23 percent).<sup>328 329</sup>

In addition, HHS finds it difficult to fill these vacant public health and prevention specialist positions. With a high vacancy rate for these positions (at approximately 15 percent), these positions often remain open for more than four months before being filled.<sup>330</sup>

Retention is expected to remain an issue as these employees approach retirement. Nineteen percent of public health and prevention specialists are currently eligible to retire, and about 33 percent will be eligible to retire in the next five years.<sup>331</sup>

## **Medical Technicians**

Within HHS, there are 24 medical technicians.<sup>332</sup> These workers assist nursing staff with age appropriate patient care, which includes providing patients personal hygiene; making beds and assisting with preparation of unit's and patient's rooms for receiving new patients; taking vital signs; obtaining specimens; cleaning patient care equipment; and transporting patients to and from various departments.

Over half of these medical technicians are employed at the Texas Center of Infectious Disease (TCID), with the remaining technicians employed at HHS state hospitals and state supported living centers across Texas.

System medical technicians have, on average, about 11 years of state service, with an average age of 50 years. About 33 percent of these employees have 10 or more years of state service.<sup>333</sup>

The turnover rate for all System medical technicians is currently well managed at nine percent. This rate is higher for entry-level Medical Technician Is at TCID (at 14 percent).<sup>334</sup>

The vacancy rate for System medical technicians is currently low at about four percent, though vacant positions often remain unfilled for about a year.<sup>335</sup>

HHS medical technicians earn an average annual salary of \$28,064.<sup>336</sup> The State Auditor's Office 2018 market index analysis found the average state salary for medical technicians ranged from five to 10 percent behind the market rate.<sup>337</sup> This disparity may be affecting HHS' ability to recruit qualified applicants for open positions.

About 17 percent of these employees are currently eligible to retire, with nearly 30 of these employees eligible in the next five years. HHS will need to develop creative recruitment strategies to replace these employees, and to ensure a qualified applicant pool is available to select from as vacancies occur.<sup>338</sup>

## **Laboratory Staff**

HHS operates a state-of-the-art state laboratory in Austin and two regional laboratories, one in San Antonio and the other in Harlingen. The Austin State Hospital provides laboratory services for the other HHS state hospitals and state supported living centers.

While laboratory staff is made up of a number of highly skilled employees, there are four job groups that are essential to laboratory operations: chemists, microbiologists, laboratory technicians and medical technologists.

### **Chemists**

There are 56 chemists employed in the HHS Division for Laboratory and Infectious Disease Services, all located in Austin.<sup>339</sup>

The typical System chemist is about 47 years old and has an average of about 13 years of state service. Nearly half of the employees have 10 years or more of state service.<sup>340</sup>

The overall turnover rate for System chemists is high, at 24 percent annually, which is above the state average turnover rate of 20 percent.<sup>341 342</sup>

Vacant System chemist positions often go unfilled for many months due to a shortage of qualified applicants available for work.<sup>343</sup> These vacancy problems are expected to worsen as employees approach retirement. Nearly 21 percent of these tenured and highly skilled employees are currently eligible to retire.<sup>344</sup>

Low pay is a factor in the inability to attract qualified chemist applicants. System chemists earn an average annual salary of about \$47,652.<sup>345</sup> The State Auditor's Office 2018 market index analysis found the average state salary for chemists ranged from five to 11 percent behind the market rate.<sup>346</sup> The average annual salary for chemists nationally is \$84,150 and \$89,520 in Texas.<sup>347</sup>

### **Microbiologists**

There are 138 microbiologists working for HHS, with the majority at the Austin laboratory.<sup>348 349</sup>

System microbiologists have, on average, about 10 years of state service, with an average age of about 40 years.<sup>350</sup>

The turnover rate for all System microbiologists is below the state average rate of 20 percent at about nine percent. This rate is much higher for tenured Microbiologist Vs (at 20 percent).<sup>351 352</sup>

System microbiologists earn an average annual salary of about \$44,378.<sup>353</sup> The State Auditor's Office 2018 market index analysis found the average state salary for Microbiologist IIs was 12 percent behind the market rate and from six to eight percent behind the market rate for Molecular Biologists.<sup>354</sup> This average annual salary also falls below the national and statewide market rates for this occupation. The average annual salary for microbiologists nationally is \$82,760 and \$55,030 in Texas.<sup>355</sup> This disparity in earnings is affecting the System's ability to recruit qualified applicants for open positions. Microbiologist positions often remain unfilled for several months.<sup>356</sup>

In addition, HHS may face significant recruitment challenges in the next few years to replace these highly skilled and tenured employees who are eligible for retirement. Though only 11 percent of these employees are currently eligible to retire, this rate will increase in the next five years to about 20 percent.<sup>357</sup>

## **Laboratory Technicians**

There are 42 laboratory technicians employed at HHS.<sup>358</sup>

The typical laboratory technician is about 43 years old and has an average of 11 years of state service.<sup>359</sup>

The turnover rate for System laboratory technicians is very high, at about 32 percent.<sup>360</sup>

The vacancy rate for System laboratory technicians is currently high at about 19 percent (seven percent higher than reported in FY 2017), with vacant positions often going unfilled for many months due to a shortage of qualified applicants available for work.<sup>361</sup>

Low pay is a factor in the inability to attract qualified laboratory technician applicants. HHS laboratory technicians earn an average annual salary of about \$31,478.<sup>362</sup> The average annual salary for medical and clinical laboratory technicians nationally is \$54,780 and \$52,720 in Texas.<sup>363</sup> The State Auditor's Office 2018 market index analysis found the average state salary for Laboratory Technician Is to IVs ranged from three to 16 percent behind the market rate.<sup>364</sup>

These problems are expected to worsen as employees approach retirement. About 29 percent of these tenured and highly skilled employees will be eligible to retire in the next five years.<sup>365</sup>

## **Medical Technologists**

Within HHS, there are 66 medical technologists.<sup>366</sup> These workers perform complex clinical laboratory work and are critical to providing efficient and quality healthcare.

System medical technologists have, on average, about 10 years of state service, with an average age of 42 years. About 39 percent of these employees have 10 or more years of state service.<sup>367</sup>

The turnover rate for all System medical technologists is currently high at 21 percent.<sup>368 369</sup>

The vacancy rate for System medical technologists is currently high at about 12 percent, with vacant positions often going unfilled for many months due to a shortage of qualified applicants available for work.<sup>370</sup>

HHS medical technologists earn an average annual salary of \$43,033.<sup>371</sup> The State Auditor's Office 2018 market index analysis found the average state salary for medical technologists ranged from six to 13 percent behind the market rate.<sup>372</sup> This disparity is affecting HHS' ability to recruit qualified applicants for open positions.

Though only nine percent of these employees are currently eligible to retire, over 20 percent of these employees will be eligible in the next five years.<sup>373</sup> HHS will need to develop creative recruitment strategies to replace these highly skilled and tenured employees, and to ensure a qualified applicant pool is available to select from as vacancies occur.

## 9. Development Strategies to Meet Workforce Needs

### Recruitment Strategies

#### General Facility Strategies

- Re-brand the public image of the facilities through various means to dispel preconceived notions of our systems.
- Conduct new market rate analysis of psychiatric nursing assistant (PNA), direct support professional (DSP), licensed vocational nurse (LVN) and registered nurse (RN) salaries in order to track private industry standards and competition.
- Expand internships and residency programs offered at the facilities.
- Development of Academic Assignment and Dual Employment agreements with universities to attract licensed professional staff.
- Expand telemedicine for primary care and psychiatry to allow for greater access to physicians, particularly for rural facilities.
- Survey new staff in orientation to refine best recruitment tactics for specific areas.
- Improve coordination of employment-related advertising, job postings and recruitment events across the facilities.

#### State Supported Living Center Strategies

- Continue to advertise employment opportunities using a variety of media sources, including social media, print advertising in local and regional newspapers, billboards, and local radio and television commercials.
- Continue to post jobs on various employment and professional websites.
- Continue to participate in major job fairs, and in some cases host on-campus job fairs.
- Continue to inform applicants of available incentives such as payment of licensure fees, required training, and continued education costs for eligible positions.
- Explore additional contracting opportunities with universities for telemedicine to reduce dependency on contract clinicians.
- Continue recruitment efforts through established nursing programs to focus on graduating classes.
- Consider hiring J-1 Visa Waiver applicants. The J-1 Visa Waiver allows a foreign student who is subject to the two-year foreign residence requirement to remain in the U.S. upon completion of degree requirements/residency program, if they find an employer to sponsor them. The J-1 Visa Waiver applies to specialty occupations in which there is a shortage. The J-1 Waiver could be used to recruit physicians, psychiatrists, dentists, psychologists, nurse practitioners, registered therapists, and others for a minimum of three years.

- Use of a telepsychiatry job description in postings at various SSLCs to allow Psychiatrists to work from anywhere in the state.

### **State Hospital Strategies**

- Continue using internet-based job postings, billboards, job fairs, professional newsletters, list serves and recruitment firms.
- Work with nurse practitioner educational programs to develop, fund and promote specialty psychiatric nurse tracks with rotations in state hospitals.
- Continue focus on targeted recruiting and advertising efforts in states in the United States and Canada that are members of the reciprocity agreement for psychologists, which provides immediate licensure if requirements are met.
- Continue negotiations with academic social work programs to broaden hospital exposure among social work students.
- Continue partnership with Midwestern State University to allow nursing staff at North Texas State Hospital to also be faculty of the university nursing program and develop forensic concentration for nurses who wish to specialize in this area of nursing.
- Continue with expansion of telemedicine at North Texas State Hospital – Vernon and Wichita Falls campuses, in partnership with University of Texas Health – Houston, which may reduce dependency on contracted providers and enhance the quality of the service delivery.
- Fund stipends for residency positions and promote the educational loan repayment program for eligible psychiatrists and physicians.
- Continue nursing compensation plans for eligible PNAs and nurses to award merits at a regular and predictable interval.

### **Public Health Strategies**

- Aggressive marketing through national public health programs for nurses.
- Continue advertising job postings on public health schools and professional listings, and various employment and professional websites.
- Increase networking with professional and other associations to target recruitment efforts.
- Solidify a “pipeline” from academia to the agency for students to learn about the work of the agency and gain experience, skills and qualifications through internships.
- Increase the number of interns performing programmatic work to help introduce public health work as a career choice to college students.
- Establish a base salary entry point that encourages qualified applicants to apply, along with a protocol to increase compensation that is tied to ongoing training and subject matter expertise.
- Promote the benefits of state employment, including job stability, insurance, career advancement ladder and opportunities, and the retirement pension plan.
- Continue to inform appropriate applicants of available incentives (e.g., teleworking, compressed/flex schedules, and professional development and continuing education opportunities).

- Explore the feasibility of creating defined career paths.
- Continue to explore improvement of starting salary structures to more closely align with federal and private employers.
- Ensure job candidates have a realistic understanding of the applied for positions.
- Encourage staff to apply for internal promotion opportunities.
- Continue to submit salary exception requests for approval of salary offers when warranted.
- Establish a salary entry point for Health Physicists and Sanitarians that encourages qualified applicants to apply, along with a protocol to increase compensation that is tied to ongoing training and subject matter expertise.

### **Other Targeted Strategies**

- Inspectors:
  - ▶ Recommend creation of the Meat Science Officer classification to more closely match the skill requirements of the job and provide competitive entry-level salaries.
- Epidemiologists:
  - ▶ Regular and ongoing dialogues and presence with the respective universities in the state and surrounding areas; host on campus recruitment fairs at the universities.
- Medical and Social Services Occupations:
  - ▶ Utilize updated web content, social media strategies, community outreach, and media sources to advertise employment opportunities.
  - ▶ Advertise job postings on public health schools and professional listings and various employment and professional websites.
  - ▶ Increase networking with professional and other associations to target recruitment efforts.
  - ▶ Participate in major job fairs and, in some cases, host on-campus job fairs.
  - ▶ Recruit interns to perform programmatic work to introduce a job with HHSC as a career choice to college students.
  - ▶ Survey new staff in orientation to refine best recruitment tactics for specific areas.
  - ▶ Establish a base salary entry point that encourages qualified applicants to apply, along with a protocol to increase compensation that is tied to ongoing training and subject matter expertise.
  - ▶ Promote the benefits of state employment, including job stability, insurance, career advancement ladder and opportunities, and the retirement pension plan.
  - ▶ Advertise the Public Service Loan Forgiveness (PSLF) program to potential applicants and that HHSC is a qualifying employer and provide information regarding PSLF program requirements to new employees.
  - ▶ Inform appropriate applicants of available incentives (e.g. teleworking, compressed/flex schedules).
- Social Service Surveyors and Facility Investigator Specialists:

- ▶ Develop an external SharePoint site for potential applicant.
- ▶ Increase utilization of hiring specialist to review applicants.
- Nurse Surveyors:
  - ▶ Explore a classification parity study among nurse surveyor positions to determine whether changes are needed to maintain a current and competitive structure which accurately reflects responsibilities and salary ranges that are equitable and competitive with the market.
  - ▶ Develop an external SharePoint site for potential applicants.
  - ▶ Increase utilization of hiring specialist to review applicants.
- Continue to utilize the HHS talent acquisition office and its full range of services, including assistance with job postings and recruitment and hiring activities.

## **Retention Strategies**

### **General Facility Strategies**

- Conduct new market rate analysis of psychiatric nursing assistant, direct support professional, licensed vocational nurse, and registered nurse salaries in order to track private industry standards and competition.
- Continue promotion of the physician loan repayment program.

### **State Supported Living Center Strategies**

- Continue paying licensure fees and required training and continuing education costs for employees whose position require them to maintain professional licensure.
- Creation of Retention Specialist positions at SSLCs to focus on consistent training and strategies to retain staff at all levels, with a focus on DSP positions.

### **State Hospital Strategies**

- Continue adjusting and approving nursing compensation plans every two years.
- Continue nursing compensation plans at the state hospitals to provide merits for psychiatric nursing assistants and nurses at a regular and predictable intervals.
- Continue to explore retention strategies to pilot for the food service workers.
- Develop an as needed staffing pool at certain state hospitals to reduce the need for overtime, and the Intensive Observation Units are also being developed at certain state hospitals to reduce the need for 1:1 staffing for high risk individuals.

### **Public Health Strategies**

- Gradual use of Exceptional Items and merits to build salaries conducive to retention.
- Liberal use of educational leave for advance education programs that are supportive of the Department of State Health Services' mission.

- Continue support for conference and educational symposium travel opportunities for employees.
- Continue to offer professional development and training opportunities.
- Explore opportunities to mentor professional staff.
- Explore engaging staff in the full spectrum of cross-program activities.
- Continue to provide required training and expand opportunities for cross-training.
- Encourage the use of HHS System tuition reimbursement program.
- Establish and advertise “career paths” and other opportunities for individual advancement.
- Ensure staff have opportunities to design and conduct public health data analyses.
- Ensure staff have development plans that encourage the enhancement of data skills.
- Ensure staff have opportunities to design and conduct public health data analyses.
- Explore opportunities for flexible work schedules, telework, mobile work, and alternative offices.
- Continue to recognize and reward employees who make significant contributions.
- Encourage the use of team building and staff recognition activities.
- Continue to have programmatic and division-level all staff meetings on a regular basis to provide an opportunity for staff at all levels to have their concerns addressed and to share appropriate levels of information.
- Explore feasibility of increased funding for positions and opportunities for advancement and/or regular increases in salary.
- Consider feasibility of providing shift pay for laboratory staff who are required to work Saturdays.
- Consider feasibility of increasing the pay for technical staff positions to better compete with private sector salaries.
- Continue to ensure the workplace reflects continuous upgrades and improvements, especially in the areas of Information Technology and communication technologies.
- Establish a system of regular job audit reviews for Health Physicists and Sanitarians to ensure that responsibilities are accurately reflected in the job classification assigned.
- Work with CNA programs to develop and promote Certified Nursing Assistant (Medical Technicians) tracks with rotations.

### **Other Targeted Strategies**

- Architects:
  - ▶ Create certification tracks.
- Child Care Licensing (CCL) and Residential Child Care Licensing Services (RCCL) Specialists:
  - ▶ Add additional career track level(s) to bring positions in line with similar System positions.

- ▶ Continue locality pay for positions in certain geographical areas.
- Epidemiologists:
  - ▶ Consider feasibility of offering an increased number of recurring merit awards to eligible employees.
- License and Permit Specialists:
  - ▶ Create certification tracks.
- Medical and Social Service Occupations:
  - ▶ Encourage staff to apply for internal promotion opportunities.
  - ▶ Explore opportunities for flexible work schedules, telework, mobile work, and alternative officing.
  - ▶ Develop a management forum and other tools to assist individuals with the technical skills transition and be successful in positions that require both technical and management skills.
  - ▶ Continue to offer professional development and training opportunities.
  - ▶ Explore opportunities to mentor professional staff.
  - ▶ Explore engaging staff in the full spectrum of cross-program activities.
  - ▶ Continue to provide required training and expand opportunities for cross-training.
  - ▶ Establish and advertise “career paths” and other opportunities for individual advancement.
  - ▶ Continue to recognize and reward employees who make significant contributions.
  - ▶ Encourage the use of team building and staff-recognition and staff-appreciation activities.
  - ▶ Continue to have programmatic and division-level all staff meetings on a regular basis to provide an opportunity for staff at all levels to have their concerns addressed and to share appropriate levels of information.
  - ▶ Explore feasibility of increased funding for positions and opportunities for advancement and/or regular increases in salary.
- Nurse Surveyors:
  - ▶ Continue locality pay for positions in certain geographical areas.
  - ▶ Explore a classification parity study among nurse surveyor positions to determine whether changes are needed to maintain a current and competitive structure which accurately reflects responsibilities and salary ranges that are equitable and competitive with the market.
- Protective Service Intake Specialists:
  - ▶ Create certification tracks.
- Provider Investigators:
  - ▶ Continue locality pay for positions in certain geographic areas.
- Quality Assurance Specialists:
  - ▶ Create certification tracks.
- Safety Officer IIs:
  - ▶ Create certification tracks.
- Social Services Surveyors and Facility Investigator Specialists:
  - ▶ Explore a classification parity study to determine whether changes are needed to maintain a current and competitive structure which accurately

reflects responsibilities and salary ranges that are equitable and competitive with the market.

In addition to the recruitment and retention strategies described above, HHS, in accordance with its inaugural business plan, Blueprint for a Healthy Texas is working towards certain initiatives and goals aimed to ensure the delivery of high-quality services to Texans. Initiative nine in the business plan focuses on improving systemwide recruitment and retention. To implement this initiative, HHS will perform activities such as, but not limited to those listed below:

- Continue to utilize the HHS talent acquisition office for a full range of services, including assistance with job postings and recruitment and hiring activities.
- Align job postings, descriptions and hiring materials for critical positions to accurately explain the expectations, responsibilities and work environment, which will help prospective employees better understand their roles.
- Develop strategic plans for hard-to-fill and retain positions.
- Deploy recruitment teams to job fairs and local events to promote HHS employment opportunities.
- Create career pathways to encourage team members to advance.

## References

- <sup>1</sup> HHSAS Database, as of 8/31/17.
- <sup>2</sup> HHSAS Database, as of 8/31/18.
- <sup>3</sup> HHSAS Database, as of 8/31/19.
- <sup>4</sup> Ibid.
- <sup>5</sup> Direct care workers include direct support professionals and psychiatric nursing assistants.
- <sup>6</sup> Eligibility workers includes Texas works advisors, hospital-based workers and medical eligibility specialists within Access and Eligibility Services (AES).
- <sup>7</sup> RNs include public health nurses, nurse surveyors, and direct care nurses.
- <sup>8</sup> Food service workers include food service workers, managers and cooks.
- <sup>9</sup> HHSAS Database, as of 8/31/19.
- <sup>10</sup> HHSAS Database, as of 8/31/17.
- <sup>11</sup> HHSAS Database, as of 8/31/18.
- <sup>12</sup> HHSAS Database, as of 8/31/19.
- <sup>13</sup> Ibid.
- <sup>14</sup> HHSAS Database, as of 8/31/17.
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- <sup>18</sup> Ibid.
- <sup>19</sup> HHSAS Database, as of 8/31/17.
- <sup>20</sup> HHSAS Database, as of 8/31/18.
- <sup>21</sup> HHSAS Database, as of 8/31/19.
- <sup>22</sup> Totals may not equal 100% due to rounding.
- <sup>23</sup> HHS System workforce data is from CAPPs-HCM Database as of 8/31/2019.
- <sup>24</sup> CLF data for underutilization percentages comes from the "Equal Employment Opportunity and Minority Hiring Practices Report Fiscal Years 2017-2018," published by the Texas Workforce Commission (TWC). Note: CLF data from TWC did not include Para-Professionals as a job category and did not indicate if members of that category were counted as part of any other categories - as a result, it is not included in the above table.
- <sup>25</sup> "N/A" for Protective Service is due to that workforce being integrated into HHSC as part of Transformation. "N/A" for Skilled Craft indicates the number of employees in that job category was too small (less than 30) to test any differences for statistical significance.
- <sup>26</sup> HHSAS Database, as of 8/31/19. Number of veterans based on self-reporting.
- <sup>27</sup> Ibid.
- <sup>28</sup> HHSAS Database, as of 8/31/19.
- <sup>29</sup> Totals may not equal 100% due to rounding.
- <sup>30</sup> HHSAS Database, as of 8/31/17.
- <sup>31</sup> HHSAS Database, as of 8/31/18.
- <sup>32</sup> HHSAS Database, as of 8/31/19.
- <sup>33</sup> Ibid.
- <sup>34</sup> Ibid.
- <sup>35</sup> Ibid.
- <sup>36</sup> Ibid.
- <sup>37</sup> HHS turnover calculations do not consider interagency transfers due to legislatively mandated transfers as separations. All other interagency transfers were counted as separations, since these separations significantly impact HHS agencies.
- <sup>38</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," October 2018, Report No. 19-702, web page <http://www.sao.texas.gov/reports/main/19-702.pdf>, last accessed 4/19/20. Note: The State Auditor's Office does not consider transfers between state agencies as a loss to the state and therefore does not include this turnover in their calculations.
- <sup>39</sup> HHSAS Database for FY 2017-2019. Note: Legislative transfers are not considered separations.

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- 40 HHSAS Database for FY 2019. Note: Legislative transfers are not considered separations.
- 41 Ibid.
- 42 Death accounted for .59% of separations.
- 43 HHSAS Database for FY 2019.
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- 45 Death accounted for .59% of separations (69 separations).
- 46 Direct care workers include direct support professionals and psychiatric nursing assistants.
- 47 Food service workers include food service workers, managers and cooks.
- 48 HHSAS Database for FY 2019.
- 49 HHSAS Database for FY 2019. Note: Legislative transfers are not considered separations.
- 50 Direct care workers include direct support professionals and psychiatric nursing assistants.
- 51 Food service workers include food service workers, managers and cooks.
- 52 Psychologists include behavioral health specialists and behavioral analysts.
- 53 Eligibility workers includes Texas works advisors, hospital-based workers and medical eligibility specialists within Access and Eligibility Services (AES).
- 54 CCL and RCCL specialists include CCL inspectors and specialists and RCCL inspectors and investigators.
- 55 RNs include public health nurses, nurse surveyors, and direct care nurses.
- 56 Eligibility clerks includes clerical, administrative assistant and customer service representative positions within AES.
- 57 Nurse practitioners include nurse practitioners at state supported living centers and state hospitals.
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- <sup>82</sup> HHSAS Database, as of 8/31/19. Note: Food service workers include food service workers, managers and cooks.
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- <sup>114</sup> HHSAS Database, FY 2017 data.
- <sup>115</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
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- 212 State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," October 2018, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/19-702.pdf>, last accessed 4/27/20.
- 213 HHSAS Database, as of 8/31/19.
- 214 HHSAS Database, FY 2019 data.
- 215 HHSAS Database, as of 8/31/19.
- 216 Ibid.
- 217 Ibid.
- 218 HHSAS Database, FY 2019 data.

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- HHSAS Database, as of 8/31/19.
- <sup>220</sup> HHSAS Database, FY 2019 data.
- <sup>221</sup> U.S. Bureau of Labor Statistics, Occupational Outlook Handbook, website <https://www.bls.gov/ooh/healthcare/licensed-practical-and-licensed-vocational-nurses.htm#tab-6>.
- <sup>222</sup> Advanced Practice RN Is.
- <sup>223</sup> HHSAS Database, FY 2019 data.
- <sup>224</sup> Ibid.
- <sup>225</sup> Ibid.
- <sup>226</sup> State Auditor’s Office, “A Biennial Report on the State’s Position Classification Plan,” October 2018, Report No. 19-702, web page <http://www.sao.texas.gov/Reports/Main/19-702.pdf>, last accessed 4/26/20. Note: For Advanced Practice Registered Nurse Is.
- <sup>227</sup> HHSAS Database, FY 2019 data.
- <sup>228</sup> HHSAS Database, as of 8/31/19.
- <sup>229</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- <sup>230</sup> HHSAS Database, as of 8/31/19.
- <sup>231</sup> Ibid.
- <sup>232</sup> HHSAS Database, FY 2019 data.
- <sup>233</sup> HHSAS Database, as of 8/31/19.
- <sup>234</sup> Ibid.
- <sup>235</sup> HHSAS Database, FY 2019 data.
- <sup>236</sup> HHSAS Database, as of 8/31/19.
- <sup>237</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- <sup>238</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, web page <http://www.bls.gov/ooh/healthcare/dentists.htm>, last accessed on 4/27/20.
- <sup>239</sup> HHSAS Database, as of 8/31/19.
- <sup>240</sup> Ibid.
- <sup>241</sup> Ibid.
- <sup>242</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page <https://www.bls.gov/oes/2019/may/oes291021.htm>, Period: May 2019; last accessed on 4/28/20. Note: The Employees are listed under the Occupational title of Dentists, General.
- <sup>243</sup> HHSAS Database, FY 2019 data.
- <sup>244</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- <sup>245</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page <https://www.bls.gov/oes/current/oes291228.htm>, Period: May 2019; last accessed on 4/27/20. Employees listed under the occupational title of Physicians, All Other.
- <sup>246</sup> U.S. Department of Labor, Bureau of Labor Statistics, Selected Occupational Projections Data, web page <http://data.bls.gov/projections/occupationProj>, Period: May 2019; last accessed on 4/27/20.
- <sup>247</sup> HHSAS Database, as of 8/31/19.
- <sup>248</sup> Ibid.
- <sup>249</sup> Ibid.
- <sup>250</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page <https://www.bls.gov/oes/current/oes291228.htm>, Period: May 2019; last accessed on 4/27/20. Employees listed under the occupational title of Physicians, All Other.
- <sup>251</sup> State Auditor’s Office, “A Biennial Report on the State’s Position Classification Plan,” October 2018, Report No. 17-702, web page <http://www.sao.texas.gov/reports/main/19-702.pdf>, last accessed 4/27/20.
- <sup>252</sup> HHSAS Database, FY 2019 data.
- <sup>253</sup> HHSAS Database, as of 8/31/19.
- <sup>254</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- <sup>255</sup> HHSAS Database, as of 8/31/19.
- <sup>256</sup> Ibid.
- <sup>257</sup> HHSAS Database, FY 2019 data.
- <sup>258</sup> HHSAS Database, as of 8/31/19.
- <sup>259</sup> Ibid.
- <sup>260</sup> Ibid.
- <sup>261</sup> HHSAS Database, FY 2019 data.
- <sup>262</sup> Ibid.

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- 263 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- 264 HHSAS Database, as of 8/31/19.
- 265 Ibid.
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- 267 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
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- 269 HHSAS Database, as of 8/31/19.
- 270 Ibid.
- 271 Ibid.
- 272 State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," October 2018, Report No. 17-702, web page <http://www.sao.texas.gov/Reports/Main/19-702.pdf>, last accessed 4/27/20.
- 273 HHSAS Database, FY 2019 data.
- 274 HHSAS Database, as of 8/31/19.
- 275 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- 276 HHSAS Database, as of 8/31/19.
- 277 Ibid.
- 278 Ibid.
- 279 Ibid.
- 280 Ibid.
- 281 Ibid.
- 282 HHSAS Database, FY 2019 data.
- 283 HHSAS Database, as of 8/31/19.
- 284 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- 285 HHSAS Database, as of 8/31/19. Note: Includes Psychologists, Behavioral Health Specialists, and Behavioral Analysts.
- 286 HHSAS Database, as of 8/31/19.
- 287 State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," October 2018, Report No. 19-702, web page <http://www.sao.texas.gov/Reports/Main/19-702.pdf>, last accessed 4/27/20.
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- 289 HHSAS Database, as of 8/31/19.
- 290 Ibid.
- 291 Ibid.
- 292 HHSAS Database, FY 2019 data.
- 293 HHSAS Database, as of 8/31/19.
- 294 Ibid.
- 295 Ibid.
- 296 HHSAS Database, FY 2019 data.
- 297 HHSAS Database, as of 8/31/19.
- 298 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- 299 HHSAS Database, as of 8/31/19.
- 300 U.S. Department of Labor, Bureau of Labor Statistics, Selected Occupational Projections Data, web page <http://data.bls.gov/projections/occupationProj>, Period: May 2018; last accessed on 4/27/20
- 301 HHSAS Database, as of 8/31/19.
- 302 HHSAS Database, FY 2019 data.
- 303 HHSAS Database, as of 8/31/19.
- 304 U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page <https://www.bls.gov/oes/current/oes191041.htm#st>, Period: May 2019; last accessed on 4/27/20.
- 305 State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," October 2018, Report No. 19-702, web page <http://www.sao.texas.gov/Reports/Main/19-702.pdf>, last accessed 4/27/20.
- 306 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.

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- 306 HHSAS Database, as of 8/31/19.
- 307 Ibid.
- 308 HHSAS Database, as of 8/31/19.
- 309 HHSAS Database, FY 2019 data.
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- 311 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- 312 HHSAS Database, as of 8/31/19.
- 313 Ibid.
- 314 U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page <https://www.bls.gov/oes/2019/may/oes291131.htm>, Period: May 2019; last accessed on 4/27/20.
- 315 State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," October 2018, Report No. 19-702, web page <http://www.sao.texas.gov/Reports/Main/19-702.pdf>, last accessed 4/27/20.
- 316 HHSAS Database, FY 2019 data.
- 317 State Auditor's Office (SAO) FY 2019 Turnover Statistics.
- 318 Includes return-to-work retirees. HHSAS Database, as of 8/31/20.
- 319 HHSAS Database, as of 8/31/19.
- 320 Ibid.
- 321 Ibid.
- 322 U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page <https://www.bls.gov/oes/current/oes195011.htm>, Period: May 2019; last accessed on 4/27/20. Note: The Employees are listed under the Occupational title of Occupational Health and Safety Specialists.
- 323 HHSAS Database, FY 2019 data.
- 324 HHSAS Database, as of 8/31/19.
- 325 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- 326 HHSAS Database, as of 8/31/19.
- 327 Ibid.
- 328 State Auditor's Office (SAO) FY 2019 Turnover Statistics.
- 329 HHSAS Database, FY 2019 data.
- 330 HHSAS Database, as of 8/31/19.
- 331 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- 332 HHSAS Database, as of 8/31/19.
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- 334 HHSAS Database, FY 2019 data.
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- 338 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- 339 HHSAS Database, as of 8/31/19.
- 340 Ibid.
- 341 HHSAS Database, FY 2019 data.
- 342 State Auditor's Office (SAO) FY 2019 Turnover Statistics.
- 343 HHSAS Database, as of 8/31/19.
- 344 Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- 345 HHSAS Database, as of 8/31/19.
- 346 State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," October 2018, Report No. 19-702, web page <http://www.sao.texas.gov/reports/main/19-702.pdf>, last accessed 4/27/20.
- 347 U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page <https://www.bls.gov/oes/current/oes192031.htm>, Period: May 2019; last accessed on 4/27/20.
- 348 Microbiologists include molecular biologists.
- 349 HHSAS Database, as of 8/31/19.

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- <sup>350</sup> Ibid.
- <sup>351</sup> State Auditor's Office (SAO) FY 2019 Turnover Statistics.
- <sup>352</sup> HHSAS Database, FY 2019 data.
- <sup>353</sup> HHSAS Database, as of 8/31/19.
- <sup>354</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," October 2018, Report No. 19-702, web page <http://www.sao.texas.gov/reports/main/19-702.pdf>, last accessed 4/27/20.
- <sup>355</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page <https://www.bls.gov/oes/current/oes191022.htm>, Period: May 2019; last accessed on 4/27/20.
- <sup>356</sup> HHSAS Database, as of 8/31/19.
- <sup>357</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- <sup>358</sup> HHSAS Database, as of 8/31/19.
- <sup>359</sup> Ibid.
- <sup>360</sup> HHSAS Database, FY 2019 data.
- <sup>361</sup> HHSAS Database, as of 8/31/2017 and 8/31/19.
- <sup>362</sup> HHSAS Database, as of 8/31/19.
- <sup>363</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page <https://www.bls.gov/oes/2019/may/oes292010.htm>, Period: May 2019; last accessed on 4/27/20. Employees listed under the occupational title of Clinical Laboratory Technologists and Technicians.
- <sup>364</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," October 2018, Report No. 19-702, web page <http://www.sao.texas.gov/reports/main/19-702.pdf>, last accessed 4/27/20.
- <sup>365</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/19.
- <sup>366</sup> HHSAS Database, as of 8/31/19.
- <sup>367</sup> Ibid.
- <sup>368</sup> State Auditor's Office (SAO) FY 2019 Turnover Statistics.
- <sup>369</sup> HHSAS Database, FY 2019 data.
- <sup>370</sup> HHSAS Database, as of 8/31/17.
- <sup>371</sup> HHSAS Database, as of 8/31/19.
- <sup>372</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," October 2018, Report No. 19-702, web page <http://www.sao.texas.gov/reports/main/19-702.pdf>, last accessed 4/27/20.
- <sup>373</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/19.