



# **Strategic Staffing Analysis and Workforce Plan**

## **For the Planning Period 2019-2023**

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**As Required by**

**Texas Government Code**

**Section 2056.0021**

**Health and Human Services**

**System**

**May 2018**



**TEXAS**  
Health and Human  
Services



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## 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 HHS System 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.



# 1. Health and Human Services

## The 84th Legislature Transformation

In 2013, the Health and Human Services System, as reflected in Article II of the General Appropriations Act, consisted of the following five agencies:

- **Health and Human Services Commission (HHSC)**. Includes providing leadership to all HHS agencies, administering programs previously administered by the Texas Department of Human Services and oversight of HHS agencies. Began services in 1991.
- **Department of Family and Protective Services (DFPS)**. Includes all programs previously administered by the Department of Protective and Regulatory Services. Began services on February 1, 2004.
- **Department of Assistive and Rehabilitative Services (DARS)**. Includes programs previously administered by the Texas Rehabilitation Commission, Commission for the Blind, Commission for the Deaf and Hard of Hearing and Interagency Council on Early Childhood Intervention. Began services on March 1, 2004.
- **Department of Aging and Disability Services (DADS)**. Includes intellectual and developmental disability and state supported living center programs previously administered by the Department of Mental Health and Mental Retardation, community care and nursing home services and long-term care regulatory programs of the Department of Human Services and aging services programs of the Texas Department of Aging. Began services on September 1, 2004.
- **Department of State Health Services (DSHS)**. Includes programs previously administered by the Texas Department of Health, the Texas Commission on Alcohol and Drug Abuse, the Health Care Information Council and mental-health community services and state hospital programs from the Department of Mental Health and Mental Retardation. Began services on September 1, 2004.

That same year, the Sunset Commission began its almost two-year analysis, the first formal review of the previous consolidation. The findings and recommendations of the Sunset review formed the basis for the 84th Texas Legislature (Regular Session, 2015) directive to transform the HHS system. With the passage of that legislation, HHS was given an opportunity to develop a more fully streamlined, efficient system that more effectively provides services and benefits. Senate Bill 200 outlined a phased approach to this restructuring.

The first phase transferred the following programs and functions to HHSC on September 1, 2016:

- select functions at DARS,
- client services at DADS and DSHS, and
- administrative services that support those respective HHS core services.

As a result of this transfer and the transfer of other programs to the Texas Workforce Commission (TWC), DARS was abolished on September 1, 2016. Additionally, the Nurse Family Partnership and Texas Home Visiting programs transferred from HHSC to the DFPS, which continued its focus on protective services.

In the second phase, regulatory programs, as well as state supported living centers and state hospitals, transferred to HHSC on September 1, 2017, and DADS was abolished. After these transfers, DSHS' streamlined structure focused on its core public health functions.

## **The 85th Legislature Transformation**

The 85<sup>th</sup> Legislature (Regular Session, 2017) passed House Bill 5, which made DFPS a stand-alone agency, removing it from the HHS System.

## **HHS Mission**

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

## **HHS Vision**

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

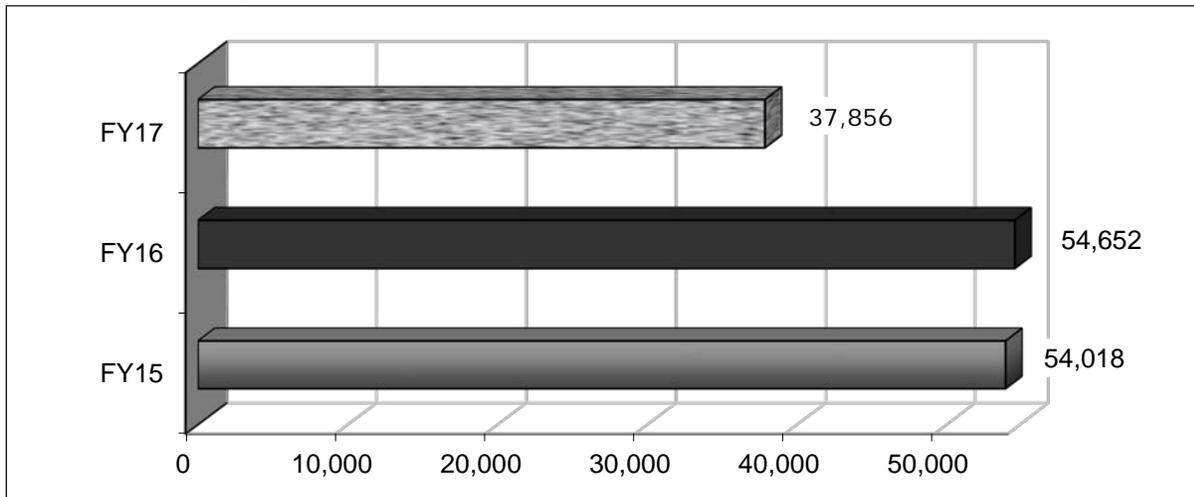
## **HHS Values**

- **Accountability.** We operate in a manner that reflects honesty, integrity and reliability.
- **Collaboration.** We work with clients, stakeholders, public and private partners, elected officials and our employees to make informed decisions and achieve excellence in service design and delivery.
- **Client-focused.** We exist because people have needs, and we respect each and every person.
- **Independence.** Our services and supports allow clients to reach their full potential.
- **Stewardship.** We are focused on the appropriate use of resources entrusted to our care and use them efficiently, effectively and in a manner that builds public trust.
- **Transparency.** We build confidence in our operations by being open, inclusive and holding ourselves accountable.
- **Diversity.** We offer programs and services that value and respect the diversity of the State of Texas.

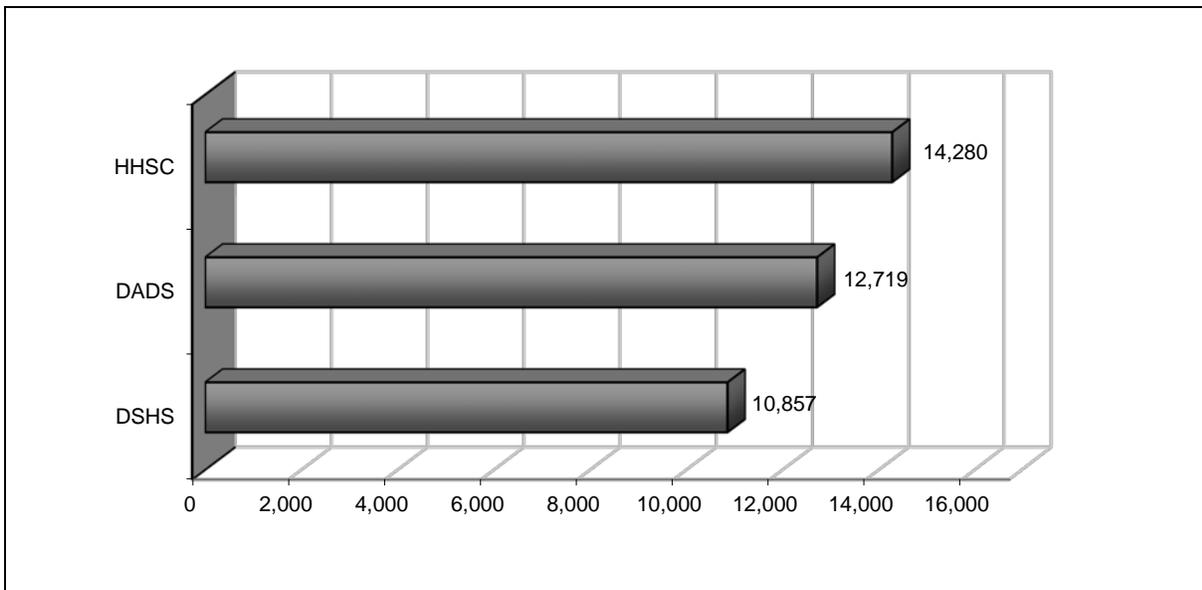
## 2. Workforce Demographics

With a total of 37,856 full-time and part-time employees, the HHS workforce has decreased by about 30 percent (16,160 employees) in the period from August 31, 2015 to August 31, 2017. This decrease in the HHS System workforce reflects the September 1, 2017 legislative removal of DFPS from the HHS System, a loss of over 13,000 full-time and part-time DFPS employees.<sup>1</sup>

**Figure 1: HHS System Workforce for FY 15 - FY 17**



**Figure 2: HHS System Workforce for FY 17**



## Job Families

Approximately 83 percent of HHS employees (31,282 employees) work in 22 job families.<sup>2</sup>

**Table 1: Largest Program Job Families**

Job Family	Number of Employees
Direct Care Workers <sup>3</sup>	8,523
Eligibility Workers <sup>4</sup>	5,276
Clerical Workers	3,735
Registered Nurses (RNs) <sup>5</sup>	2,059
Program Specialists	1,965
Managers	1,062
Licensed Vocational Nurses (LVNs)	982
Rehabilitation Technicians	982
Food Service Workers <sup>6</sup>	927
Program Supervisors	781
System Analysts	745
Custodians	686
Maintenance Workers	577
Security Workers	391
Claims Examiners	387
Directors	371
Investigators	335
Public Health and Prevention Specialists	335
Accountants	312
Training Specialists	289
Inspectors	282
Contract Specialists	280

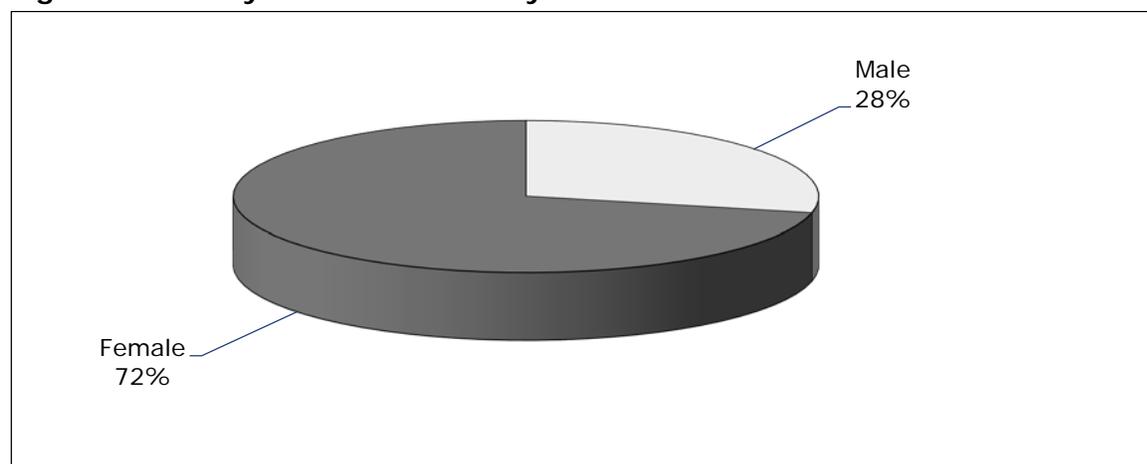
## Gender

Most HHS employees are female, making up about 72 percent of the HHS workforce.<sup>7</sup> This breakdown is consistent across all HHS agencies.<sup>8</sup>

**Table 2: HHS System Workforce Gender for FY 15 – FY 17**

Gender	FY 15	FY 16	FY 17
Male	24.9%	25.2%	28.5%
Female	75.1%	74.8%	71.5%

**Figure 3: HHS System Workforce by Gender for FY 17**



**Table 3: HHS Agencies by Gender**

Agency	Percentage Male	Percentage Female
HHSC	23.5%	76.5%
DSHS	36.1%	63.9%
DADS	27.5%	72.5%

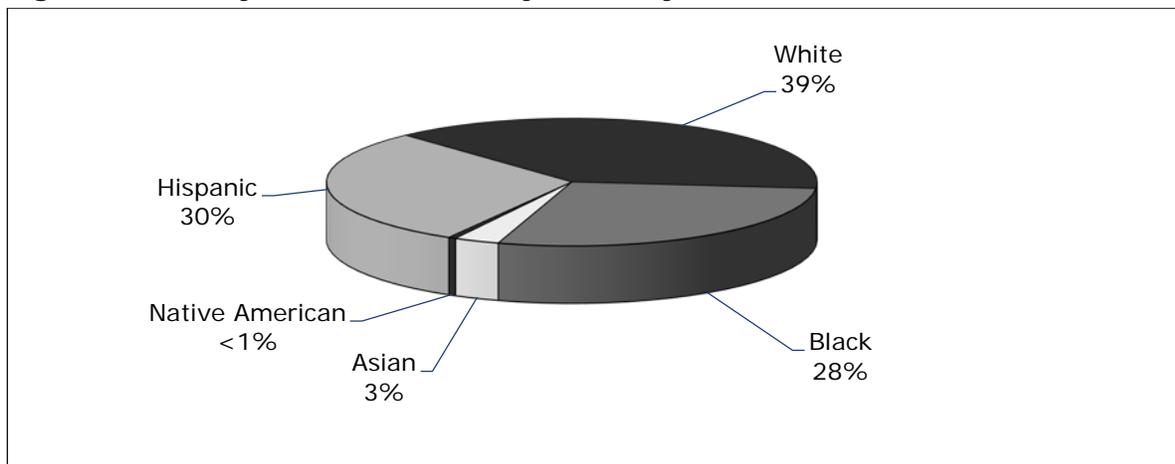
## Ethnicity

The workforce is diverse, with approximately 39 percent White, 30 percent Hispanic, 28 percent Black, and three percent Asian and Native American. This breakdown is consistent across all HHS agencies.<sup>9</sup>

**Table 4: HHS System Workforce Ethnicity for FY 15 – FY 17<sup>10</sup>**

Race	FY 15	FY 16	FY 17
White	39.4%	38.7%	38.5%
Black	28.1%	28.5%	28.2%
Hispanic	29.6%	29.8%	29.8%
Native American	.5%	.5%	.5%
Asian	2.3%	2.5%	3.0%

**Figure 4: HHS System Workforce by Ethnicity for FY 17**



**Table 5: HHS Agencies by Ethnicity<sup>11</sup>**

Agency	Percentage White	Percentage Black	Percentage Hispanic	Percentage Native American	Percentage Asian
HHSC	34.5%	25.7%	36.7%	.5%	2.6%
DSHS	47.6%	19.5%	29.0%	.6%	3.4%
DADS	35.4%	38.5%	22.7%	.4%	3.1%

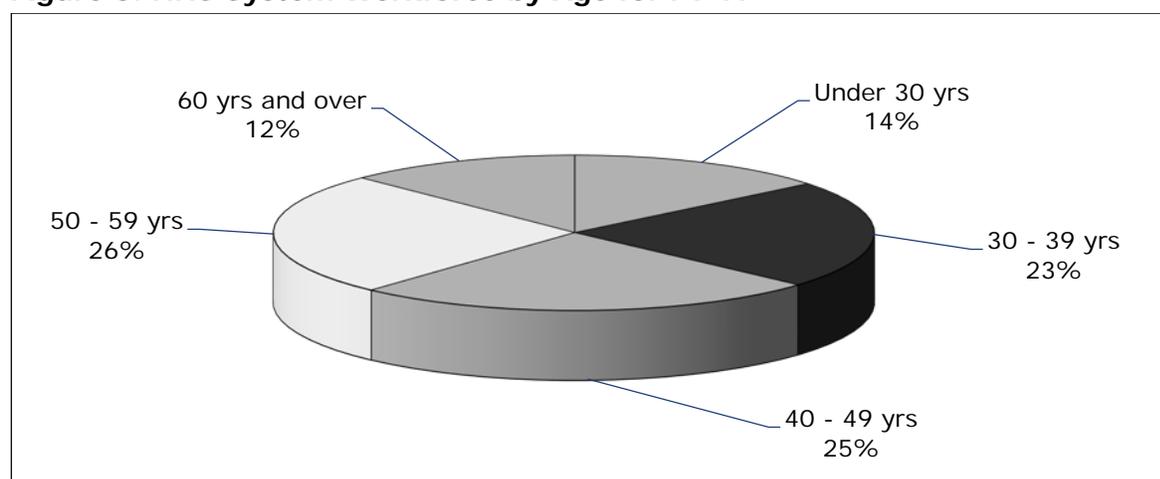
## Age

The average age of an HHS worker is 45 years. This breakdown is consistent across all HHS agencies.<sup>12</sup>

**Table 6: HHS System Workforce Age for FY 15 – FY 17**

Age	FY 15	FY 16	FY 17
Under 30	16.4%	16.6%	14.1%
30-39	23.9%	24.6%	22.6%
40-49	25.1%	23.0%	25.0%
50-59	24.1%	23.5%	25.7%
Over 60	10.4%	10.4%	12.5%

**Figure 5: HHS System Workforce by Age for FY 17**



**Table 7: HHS Agencies by Age<sup>13</sup>**

Agency	Percentage Under 30	Percentage 30-39	Percentage 40-49	Percentage 50-59	Percentage 60 and over
HHSC	7.6%	23.6%	30.0%	27.4%	11.4%
DSHS	15.5%	21.6%	22.6%	26.1%	14.3%
DADS	20.2%	22.5%	21.5%	23.5%	12.3%

## 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 2017 indicated potential underutilization in the HHSC, DADS and DSHS workforce. The following table summarizes the results of the utilization analysis for the HHS System.

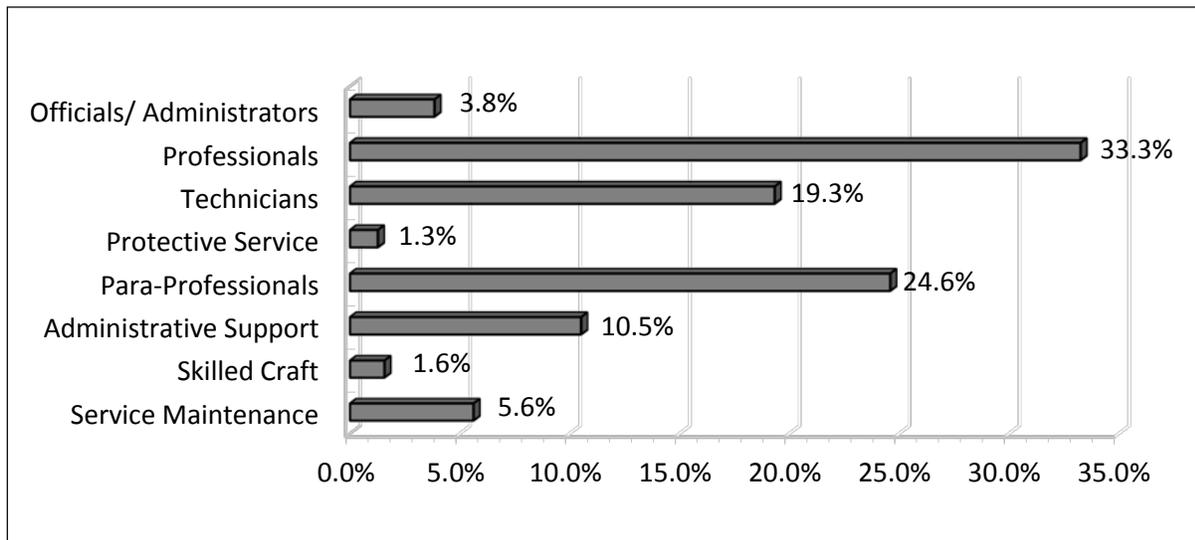
**Table 8: HHS System Utilization Analysis Results<sup>14 15 16</sup>**

Job Category	HHS System		Agency	
	HHSC	DSHS	DADS	DSHS
<b>Officials/Administrators</b>	No	No	Hispanic	No
<b>Professionals</b>	No	No	No	No
<b>Technicians</b>	No	No	N/A	No
<b>Protective Service</b>	Hispanic	Hispanic	No	Hispanic
<b>Administrative Support</b>	No	No	Hispanic	No
<b>Skilled Craft</b>	Black Hispanic Female	Female	Black Hispanic Female	Black Hispanic Female
<b>Service Maintenance</b>	Hispanic	Hispanic Female	Hispanic	Hispanic

Although potential underutilization was identified in the Protective Service and Skilled Craft job categories, it should be noted that these job categories comprise only 1.3 and 1.6 percent respectively, of the HHS workforce.

The other job categories showing potential underutilization are Officials/Administrators, Administrative Support, and Service Maintenance.

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



## Veterans

About six percent of the workforce (2,248 employees) are veterans. HHSC has the lowest percentage of veterans at 4.9 percent (624 employees) and DSHS has the highest at 6.9 percent (754 employees). For fiscal years 2015 through 2017, the percentage of veterans in the HHS workforce remained constant at 5.9 percent.<sup>17</sup>

**Table 9: HHS System Workforce by Veterans Status<sup>18</sup>**

Agency	Number of Veterans	FY 17 Percentage
HHSC	624	4.9%
DSHS	754	6.9%
DADS	870	6.1%
HHS System	2,248	5.9%

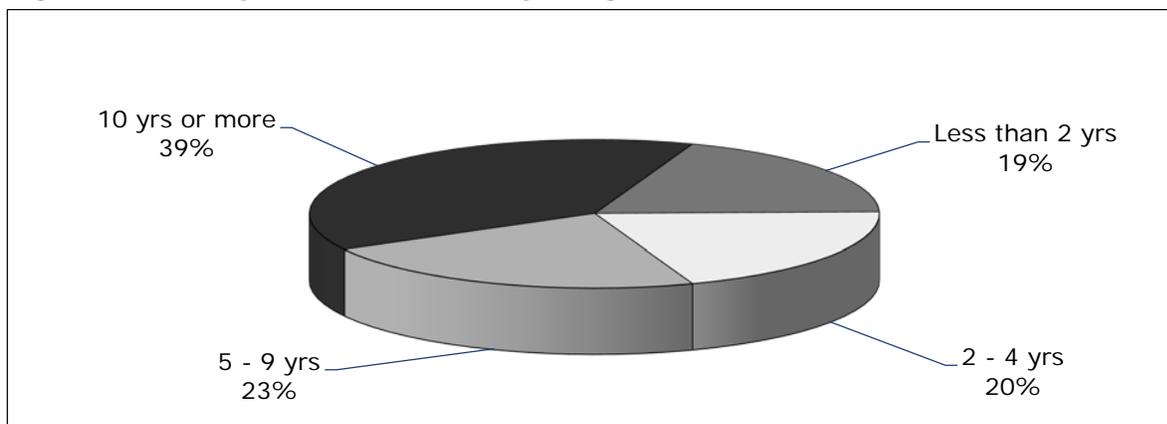
## State Service

Approximately 39 percent of the workforce has 10 or more years of state service. Less than a quarter of the workforce have been with the state for less than two years. This breakdown is consistent across all HHS agencies.<sup>19</sup>

**Table 10: HHS System Workforce Length of State Service for FY 15 – FY 17<sup>20</sup>**

State Service	FY 15	FY 16	FY 17
less than 2 years	21.1%	22.3%	19.1%
2-4 years	17.9%	19.4%	19.8%
5-9 years	22.5%	26.8%	22.5%
10 years or more	37.5%	36.6%	38.6%

**Figure 7: HHS System Workforce by Length of State Service<sup>21</sup>**



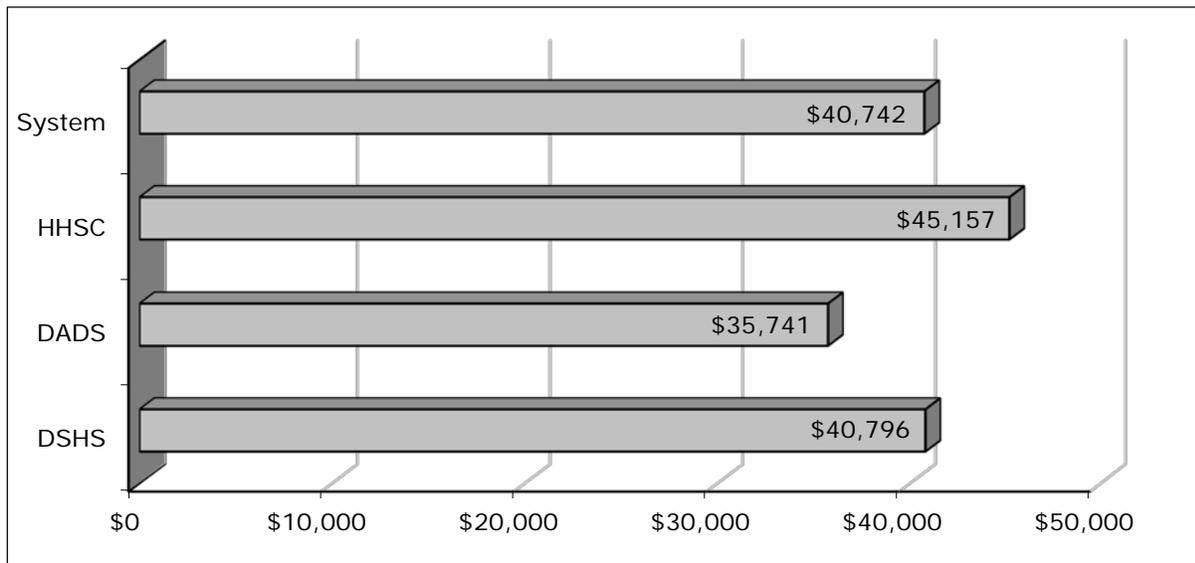
**Table 11: HHS Agencies by Length of State Service<sup>22</sup>**

Agency	Percentage Less than 2 yrs	Percentage 2-4 yrs	Percentage 5-9 yrs	Percentage 10 yrs or more
HHSC	13.4%	17.5%	23.8%	45.4%
DSHS	20.0%	21.3%	19.7%	38.9%
DADS	24.9%	21.1%	23.3%	30.7%

## Average Annual Employee Salary

On average, the annual salary for an HHS System employee is \$40,742. HHSC has the highest average annual salary at \$45,157 and DADS has the lowest at \$35,741.<sup>23</sup>

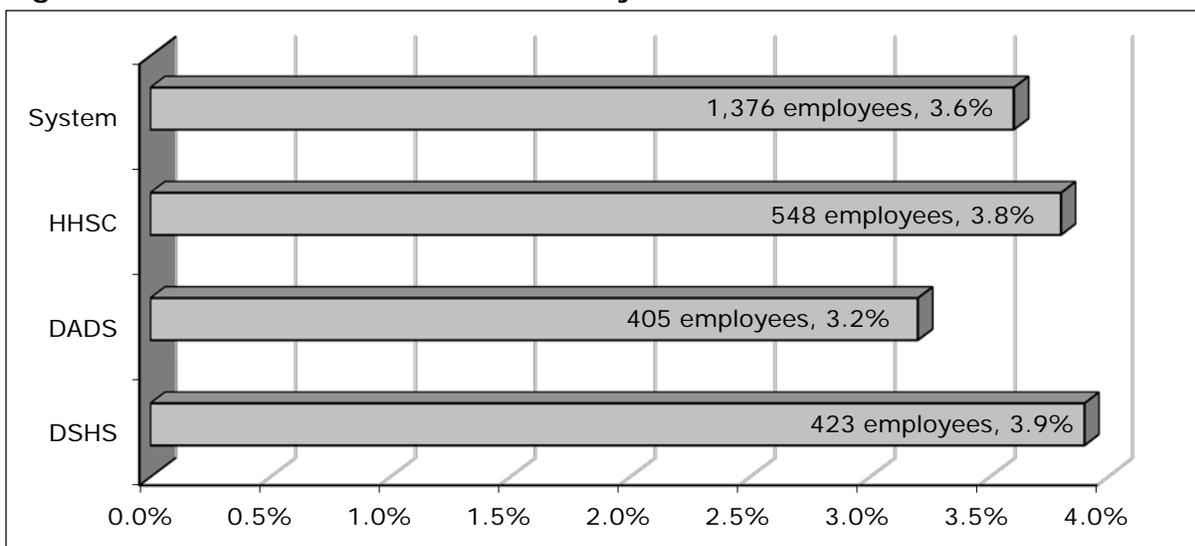
**Figure 8: HHS Average Annual Salary by Agency**



## Return-to-Work Retirees

HHS agencies routinely 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 four percent of the total HHS workforce.<sup>24</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 this 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 these 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 that HHS considers and documents the selection of retirees, the System has adopted a requirement that before offering a supervisory position to a retiree, the hiring authority must consult with HHS Human Resources before extending an offer of employment.

### 3. Turnover

The HHS System turnover rate for fiscal year 2017 was 24.9 percent, about six percent higher than the statewide turnover rate of 18.6 percent.<sup>25 26</sup>

**Table 12: HHS System Workforce - Turnover for FY 15 – FY 17 (excludes inter-HHS agency transfers)**

Agency	FY 15	FY 16	FY 17
HHS System	23.3%	23.7%	24.9%

DADS experienced the highest turnover rate (33.9 percent), with the lowest turnover rate at HHSC (18.1 percent).<sup>27</sup>

**Table 13: Turnover by HHS Agency for FY 17 (includes inter-HHS agency transfers and excludes legislatively mandated transfers)**

Agency	Average Annual Headcount	Total Separations	Turnover Rate
HHSC	15,810	2,860	18.1%
DSHS	11,781	2,716	23.1%
DADS	14,405	4,879	33.9%
<b>Grand Total</b>	<b>41,996</b>	<b>10,455</b>	<b>24.9%</b>

Turnover at HHS agencies was consistent across gender, while turnover across ethnic groups ranged from a high of 38.7 percent for Native American employees to a low of 23.4 percent for White employees.<sup>28</sup>

**Table 14: HHS Agency Turnover by Gender for FY 17 (includes inter-HHS agency transfers and excludes legislatively mandated transfers)**

Agency	Gender	Average Annual Headcount	Total Separations	Turnover Rate
HHSC	Female	12,154	2,246	18.5%
	Male	3,645	614	16.8%
DSHS	Female	7,512	1,690	22.5%
	Male	4,251	1,026	24.1%
DADS	Female	10,421	3,490	33.5%
	Male	3,975	1,389	34.9%
HHS System	Female	<b>30,087</b>	<b>7,426</b>	<b>24.7%</b>
	Male	<b>11,871</b>	<b>3,029</b>	<b>25.5%</b>

**Table 15: HHS Agency Turnover by Ethnicity for FY 17 (includes inter-HHS agency transfers and excludes legislatively mandated transfers)**

Agency	White Turnover Rate	Black Turnover Rate	Hispanic Turnover Rate	Native American Turnover Rate	Asian Turnover Rate
HHSC	17.4%	21.2%	16.8%	34.0%	12.3%
DSHS	23.0%	24.4%	23.3%	31.7%	14.4%
DADS	30.4%	36.8%	35.4%	53.8%	23.9%
HHS System	<b>23.4%</b>	<b>29.0%</b>	<b>23.5%</b>	<b>38.7%</b>	<b>17.1%</b>

Of the total losses during fiscal year 2017, approximately 76 percent were voluntary separations and 24 percent were involuntary separations.<sup>29 30</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>31</sup>

**Table 16: Reason for Separation**

Type of Separation	Reason	Separations	Percentage <sup>32</sup>
<b>Voluntary</b>	Personal reasons	6,099	56.5%
	Transfer to another agency	930	8.6%
	Retirement	1,153	10.7%
<b>Involuntary</b>	Termination at Will	30	.3%
	Resignation in Lieu	206	1.9%
	Dismissal for Cause	2,321	21.5%
	Reduction in Force	6	.1%

Certain job families have significantly higher turnover than other occupational series, including medical technicians at 46.2 percent, direct care workers<sup>33</sup> at 43.6 percent, licensed vocational nurses (LVNs) at 29.0 percent, food service workers<sup>34</sup> at 28.6 percent, and social workers at 27.2 percent.<sup>35</sup>

**Table 17: FY 17 Turnover for Significant Job Families<sup>36</sup>**

<b>Job Title</b>	<b>Average Annual Headcount</b>	<b>Separations</b>	<b>Turnover Rate</b>
Medical Technicians	26	12	46.2%
Direct Care Workers <sup>37</sup>	9,968	4,343	43.6%
Licensed Vocational Nurses (LVNs)	1,086	315	29.0%
Food Service Workers <sup>38</sup>	1,007	288	28.6%
Social Workers	209	57	27.2%
Epidemiologists	95	24	25.3%
Social Services Surveyors	60	15	25.0%
Psychologists	242	60	24.8%
Registered Nurses (RNs) <sup>39</sup>	2,232	537	24.1%
Eligibility Workers <sup>40</sup>	6,070	1,384	22.8%
Medical Technologists	71	15	21.3%
Facility Investigator Specialists <sup>41</sup>	163	34	20.9%
Nurse Practitioners <sup>42</sup>	46	9	19.6%
CCL and RCCL Specialists <sup>43</sup>	422	82	19.4%
Eligibility Clerks <sup>44</sup>	1,360	258	19.0%
Physicians	89	16	18.0%
Registered Therapists <sup>45</sup>	231	36	15.6%
Inspectors <sup>46</sup>	148	23	15.5%
Public Health and Prevention Specialists	357	52	14.6%
Eligibility Supervisors <sup>47</sup>	537	73	13.6%
Microbiologists <sup>48</sup>	137	15	11.0%
Laboratory Technicians	53	5	9.4%
Psychiatrists	130	11	8.5%
Chemists	59	5	8.5%
Sanitarians	127	10	7.9%
Health Physicists	66	4	6.1%
Dentists	18	1	5.6%

## 4. Retirement Projections

Currently, about 13 percent of the HHS workforce is eligible to retire and leave state employment. About 2.5 percent of the eligible employees retire each fiscal year. If this trend continues, approximately 12.5 percent of the current workforce is expected to retire in the next five years.<sup>49</sup>

**Table 18: HHS System Retirements - Percent of Workforce (FY 13 – FY 17)**

Fiscal Year	Retirement Losses	Retirement Turnover Rate
2013	1,444	2.6%
2014	1,390	2.4%
2015	1,396	2.4%
2016	1,469	2.6%
2017	989	2.4%

**Table 19: HHS System First-Time Retirement Eligible Projection (FY 17 – FY 22)**

Agency	FY 17		FY 18		FY 19		FY 20		FY 21		FY 22	
HHSC	354	2.5%	464	3.2%	514	3.6%	561	3.9%	546	3.8%	592	4.1%
DADS	237	1.9%	289	2.3%	285	2.2%	355	2.8%	372	2.9%	404	3.2%
DSHS	258	2.4%	364	3.4%	331	3.0%	380	3.5%	369	3.4%	380	3.5%
<b>Grand Total</b>	<b>849</b>	<b>2.2%</b>	<b>1,117</b>	<b>3.0%</b>	<b>1,130</b>	<b>3.0%</b>	<b>1,296</b>	<b>3.4%</b>	<b>1,287</b>	<b>3.4%</b>	<b>1,376</b>	<b>3.6%</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.



## 5. 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.

## 6. Environmental Assessment

### The Texas Economy

In 2011, the Texas economy emerged from the worldwide recession. Pre-recession Texas employment peaked at 10,639,900 jobs in 2008, a level that was surpassed by November of 2011. By January 2016, Texas added an additional 1,322,600 jobs.<sup>50</sup>

Texas added jobs at a 2.4 percent rate in 2017, ranking number four in the nation after falling below the national average in 2015 and 2016. The Federal Reserve Bank of Dallas forecasts 2018 Texas job growth of 2.8 percent. This continued economic recovery could have a profound impact on the recruitment and retention challenges facing HHS.<sup>51</sup>

### 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 2017 according to household/family size as follows:

- \$24,600 or less for a family of four;
- \$20,420 or less for a family of three;
- \$16,240 or less for a family of two; and
- \$12,060 or less for individuals.<sup>52</sup>

It is estimated that 15.6 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 12.7 percent.<sup>53</sup>

### Unemployment

Another factor that directly impacts the demand for HHS System services is unemployment. In Texas, the August 2017 statewide unemployment rate was 4.0 percent, below the national rate of 4.4 percent.<sup>54</sup>

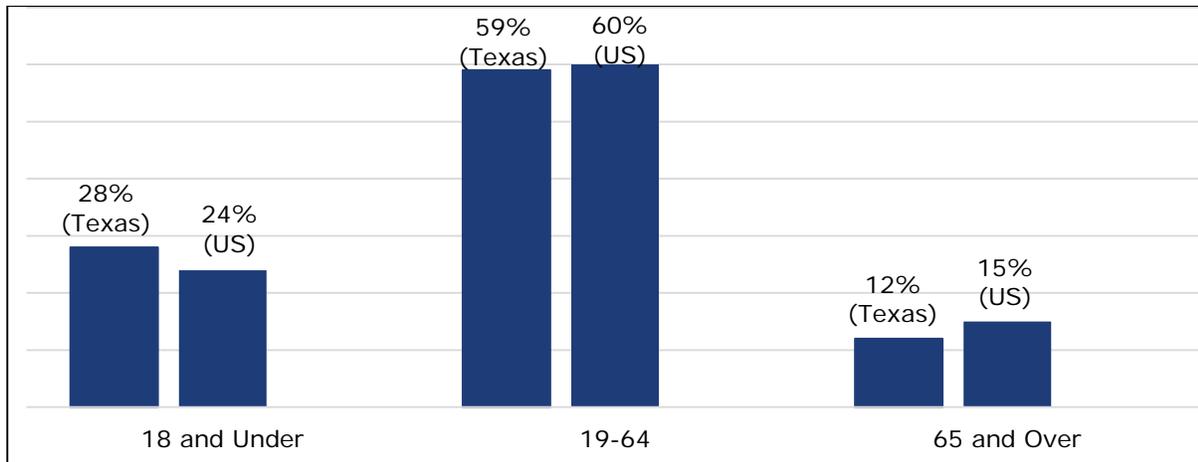
### Other Significant Factors

With over 28 million residents, Texas is one of the faster growing states in the nation. In just one period, April 1, 2010 to July 1, 2017, the population of Texas

increased by more than three million, a 12.6 percent increase.<sup>55</sup> The Texas population is expected to continue to increase. By 2020, the Texas population is expected to reach over 30 million residents.<sup>56</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 (28 percent) and those 65 and over (12 percent).<sup>57</sup>

**Figure 10: Population Distribution by Age**



Long term population projections by the Texas State Data Center estimate that by 2050, the number of persons older than age 65 will triple in size (from 2010-2050), approaching 7.9 million.<sup>58</sup> This projected aging of the Texas labor force may have a major impact on growth of the labor force by dramatically lowering the overall labor force participation rate.

## 7. 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, epidemiologists, sanitarians, health physicists, public health and prevention specialists, medical technicians and laboratory staff. Additionally, 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, facility investigator specialists, inspectors, social services surveyors, direct care workers (direct support professionals and psychiatric nursing assistants) and food service workers.

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

There are about 8,523 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 \$12.55.<sup>59</sup>

The overall turnover rate for employees in this group is very high, at about 44 percent annually.<sup>60</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 5,697 direct support professionals in state supported living centers across Texas, representing approximately 15 percent of the System's total workforce.<sup>61</sup> These employees provide 24-hour direct care to over 4,000 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>62</sup>

Turnover for direct support professionals is very high, at about 48 percent. This is one of the highest turnover rates of any job category in the System, reflecting the loss of about 3,296 workers during fiscal year 2017. Within this job family, entry-level Direct Support Professional Is experienced the highest turnover at approximately 60 percent. Turnover rates by location ranged from 30 percent at Richmond State Supported Living Center to 63 percent at the San Angelo State Supported Living Center.<sup>63</sup>

The average hourly salary rate for these employees is \$12.56 per hour.<sup>64</sup> The State Auditor's Office 2016 market index analysis found the average state salary for Direct Support Professional I and IIs to range from two to seven percent behind the market rate.<sup>65</sup>

## **Psychiatric Nursing Assistants**

There are approximately 2,826 psychiatric nursing assistants employed in HHS state hospitals.<sup>66</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 \$12.54 per hour. The State Auditor's Office 2016 market index analysis found the average state salary for a Psychiatric Nursing Assistant I was seven percent behind the market rate.<sup>67 68</sup>

The average psychiatric nursing assistant is about 38 years old and has an average of seven years of state service.<sup>69</sup>

Turnover for psychiatric nursing assistants is very high at about 33 percent, reflecting the loss of 1,047 workers during fiscal year 2017. Within this job family, entry-level Psychiatric Nursing Assistant Is experienced the highest turnover at 44 percent. Turnover rates by location ranged from 20 percent at Terrell State Hospital to nearly 50 percent at the Big Spring State Hospital.<sup>70</sup>

HHS is currently experiencing difficulty filling vacant psychiatric nursing assistant positions. Vacant positions are going unfilled for many months. Positions at the Terrell State Hospital and Austin State Hospital are remaining vacant, on average, for about five months.<sup>71</sup>

HHS is developing an as needed staffing pool 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 927 food service workers.<sup>72</sup>

The physical requirements are 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. Turnover in food service worker positions is high, at 29 percent during fiscal year 2017.<sup>73</sup> The State Auditor's Office 2016 market index analysis found the average state salary for Cook IIs to be three percent behind the market rate, and food service managers ranged from zero to nine percent behind the market rate.<sup>74</sup>

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

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

There are 595 food service workers employed in HHS state supported living centers throughout Texas.<sup>75</sup>

The typical food service worker is about 45 years of age and has an average of approximately 10 years of state service.<sup>76</sup>

Turnover in these food service worker positions is very high, at 31 percent. Turnover is at nearly 50 percent at the El Paso State Supported Living Center.<sup>77</sup>

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

There are 332 food service workers employed at HHS state hospitals and centers throughout Texas.<sup>78</sup>

The typical food service worker is about 44 years of age and has an average of about eight years of state service.<sup>79</sup>

Turnover in these food service worker positions is high, at 24 percent. Turnover was nearly 45 percent at the Kerrville State Hospital.

### **Eligibility Services Staff**

Across the state, there are about 7,487 employees supporting eligibility determinations within the System, accounting for about 20 percent of the HHS System workforce.<sup>80</sup>

The majority of these individuals (6,996 employees or 93 percent) are employed as Texas works advisors, medical eligibility specialists, hospital based workers, eligibility clerks and eligibility supervisors.<sup>81</sup>

Overall turnover for Eligibility Services Staff is higher than the state average rate (at about 21 percent), with medical eligibility specialists experiencing the highest turnover at 25 percent, followed by Texas works advisors at 23 percent and eligibility clerks at 19 percent.<sup>82 83</sup>

### **Texas Works Advisors**

There are over 4,300 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 43 years of age and has an average of about eight years of service.<sup>84</sup>

Turnover for these employees is high at about 23 percent, representing a loss of 1,155 workers in fiscal year 2017. Certain regions of Texas experienced higher turnover than others, including the Metroplex at 31 percent and Upper South Texas at 31 percent. Entry-level Texas Works Advisor Is experienced the highest turnover at 49 percent.<sup>85</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 three months, with vacant positions in Southeast Texas remaining unfilled for an average of a little more than four months.<sup>86</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 649 medical eligibility specialists determining financial eligibility for Medicaid for Elderly and People with Disabilities (MEPD). Medical eligibility specialists have, on average, about nine years of state service, with an average age of 43.<sup>87</sup>

Turnover for these employees is high at about 25 percent, representing the loss of 184 employees in fiscal year 2017. Entry-level Medical Eligibility Specialist Is experienced the highest turnover, at 48 percent.<sup>88</sup>

Retention of these specialists is an ongoing challenge.

### **Hospital Based Workers**

HHS has about 270 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 14 years of state service (about 59 percent of these employees have 10 or more years of state service), with an average age of 46.<sup>89</sup>

Turnover for these employees is currently below the state average (of 18.6 percent) at about 15 percent.<sup>90 91</sup>

### **Eligibility Clerks**

HHS employs about 1,223 eligibility clerks in various clerical, administrative assistant and customer service representative positions. The typical eligibility clerk is 47 years of age and has an average of 11 years of state service.<sup>92</sup>

The turnover rate for eligibility clerks is high at about 19 percent, representing the loss of about 258 employees (a one percent higher rate than reported for fiscal year 2015).<sup>93 94</sup> Eligibility Specialist Clerk IIIs made up the majority of these losses at about 73 percent, with these positions often remaining unfilled for an average of five months.<sup>95 96</sup>

Recruitment and retention for these jobs are ongoing challenges.

## **Eligibility Supervisors**

Approximately 500 eligibility supervisors are employed within HHS. These highly-tenured supervisors have an average of 18 years of state service (75 percent of these employees have 10 or more years of state service), with an average age of 48.<sup>97</sup>

Though turnover for these employees is well managed at about 14 percent, this represents a four percent higher turnover rate than reported for fiscal year 2015).<sup>98</sup> Within the next five years, nearly half of these employees will be eligible to retire.<sup>99</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 396 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>100</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 38 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>101 102</sup>

CCL and RCCL specialist turnover is high at 19 percent.<sup>103</sup>

Retention of these employees is an ongoing challenge.

## **Facility Investigator Specialists**

There are 147 facility investigator specialists employed within the System who 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. Provider investigations are completed in accordance with Texas Administrative Code and Provider Investigations policy.

The typical specialist is 38 years of age and has an average of seven years of state service. Over half of these employees have less than five years of state service.<sup>104 105</sup>

Turnover for facility investigator specialists is high at about 21 percent, reflecting the loss of 34 specialists during fiscal year 2017.<sup>106</sup>

Retention of these employees is an ongoing challenge.

## **Social Services Surveyors**

There are 56 social services surveyors employed with HHS.<sup>107</sup> HHS social services surveyors 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.

On average, HHS social services surveyors are 45 years old and have about nine years of state service. About 32 percent of these employees have 10 or more years of state service.<sup>108</sup>

The turnover rate for HHS social services surveyors is currently high at 25 percent.<sup>109</sup>

In addition, 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.<sup>110 111</sup>

In addition, HHS may face significant recruitment challenges in the next few years to replace these skilled tenured employees who are eligible for retirement. Though only 13 percent of these employees are currently eligible to retire, this rate will increase in the next five years to nearly 30 percent.<sup>112</sup>

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

## **Social Workers**

There are 187 social workers employed by HHS, with the majority (99 percent) housed in state supported living centers and state hospitals across the state.<sup>113</sup>

Turnover for these social workers is high at 27 percent.<sup>114</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 \$44,024.<sup>115</sup> This salary falls significantly below the market rate. The average annual salary for social workers nationally is \$55,510 and \$57,950 in Texas.<sup>116</sup> The State Auditor's

Office 2016 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.<sup>117</sup>

These problems are expected to worsen as employees approach retirement. While 13 percent of these employees are currently eligible to retire, this number increases to nearly 23 percent in the next five years.<sup>118</sup>

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

About 18 percent of HHS social workers (33 employees) work at state supported living centers across the state.<sup>119</sup> These employees serve as a liaison between the resident, 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 10 years of state service.<sup>120</sup>

The average turnover rate for these social workers is higher than the state average of 18 percent (at 35 percent), and positions often remaining unfilled for an average of eight months before being filled.<sup>121 122</sup>

### **Social Workers at State Hospitals**

There are 153 social workers at HHS state hospitals.<sup>123</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 42 years old and have an average of 9 years of state service.<sup>124</sup>

The overall turnover rate for these social workers is high at around 25 percent, with the Austin State Hospital and the Waco Center for Youth experiencing turnover of more than 35 percent.<sup>125</sup>

## Registered Therapists at State Supported Living Centers

HHS employs 213 registered therapists in state supported living centers across Texas.<sup>126</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 eight years of state service, with an average age of 46.<sup>127</sup>

Though turnover for these registered therapists is below the state average at 16 percent, HHS is experiencing difficulty filling vacant positions. Positions at the Denton and San Antonio State Supported Living Centers remain unfilled for nearly one year.<sup>128 129 130</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 11 percent of these employees are currently eligible to retire, and approximately 20 percent of them will be eligible in the next five years.<sup>131</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 2.9 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 438,100 new RN jobs by 2026.<sup>132 133 134</sup>

The supply of nurses in Texas is still low in comparison to national numbers. The numbers of RNs per 100,000 population in Texas are below the U.S. average; LVNs are the exception in Texas, with a larger ratio of providers to population than the national ratio. It is projected that, in coming years, increased demand for health care services due to the full implementation of the Patient Protection and Affordable Care Act (PPACA) in 2014 (Holahan, Buettgens, Carroll, & Dorn, 2012), an aging population, and an increase in the prevalence of chronic disease will all contribute to the need to grow the nursing workforce.<sup>135</sup> The Texas nurse-to-population ratio is below the national average of 921 nurses per 100,000 people, with the state ratio being only 796 nurses per 100,000 people.<sup>136 137</sup>

Although there are 118 nursing school programs across the state, most of them have more applicants than room for new students.<sup>138</sup>

The lack of budgeted faculty positions, the lack of qualified applicants for budgeted faculty positions, and limited classroom space impact both the number of accepted students and the number of available classes offered.

HHS employs approximately 2,059 RNs across the state, in state supported living centers, state hospitals, and in the DSHS Regional and Local Health Operations.<sup>139 140</sup> As the demand for nursing services increases and the supply decreases, the recruitment and retention of nurses becomes more difficult and the need for competitive salaries will become more critical.

Currently, the average annual salary for HHS System RNs is \$59,940.<sup>141</sup> This salary falls below both national and state averages for these occupations. Nationally, the average annual earnings for RNs in 2016 was \$72,180.<sup>142</sup> In Texas, the average annual earnings for RNs in 2016 was \$70,390.<sup>143</sup> In addition, the State Auditor's Office 2016 market index analysis found the average state salary for Nurse I-IVs ranged from two to 16 percent behind the market rate and one percent behind the market rate for Public Health Nurse Is.<sup>144</sup> Posted vacant positions are currently taking about five months to fill.

Although, targeted pay increases (as approved by the 84th Legislature) were awarded to selected RN classifications in localities with the highest turnover rates, keeping pace with the salaries offered by the private sector remains a challenge. It is expected that recruitment and retention of nurses will continue to be a problem for the System, as the nursing workforce shortage continues and as a significant portion of System nurses approach retirement.

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

About 31 percent of System RNs (632 RNs) work at HHS state supported living centers across Texas.<sup>145</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>146</sup>

The turnover rate for these RNs is considered high at about 25 percent. Turnover is especially high at the Abilene State Supported Living Center (at 36 percent) and the El Paso State Supported Living Center (at 87 percent).<sup>147</sup>

In addition, HHS finds it difficult to fill these vacant nurse positions. At these facilities, there are always vacant nursing positions that need to be filled. With a high vacancy rate for these positions (at approximately 21 percent), RN positions often remain open for more than six months before being filled. Some facilities are experiencing even longer vacancy durations. At the Austin State Supported Living Center it takes about eight months to fill a position, while at the Corpus Christi State Supported Living Center, it takes nearly 10 months.<sup>148</sup> In order to provide

quality nursing care for residents, it is essential that HHS maintain the lowest vacancy rate.

### **RNs at State Hospitals**

About 39 percent of System RNs (805 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>149</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.

The typical RN at a System state hospital is about 48 years old and has an average of approximately 10 years of state service.<sup>150</sup>

The turnover rate for these RNs is considered high at about 26 percent. Turnover is especially high within the Texas Center for Infectious Disease (at 54 percent) and at El Paso Psychiatric Center (34 percent).<sup>151</sup>

At these state hospitals, there are always vacant nursing positions that need to be filled. These RN positions often remain open for about four months before being filled. Some hospitals are experiencing even longer vacancy durations. At the North Texas State Hospital and the El Paso Psychiatric Center, it takes nearly six months to fill a position.<sup>152</sup>

### **Public Health RNs**

About six percent of System RNs (119 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>153</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 eight years of state service, with an average age of about 50 years.<sup>154</sup>

Overall turnover for these RNs is about 21 percent. Certain areas of Texas experienced higher turnover than others, including those in Public Health Region 9/10 (El Paso area) at about 33 percent and Public Health Region 2/3 (Arlington area) at 32 percent.<sup>155</sup>

## **Nurse Surveyors**

There are 228 RNs employed as nurse surveyors (approximately 11 percent of System RNs). 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.<sup>156</sup>

In addition to being licensed to practice as an RN by the Texas Board of Nurse Examiners, these nurses must also obtain the Surveyor Minimum Qualification (SMQT) with the first year of employment. The typical nurse surveyor is about 53 years old with approximately seven years of state service.<sup>157</sup>

The turnover rate is considered high at about 23 percent, and it typically takes about four months to fill a vacant position. Recruitment and retention of these RNs remains difficult due to salary constraints. This situation is expected become more problematic over time, since nearly 30 percent of these highly skilled employees will be eligible to retire from state employment in the next five years.<sup>158</sup>

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

There are about 976 LVNs employed by HHS. The majority of these employees (about 99 percent) work at state hospitals and state supported living centers across Texas.<sup>159</sup>

About one 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 45 years old and has eight years of state service.<sup>160</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 29 percent.<sup>161</sup>

Currently, the average annual salary for System LVNs during fiscal year 2017 was \$39,189.60.<sup>162</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 \$44,840, and \$46,110 in Texas.<sup>163</sup> The State Auditor's Office 2016 market index analysis found the average state salary for LVN IIs and IIIs ranged from six to 11 percent behind the market rate.<sup>164</sup>

Although, targeted pay increases (as approved by the 84th Legislature) were awarded to selected LVN classifications in localities with the highest turnover rates, recruitment and retention remains a significant challenge.

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

There are 514 LVNs employed at HHS state supported living centers across Texas. These LVNs are, on average, 45 years old and have an average of approximately eight years of state service.<sup>165</sup>

Turnover for LVNs at state supported living centers is at about 30 percent. The state supported living centers experienced the loss of 166 LVNs in fiscal year 2017. Turnover is extremely high at the El Paso State Supported Living Center (at 84 percent) and the Corpus Christi State Supported Living Center (at 45 percent).<sup>166</sup>

With a very high vacancy rate of about 29 percent, vacant positions often go unfilled for over six months. Some centers are experiencing even longer vacancy durations. At the Denton, Mexia, and San Angelo state supported living centers it takes about eight months to fill a position.<sup>167</sup>

### **LVNs at State Hospitals**

There are approximately 454 LVNs employed at HHS state hospitals and centers across Texas.<sup>168</sup>

On average, a state hospital LVN is about 44 years old and has eight years of state service.<sup>169</sup>

Turnover for these LVNs is high at about 28 percent. Turnover is especially high at Rusk State Hospital (at 39 percent) and the San Antonio State Hospital (at 46 percent).<sup>170</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 one percent of System LVNs (eight LVNs) work in the Public Health Regions across Texas. They have, on average, about 10 years of state service, with an average age of about 49 years.<sup>171</sup> The overall turnover for these LVNs is high at 31 percent.<sup>172</sup> Retention is expected to remain an issue as employment of LVNs is projected to grow 12 percent by the year 2026, faster than the average for all occupations and budgetary limitations will continue to make it difficult for the System to offer competitive salaries.<sup>173</sup>

## **Nurse Practitioners**

HHS employs 44 nurse practitioners throughout the System. Under the supervision of a physician, 43 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>174</sup>

These highly skilled employees have, on average, about 10 years of state service, with an average age of 51. Over 40 percent of these employees have 10 years or more of state service.<sup>175</sup>

System nurse practitioners earn an average annual salary of \$111,471.60.<sup>176</sup> This salary falls slightly below the market rate. The State Auditor's Office 2016 market index analysis found the average state salary for nurse practitioners ranged from three to seven percent behind the market rate.<sup>177</sup>

The turnover rate for nurse practitioners is about 19 percent, and the vacancy rate is high at 24 percent, with positions remaining vacant for an average of about nine months.<sup>178 179</sup>

About 18 percent of nurse practitioners are currently eligible to retire, with this number increasing to 30 percent in the next five years. HHS will need to develop creative recruitment strategies to replace these highly skilled and tenured employees.<sup>180</sup>

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

HHS employs 14 nurse practitioners at state supported living centers across Texas.<sup>181</sup> These highly skilled employees have, on average, about six years of state service, with an average age of 53.<sup>182</sup>

The overall turnover rate for these nurse practitioners is high at about 34 percent.<sup>183</sup>

With a high vacancy rate of 22 percent, vacant positions at state supported living centers go unfilled for over four months before being filled.<sup>184</sup>

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

## **Nurse Practitioners at State Hospitals**

HHS employs 29 nurse practitioners at state hospitals across Texas. These highly skilled employees have, on average, about 12 years of state service, with an average age of 51.<sup>185</sup>

Though turnover for these state hospital employees is currently low at about 13 percent, positions are often remaining unfilled for months.<sup>186 187</sup>

About 21 percent of these highly skilled employees are currently eligible to retire. This number will increase to nearly 30 percent retirement eligibility in the next five years, making recruitment and retention for these jobs an ongoing challenge for the System.<sup>188</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 19 percent through 2026.<sup>189</sup>

The System employs a total of 29 dentists across the state.<sup>190</sup> Of the 29 dentists employed by the System, over half (59 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 11 years of state service.<sup>191</sup>

Although turnover for these dentists is only about six percent, the state supported living centers still 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 29 percent of these employees are currently eligible to retire, and this number will increase to about 47 percent in the next five years.<sup>192</sup>

## **Physicians**

There are currently about 372,400 active physicians and surgeons across the country. Due to the increased demand for healthcare services by the growing and aging population, employment of physicians is projected to grow about 13 percent by 2026, faster than the average for all occupations.<sup>193 194</sup>

HHS employs 87 physicians, with majority (90 percent) employed in HHS state supported living centers, state hospitals and in Public Health Regions.<sup>195</sup>

These highly skilled employees have, on average, about 10 years of state service, with an average age of 57. Over 30 percent of these employees have more than 10 years or more of state service.<sup>196</sup>

System physicians are currently earning an average annual salary of \$186,817.20.<sup>197</sup> This salary is below the average wage paid nationally (\$205,560) and also lower than the Texas average of \$207,750.<sup>198</sup> The State Auditor's Office 2016 market index analysis found the average state salary for Physician IIs to be 14 percent behind the market rate.<sup>199</sup>

Turnover for these physicians is at 18 percent. In addition, the vacancy rate is at 18 percent, with positions remaining vacant for an average of about nine months.<sup>200 201</sup>

About 28 percent of these highly skilled and tenured employees are currently eligible to retire, with this number increasing to 40 percent in the next five years.<sup>202</sup>

### **Physicians at State Supported Living Centers**

There are 38 physicians working at state supported living centers across Texas.<sup>203</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. 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 explaining the reason for the high average age.

Turnover for these physicians is at 18 percent.<sup>204</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 22 percent, positions are remaining unfilled for an average of eight months.<sup>205</sup>

### **Physicians at State Hospitals**

There are currently 30 physicians at HHS who are providing essential medical care in state hospitals.<sup>206</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 13 years of state service, with an average age of about 57. 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 11 full-time physicians are under 50 years of age.<sup>207</sup>

Turnover for these physicians is about 16 percent.<sup>208</sup>

With a vacancy rate of about 19 percent, it takes about 10 months to fill a state hospital physician position with someone who has appropriate skills and expertise.<sup>209</sup>

In addition, HHS may face significant challenges in the next few years to replace those employees who are eligible for retirement. About 37 percent of these highly skilled and tenured employees are currently eligible to retire. Within five years, about 47 percent will be eligible to retire. If these employees choose to retire, the 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.<sup>210</sup>

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

Compensation levels will need to be increased to effectively compete in a market where qualified applicants are in short supply and healthcare competitors offer a higher starting salary. The cost of obtaining clinical staff through a placement service or contract far exceeds the cost of hiring and retaining an agency physician. Attracting and keeping clinical staff that are trained in the use of HHS electronic equipment and clinical practices, as well as familiarity with the patient population, is more productive and cost-effective.

## **Physicians in Public Health Roles**

There are 10 HHS physicians performing public health services.<sup>211</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 52 years old, with an average of about 10 years of state service.<sup>212</sup>

Turnover for these positions is very high at about 40 percent.<sup>213</sup>

Currently, 30 percent of these physicians are eligible to retire, with the number employees eligible to retire increasing to 40 percent in the next five years. HHS will need to develop creative recruitment strategies to replace these highly skilled employees.<sup>214</sup>

## Psychiatrists

There are currently about 28,000 psychiatrists nationwide. Increased demand for healthcare services by the growing and aging population is expected to result in a 12 percent rate of growth by 2026.<sup>215</sup>

HHS employs 128 psychiatrists throughout the System, with the majority of these psychiatrists (about 84 percent) employed in state hospitals across Texas.<sup>216</sup> These highly skilled and tenured employees have, on average, about 12 years of state service, with an average age of 53.<sup>217</sup>

System psychiatrists currently earn an average annual salary of \$225,415.<sup>218</sup> The State Auditor's Office 2016 market index analysis found the average state salary for Psychiatrist IIs to be 10 percent behind the market rate.<sup>219</sup>

Turnover for System psychiatrists is currently at about nine percent. The vacancy rate is very high at about 19 percent, with positions remaining vacant for an average of about nine months.<sup>220 221</sup>

About 27 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>222</sup>

To address these difficulties, HHS may consider increasing entry-level salaries for psychiatrists and for currently employed psychiatrists in the upcoming fiscal years.

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

There are 19 psychiatrists assigned to state supported living centers and 16 are in senior-level Psychiatrist III positions. Full staffing of these positions is critical to providing psychiatric services needed by residents.<sup>223</sup>

These Psychiatrists IIIs have, on average, about eight years of state service, with an average age of 51.<sup>224</sup>

With a high vacancy rate of 20 percent, vacant positions in state supported living centers go unfilled for about one year (Mexico State Supported Living Center has a very high vacancy rate of 80 percent and positions go unfilled for about a year).<sup>225</sup> Many of the postings and advertisements for these vacant positions result in no responses from qualified applicants.

To deal with these recruitment and retention difficulties, HHS has often used contract psychiatrists to provide required coverage. These contracted psychiatrists are paid at rates that are 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 \$108 paid to System psychiatrists at state supported living centers).<sup>226</sup> Aside from being more costly, HHS has experienced other problems with contracted psychiatrists, including a lengthy learning curve, difficulty in obtaining long-term commitments, difficulty in obtaining coverage, dependability and inconsistency of services due to their short-term commitment.

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 107 System psychiatrists providing essential medical and psychiatric care in state hospitals.<sup>227</sup> Of these 107 psychiatrists, the Psychiatrist IIs and Psychiatrist IIIs have been identified as especially difficult to recruit and retain at the state hospitals. These highly skilled employees take the lead role in diagnosing, determining a course of treatment, prescribing medications and monitoring patient progress.

These psychiatrists have, on average, about 12 years of state service, with an average age of 53. About 51 percent of these employees have 10 or more years of service.<sup>228</sup>

Annual turnover for these psychiatrists is about 10 percent. Big Spring State Hospital reported the highest state hospital turnover rate of about 27 percent.<sup>229</sup> With an overall high vacancy rate of about 19 percent, most vacant psychiatrist positions go unfilled for months.<sup>230</sup> At some state hospitals, these positions remain vacant for over nine months (at the Terrell, Rio Grande, and North Texas state hospitals). These challenges are expected to continue, as about 27 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>231</sup>

State hospitals face increasing difficulty in recruiting qualified psychiatrists. This has resulted in excessively high workloads for the psychiatrists on staff, reducing the ability of state hospitals to function at full capacity, placing hospital accreditation at risk and increasing the average length of patients' stay.

To deal with these recruitment difficulties, the System has often used contract psychiatrists to provide required coverage. These contracted psychiatrists are paid at rates that are 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 \$107 paid to psychiatrists at state hospitals).<sup>232</sup> These contracted psychiatrists may not be immediately available in an emergency (increasing the risk to patients) and are unable to provide the individualized treatment that arises from daily contact with staff and patients. Consequently, the patient's length of stay increases and annual number of patients served decreases. Since medical records of patients are almost completely electronic, psychiatrists are required to be proficient at computer entry and documentation. It often takes many weeks to train a contract psychiatrist on the nuances of the electronic medical record system.

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 219 psychologists in HHS, with the majority (98 percent) employed in state supported living centers and state hospitals across the state.<sup>233</sup>

System psychologists earn an average annual salary of \$59,341.<sup>234</sup> This salary falls below the market rate. The State Auditor's Office 2016 market index analysis found the average state salary for Psychologist Is to be four percent behind the market rate and Psychologist IIs to be eight percent behind the market rate.<sup>235</sup>

Turnover for these psychologists is high at 25 percent, with psychologist positions often remaining unfilled for several months before being filled.<sup>236 237</sup>

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

About 76 percent of HHS psychologists (167 employees) work at state supported living centers across Texas. 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.<sup>238</sup>

The typical psychologist at these facilities is about 42 years old and has an average of eight years of state service.<sup>239</sup>

Turnover for these psychologists is high at about 28 percent, reflecting the loss of about 52 workers during fiscal year 2017. Turnover rates by location ranged from 11 percent at the Lufkin State Supported Living Center to 58 percent at the Austin State Supported Living Center.<sup>240</sup>

With a high vacancy rate for these positions (at approximately 19 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 six months.<sup>241</sup>

## **Psychologists at State Hospitals**

There are 47 psychologists working at HHS state hospitals, with about 62 percent employed in Psychologist II positions.<sup>242</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 10 years of state service, with an average age of 46.<sup>243</sup>

Turnover for these psychologists is high about 15 percent. Rusk State Hospital experienced the highest turnover at 44 percent.<sup>244</sup>

The vacancy rate for these positions is very high, at about 19 percent, with positions often remaining unfilled for over 10 months.<sup>245</sup>

HHS may face significant recruitment challenges in the next few years, as 17 percent of these highly skilled and tenured employees are currently eligible for retirement, and may leave HHS at any time.<sup>246</sup>

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

## **Epidemiologists**

HHS employs 84 full-time 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>247</sup> They provide critical functions during disasters and pandemics and other preparedness and response planning.

Nationally, there is a shortage of epidemiologists.<sup>248 249</sup> Although epidemiology is known as the core science of public health, epidemiologists comprise less than one percent of all public health professionals.<sup>250</sup> As of May 2016, there were approximately 6,100 epidemiologist jobs in the U.S., with a projected job growth rate of 8.8 percent by 2026.<sup>251</sup>

On average, System epidemiologists have about eight years of state service, with an average age of approximately 38 years.<sup>252</sup>

Turnover for System epidemiologists is currently high, at about 25 percent, well above the state average turnover rate of 18.6 percent.<sup>253 254</sup> This rate is much higher for entry-level Epidemiologist Is, at 39 percent. When the level of on-the-job experience needed to adequately perform the job is considered, this high turnover rate is of special concern. It takes, on average, a year for a new epidemiologist to learn his or her job. Several years are required to develop the specialized expertise required of senior epidemiologists to support the state and protect public health. With an extremely high vacancy rate of 24 percent, HHS is currently experiencing difficulty filling vacant epidemiologist positions. Vacant positions are going unfilled for many months due to a shortage of qualified applicants available for work.<sup>255</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 \$59,321.<sup>256</sup> This salary is significantly below the average wage paid nationally (\$77,720), and also lower than the Texas average of \$88,600.<sup>257</sup>

In addition, HHS may face significant recruitment challenges in the next few years to replace these highly skilled employees who are eligible for retirement. Though only eight percent of these employees are currently eligible to retire, this rate will increase in the next five years to 18 percent.<sup>258</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

Another public health profession currently experiencing shortages is environmental health workers (i.e., sanitarians).<sup>259</sup>

There are 122 sanitarians employed with HHS.<sup>260</sup> HHS registered sanitarians inspect all food manufacturers, wholesale food distributors, food 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, asbestos abatement, hazardous chemicals/products 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 46 years old and have about 10 years of state service. About 40 percent of these employees have 10 or more years of state service.<sup>261</sup>

Though the turnover rate for HHS sanitarians is currently low at about eight 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.<sup>262 263</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 annually) has made it increasingly difficult to find qualified individuals.

With 20 percent of sanitarians currently eligible to retire, and 30 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>264</sup>

## Inspectors

There are 141 inspectors employed with the HHS Division of Consumer Protection in the Meat Safety Assurance (MSA).<sup>265</sup> Throughout the state of Texas, these inspectors perform complex inspections, investigations and quality assurance reviews at establishments with a State permit/license to perform livestock slaughter and/or meat/poultry processing operations.

The average inspector of these inspectors is about 46 years old and has about 10 years of state service. About 38 percent of these employees have 10 or more years of state service.<sup>266</sup>

Though the turnover rate for HHS Division of Consumer Protection inspectors is currently below the state turnover rate of 18.6 percent (at 16 percent), HHS has experienced difficulty filling vacant positions, with vacant positions often going unfilled for months due to a shortage of qualified applicants available for work.<sup>267 268</sup>

Historically, HHS has faced special challenges retaining trained inspectors due to salaries that are not competitive with comparable positions at the US Department of Agriculture. Currently, the average annual salary for HHS Division of Consumer Protection inspectors during fiscal year 2017 was \$38,830, though the majority of these inspectors (70 percent) were Inspector IVs making \$35,010. Nationally, the average annual earnings for agricultural inspectors was \$44,260, and \$48,030 in Texas. The State Auditor's Office 2016 market index analysis found the average state salary for Inspector IVs was six percent behind the market rate.<sup>269</sup>

With 17 percent of these inspectors currently eligible to retire, and 30 percent eligible to retire in the next five years, HHS will need to develop creative recruitment and retention strategies to retain and replace these highly skilled employees.<sup>270</sup>

## Health Physicists

Another profession currently experiencing national shortages is the health physicist profession.

Within HHS, there are 64 health physicists, all employed within the Division for Consumer Protection.<sup>271</sup> These employees plan and conduct complex and highly advanced technical inspections of industrial x-ray units, general medical diagnostic x-ray units, fluoroscopic units, mammographic units, C-Arm units, radiation therapy equipment, and laser equipment to assure user's compliance with applicable State and Federal regulations.

HHS health physicists have, on average, 13 years of state service, with an average age of 51 years. Over 50 percent of these employees have 10 or more years of state service.<sup>272</sup>

HHS health physicists earn an average annual salary of \$59,437, which is below the average wage paid nationally (\$72,480), and also lower than the Texas average of \$73,900.<sup>273 274</sup>

Though the turnover for health physicists is currently well managed at six percent, vacant positions often go unfilled for many months due to a shortage of qualified applicants available for work.<sup>275 276</sup>

With 27 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>277</sup>

## **Public Health and Prevention Specialists**

Within HHS, there are 335 public health and prevention specialists, with the majority of these employees (91 percent) employed at DSHS.<sup>278</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 feto-infant 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>279</sup>

While overall turnover for public health and prevention specialists at 15 percent is slightly below the state average rate of 18.6 percent,<sup>280</sup> certain areas within HHS are experiencing significantly higher turnover rates, including Public Health Region 9/10 in the El Paso area (at 23 percent), the Division for Consumer Protection (at 19 percent), and Public Health Region 2/3 in the Arlington area (at 19 percent).<sup>281</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

13 percent), these positions often remain open for more than six months before being filled.<sup>282</sup>

Retention is expected to remain an issue as these employees approach retirement. Fifteen percent of public health and prevention specialists currently eligible to retire, and over 30 percent eligible to retire in the next five years.<sup>283</sup>

## Medical Technicians

Within HHS, there are 21 medical technicians.<sup>284</sup> These workers assist nursing staff with age appropriate patient care, which includes providing patients personal hygiene; making beds and assisting with preparation of units and patients 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 works are employed at the Texas Center of Infectious Disease (TCID), with the remaining employees employed at HHS state hospitals and state supported living centers across Texas.

System medical technicians have, on average, about 10 years of state service, with an average age of 48 years. About 29 percent of these employees have 10 or more years of state service.<sup>285</sup>

The turnover rate for all System medical technicians is currently very high at 46 percent. This rate is much higher for entry-level Medical Technician Is at TCID (at 73 percent).<sup>286 287</sup>

The vacancy rate for System medical technicians is currently high at about 13 percent, with TCID experiencing a 21 percent vacancy rate.<sup>288</sup>

HHS medical technicians earn an average annual salary of \$27,526. The State Auditor's Office 2016 market index analysis found the average state salary for medical technicians ranged from two to four percent behind the market rate.<sup>289</sup> This disparity may be affecting HHS' ability to recruit qualified applicants for open positions.

Though only 10 percent of these employees are currently eligible to retire, about 20 percent of these employees will be 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>290</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.

Targeted recruitment and retention strategies are used to ensure that HHS laboratories have enough staff to meet HHS goals. One strategy has been to contract with private laboratories. This has not been a particularly desirable alternative to hiring laboratory staff. Barriers to using contracts with private labs include securing a cost-effective contract arrangement and the difficulty in obtaining a long term commitment. In most cases, contracting with private lab services is more costly than hiring staff to perform these services. To further address these difficulties, HHS may consider increasing entry-level salaries for new laboratory staff to better compete with private sector salaries.

## Chemists

There are 55 chemists employed in the HHS Division for Laboratory and Infectious Disease Services, all located in Austin.<sup>291</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>292</sup>

While the overall turnover rate for System chemists is well managed at about nine percent annually, Chemist Is experienced a 37 percent turnover rate, well above the state average turnover rate of 18.6 percent.<sup>293 294</sup>

The vacancy rate for System chemists is currently high at about 13 percent, with vacant positions often going unfilled for many months due to a shortage of qualified applicants available for work.<sup>295</sup> These vacancy problems are expected to worsen as employees approach retirement. Nearly 20 percent of these tenured and highly skilled employees are currently eligible to retire.<sup>296</sup>

Low pay is a factor in the inability to attract qualified chemist applicants. System chemists earn an average annual salary of about \$47,837.<sup>297</sup> The State Auditor's Office 2016 market index analysis found the average state salary for chemists ranged from one to four percent behind the market rate.<sup>298</sup> The average annual salary for chemists nationally is \$80,820 and \$76,280 in Texas.<sup>299</sup>

## Microbiologists

There are 132 microbiologists working for HHS, with the majority at the Austin laboratory.<sup>300 301</sup>

System microbiologists have, on average, about 11 years of state service, with an average age of about 41 years.<sup>302</sup>

The turnover rate for all System microbiologists is below the state average rate of 18.6 percent at about 11 percent. This rate is much higher for entry-level Microbiologist Is (at 26 percent).<sup>303 304</sup>

System microbiologists earn an average annual salary of about \$44,496.<sup>305</sup> The State Auditor's Office 2016 market index analysis found the average state salary for Microbiologist IIs was 10 percent behind the market rate and one percent behind the market rate for Molecular Biologist IIs.<sup>306</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 \$76,850 and \$56,650 in Texas.<sup>307</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>308</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 13 percent of these employees are currently eligible to retire, this rate will increase in the next five years to 24 percent.<sup>309</sup>

## Laboratory Technicians

The laboratory technician profession is currently experiencing national shortages.<sup>310</sup>

There are 50 laboratory technicians employed at HHS.<sup>311</sup>

The typical laboratory technician is about 44 years old and has an average of 12 years of state service.<sup>312</sup>

The turnover rate for System laboratory technicians is low at only nine, though turnover for entry-level laboratory technicians is much higher at 18 percent.<sup>313</sup>

The vacancy rate for System laboratory technicians 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>314</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 \$31,390.<sup>315</sup> The average annual salary for medical and clinical laboratory

technicians nationally is \$41,700 and \$40,060 in Texas.<sup>316</sup> The State Auditor's Office 2016 market index analysis found the average state salary for Laboratory Technician IIs and IIIs ranged from 10 to 18 percent behind the market rate.<sup>317</sup> These problems are expected to worsen as employees approach retirement. Over a quarter of these tenured and highly skilled employees will be eligible to retire in the next five years.<sup>318</sup>

## **Medical Technologists**

Within HHS, there are 66 medical technologists.<sup>319</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 43 years. About 49 percent of these employees have 10 or more years of state service.<sup>320</sup>

The turnover rate for all System medical technologists is currently high at 21 percent. This rate is much higher for entry-level Medical Technologist IIs (at 35 percent).<sup>321 322</sup>

The vacancy rate for System medical technologists is currently high at about 14 percent, with vacant positions often going unfilled for many months due to a shortage of qualified applicants available for work.<sup>323</sup>

HHS medical technologists earn an average annual salary of \$43,120, which is below the average wage paid nationally (\$62,440), and also lower than the Texas average of \$59,390.<sup>324 325</sup> In addition, the State Auditor's Office 2016 market index analysis found the average state salary for medical technologists ranged from zero to 16 percent behind the market rate.<sup>326</sup> This disparity is affecting HHS' ability to recruit qualified applicants for open positions.

Though only 12 percent of these employees are currently eligible to retire, over a quarter of these employees will be eligible in the next five years. 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.<sup>327</sup>



## 8. Development Strategies To Meet Workforce Needs

### Recruitment Strategies

#### General Facility Strategies

- Use updated web content, social media strategies, and community outreach to re-brand the public image of the facilities through various means to dispel preconceived notions of our systems.
- Conduct new market rate analysis of PNA, DSP, LVN and 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 submit salary exception requests for approval of salary offers greater than the HHS allowable amount.
- Continue to inform applicants of available incentives such as payment of licensure fees, required training, and continued education costs for eligible positions.
- Explore contracting 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.

- Review results of pilot project regarding increased LVN salaries at the San Angelo State Supported Living Center resulting in reduced need for highly paid LVN contractor staff.

## **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.
- Explore 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.
- Develop 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 nurses to award merits at a regular and predictable interval.
- Request exception to HHS rules governing the hiring of licensed psychological personnel to include license-eligible applicants, with agreement that full licensing will be obtained within a certain time frame.

## **Public Health Strategies**

- 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.
- 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).
- Explore the feasibility of creating defined career paths.
- 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.

## 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.
- Social Service 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.
- 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.

## Retention Strategies

### General Facility Strategies

- 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.
- Conduct new market rate analysis of psychiatric nursing assistant (PNA), 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.

### **State Hospital Strategies**

- Continue involvement in HHS System-wide efforts to address health and human services workforce issues, including retention of staff filling essential positions and participation in leadership development opportunities.
- Continue to provide adequate training to assist employees in preparedness of their jobs and expand opportunities for cross-training.
- Continue to provide formally approved continuing education for various licensed healthcare professionals that meet requirements for credentialing and evaluate options for paying for these continuing education programs.
- Continue adjusting and approving Nursing Compensation plans every two years.
- Continue nursing compensation plans at the state hospitals to provide merits for 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 to reduce the need for overtime, and the Intensive Observation Units are also being developed to reduce the need for 1:1 staffing for high risk individuals.

### **Public Health Strategies**

- 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.
- Continue to use 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 of employees.

## Other Targeted Strategies

- Eligibility Staff:
  - ▶ Continue use of the QUEST Access and Eligibility Services (AES) Leadership Academy (with a developmental focus on regional staff) and the LEADS program (with a developmental focus on state office staff). Through these programs, AES provides staff with next-level leadership abilities with skills necessary to be successful within the organization. Participants in both programs receive training to develop practical skillsets they are able to use immediately in their daily job, often preparing them for promotion. Over 80 percent of the individuals graduating from one of the AES Leadership and Professional Development programs promote within a year of graduation.
  - ▶ Continue use of Hands-On Skills Training (HOST) for newly hired eligibility determination staff to bridge the conceptual gap between learning the policies and systems within the classroom, and applying that knowledge after the classroom training. HOST provides the educational framework to improve initial performance and increase retention of newly hired eligibility determination staff. HOST employs standardized schedules and materials, supplemental trainings, real-time mentoring, case reading feedback, and utilization of job-related systems and tools. HOST allows for a gradual increase in job tasks to ensure new hires leave training with the ability to confidently and successfully manage their future workload.
  - ▶ Continue use of Supervisor Basic Skills Training (SBST). The program utilizes facilitated classroom practice and structured interactive activities to build skillsets. SBST supplies new supervisors with technical skills,

- critical soft-skills, and awareness of job tools and resources. Supervisors are provided a clear understanding of expectations while developing the necessary skills and knowledge to succeed.
- Microbiologists:
    - ▶ Consider reviewing current Microbiologist positions to determine if higher level Molecular Biologist positions more accurately reflect the work performed.
  - Epidemiologists:
    - ▶ Consider feasibility of offering an increased number of recurring merit awards to eligible employees.
  - 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.
  - Child Care Licensing (CCL) and Residential Child Care Licensing Services (RCCL) Specialists:
    - ▶ Explore the development of an additional career track level to bring positions in line with similar System positions.
  - 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.

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<sup>1</sup> HHSAS Database, as of 8/31/17.

<sup>2</sup> HHSAS Database, as of 8/31/17. Note: DFPS was not included in the HHS System data analyzed.

<sup>3</sup> Direct care workers include direct support professionals and psychiatric nursing assistants.

<sup>4</sup> Eligibility workers includes Texas works advisors, hospital based workers and medical eligibility specialists within Access and Eligibility Services (AES).

<sup>5</sup> RNs include public health nurses, nurse surveyors, and direct care nurses.

<sup>6</sup> Food service workers include food service workers, managers and cooks.

<sup>7</sup> HHSAS Database, as of 8/31/17.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> Totals may not equal 100% due to rounding.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> Totals may not equal 100% due to rounding.

<sup>14</sup> CAPPS-HCM Database, as of 8/31/17.

<sup>15</sup> CLF data for underutilization percentages comes from the "Equal Employment Opportunity and Minority Hiring Practices Report Fiscal Years 2015-2016" published by the Texas Workforce Commission (TWC), October 2016. 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 chart.

<sup>16</sup> "N/A" indicates the number of employees in these categories was too small (less than 30) to test any differences for statistical significance.

<sup>17</sup> HHSAS Database, as of 8/31/17.

<sup>18</sup> Ibid.

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- <sup>19</sup> HHSAS Database, as of 8/31/17.
- <sup>20</sup> Totals may not equal 100% due to rounding.
- <sup>21</sup> Ibid.
- <sup>22</sup> Ibid.
- <sup>23</sup> HHSAS Database, as of 8/31/17.
- <sup>24</sup> Ibid.
- <sup>25</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>26</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.pdf>, last accessed 4/19/18. 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>27</sup> HHSAS Database for FY 2017. Note: Legislative transfers are not considered separations.
- <sup>28</sup> Ibid.
- <sup>29</sup> Death accounted for .5% of separations.
- <sup>30</sup> HHSAS Database for FY 2017.
- <sup>31</sup> Ibid.
- <sup>32</sup> Death accounted for .5% of separations (50 separations).
- <sup>33</sup> Direct care workers include direct support professionals and psychiatric nursing assistants.
- <sup>34</sup> Food service workers include food service workers, managers and cooks.
- <sup>35</sup> HHSAS Database for FY 2017.
- <sup>36</sup> HHSAS Database for FY 2017. Note: Legislative transfers are not considered separations.
- <sup>37</sup> Direct care workers include direct support professionals and psychiatric nursing assistants.
- <sup>38</sup> Food service workers include food service workers, managers and cooks.
- <sup>39</sup> RNs include public health nurses, nurse surveyors, and direct care nurses.
- <sup>40</sup> Eligibility workers includes Texas works advisors, hospital based workers and medical eligibility specialists within Access and Eligibility Services (AES).
- <sup>41</sup> Job family transferred to HHS from DFPS on September 1, 2017.
- <sup>42</sup> Nurse practitioners include nurse practitioners at state supported living centers and state hospitals.
- <sup>43</sup> Child care licensing (CCL) and residential child care licensing (RCCL) job families transferred to HHS from DFPS on September 1, 2017.
- <sup>44</sup> Eligibility clerks includes clerical, administrative assistant and customer service representative positions within AES.
- <sup>45</sup> Registered therapists includes registered therapists at state supported living centers.
- <sup>46</sup> Inspectors includes inspectors at the HHS Division of Consumer Protection.
- <sup>47</sup> Eligibility supervisors includes supervisors within AES.
- <sup>48</sup> Microbiologists include molecular biologists.
- <sup>49</sup> HHSAS Database, as of 8/31/17.
- <sup>50</sup> "Comptroller's Weekly Economic Outlook," web page: <http://thetexasconomy.org/economic-outlook/>, last accessed on 5/9/16.
- <sup>51</sup> Federal Reserve Bank of Dallas, "Thriving Texas Economy Expands Broadly," webpage: <https://www.dallasfed.org/research/update/reg/2018/1801>, last accessed on 4/25/18.
- <sup>52</sup> "Annual Update of the HHS Poverty Guidelines," Federal Register (80 FR 3236), webpage: <https://www.federalregister.gov/documents/2017/01/31/2017-02076/annual-update-of-the-hhs-poverty-guidelines>, last accessed on 4/10/18. Note: Guidelines apply to the 48 Contiguous States and D.C.
- <sup>53</sup> U.S. Census Bureau: State and County Quickfacts, webpage <https://www.census.gov/quickfacts/fact/table/TX,US/PST045216>, last accessed on 4/25/18.
- <sup>54</sup> Bureau of Labor Statistics, seasonally adjusted unemployment rate, web page <https://www.bls.gov/eag/eag.tx.htm>, last accessed on 4/25/18.
- <sup>55</sup> American Fact Finder, U.S. Census Bureau, web page: <http://www.census.gov/quickfacts/table/PST045215/48>, last accessed on 5/9/16.
- <sup>56</sup> Lloyd B. Potter and Nazrul Hoque, "Texas Population Projections, 2010 to 2050," Office of the State Demographer, November 2014, web page [http://osd.texas.gov/Resources/Publications/2014/2014-11\\_ProjectionBrief.pdf](http://osd.texas.gov/Resources/Publications/2014/2014-11_ProjectionBrief.pdf), last accessed on 4/25/18.

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- <sup>57</sup> The Kaiser Family Foundation, State Health Facts: Population by Age, based on U.S. Census Bureau's March 2017 Current Population Surveys, web page <http://kff.org/other/state-indicator/distribution-by-age/>, last accessed on 4/25/18. Note: Percentage totals may not equal 100 percent due to rounding.
- <sup>58</sup> Lloyd B. Potter and Nazrul Hoque, "Texas Population Projections, 2010 to 2050," Office of the State Demographer, November 2014, web page [http://osd.texas.gov/Resources/Publications/2014/2014-11\\_ProjectionBrief.pdf](http://osd.texas.gov/Resources/Publications/2014/2014-11_ProjectionBrief.pdf), last accessed on 4/25/18.
- <sup>59</sup> HHSAS Database, as of 8/31/17.
- <sup>60</sup> HHSAS Database, FY 2017 data.
- <sup>61</sup> HHSAS Database, as of 8/31/17.
- <sup>62</sup> Ibid.
- <sup>63</sup> HHSAS Database, FY 2017 data.
- <sup>64</sup> HHSAS Database, as of 8/31/17.
- <sup>65</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.pdf>, last accessed 4/19/18.
- <sup>66</sup> HHSAS Database, as of 8/31/17.
- <sup>67</sup> Ibid.
- <sup>68</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.pdf>, last accessed 4/19/18.
- <sup>69</sup> HHSAS Database, as of 8/31/17.
- <sup>70</sup> HHSAS Database, FY 2017 data.
- <sup>71</sup> HHSAS Database, as of 8/31/17.
- <sup>72</sup> HHSAS Database, as of 8/31/17. Note: Food service workers include food service workers, managers and cooks.
- <sup>73</sup> Ibid.
- <sup>74</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.pdf>, last accessed 4/19/18.
- <sup>75</sup> HHSAS Database, as of 8/31/17.
- <sup>76</sup> Ibid.
- <sup>77</sup> HHSAS Database, FY 2017 data.
- <sup>78</sup> HHSAS Database, as of 8/31/17.
- <sup>79</sup> Ibid.
- <sup>80</sup> Ibid.
- <sup>81</sup> Ibid.
- <sup>82</sup> HHSAS Database, FY 2017 data.
- <sup>83</sup> State Auditor's Office (SAO) FY 2017 Turnover Statistics.
- <sup>84</sup> HHSAS Database, as of 8/31/17.
- <sup>85</sup> HHSAS Database, FY 2017 data.
- <sup>86</sup> HHSAS Database, as of 8/31/17.
- <sup>87</sup> Ibid.
- <sup>88</sup> HHSAS Database, FY 2017 data.
- <sup>89</sup> HHSAS Database, as of 8/31/17.
- <sup>90</sup> State Auditor's Office (SAO) FY 2017 Turnover Statistics.
- <sup>91</sup> HHSAS Database, FY 2017 data.
- <sup>92</sup> HHSAS Database, as of 8/31/17.
- <sup>93</sup> HHSAS Database, FY 2015 data.
- <sup>94</sup> HHSAS Database, FY 2017 data.
- <sup>95</sup> HHSAS Database, FY 2017 data.
- <sup>96</sup> HHSAS Database, as of 8/31/17.
- <sup>97</sup> Ibid.
- <sup>98</sup> HHSAS Database, FY 2015 data.
- <sup>99</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.

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- <sup>100</sup> CCL and RCCL specialists include CCL inspectors and specialists and RCCL inspectors and investigators. Note: These positions were not included in the System section of this report, since they were moved from DFPS to HHSC on September 1, 2017.
- <sup>101</sup> HHSAS Database, as of 8/31/17.
- <sup>102</sup> Ibid.
- <sup>103</sup> HHSAS Database, FY 2017 data.
- <sup>104</sup> HHSAS Database, as of 8/31/17.
- <sup>105</sup> Ibid.
- <sup>106</sup> HHSAS Database, FY 2017 data.
- <sup>107</sup> HHSAS Database, as of 8/31/17.
- <sup>108</sup> Ibid.
- <sup>109</sup> HHSAS Database, FY 2017 data.
- <sup>110</sup> Ibid.
- <sup>111</sup> HHSAS Database, as of 8/31/17.
- <sup>112</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.
- <sup>113</sup> HHSAS Database, as of 8/31/17.
- <sup>114</sup> HHSAS Database, FY 2017 data.
- <sup>115</sup> HHSAS Database, as of 8/31/17.
- <sup>116</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page [http://data.bls.gov/oes/search.jsp?data\\_tool=OES](http://data.bls.gov/oes/search.jsp?data_tool=OES), Period: May 2017; last accessed on 4/23/18.
- <sup>117</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.pdf>, last accessed 4/26/18.
- <sup>118</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.
- <sup>119</sup> HHSAS Database, as of 8/31/17.
- <sup>120</sup> Ibid.
- <sup>121</sup> State Auditor's Office (SAO) FY 2017 Turnover Statistics.
- <sup>122</sup> HHSAS Database, FY 2017 data.
- <sup>123</sup> HHSAS Database, as of 8/31/17.
- <sup>124</sup> Ibid.
- <sup>125</sup> HHSAS Database, FY 2017 data.
- <sup>126</sup> HHSAS Database, as of 8/31/17.
- <sup>127</sup> Ibid.
- <sup>128</sup> State Auditor's Office (SAO) FY 2017 Turnover Statistics.
- <sup>129</sup> HHSAS Database, FY 2017 data.
- <sup>130</sup> HHSAS Database, as of 8/31/17.
- <sup>131</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.
- <sup>132</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, web page <http://www.bls.gov/ooh/healthcare/registered-nurses.htm>, last accessed on 4/23/18.
- <sup>133</sup> U.S. Department of Labor, Bureau of Labor Statistics, Selected Occupational Projections Data. Period: May 2016; web page [http://www.bls.gov/emp/ep\\_table\\_110.htm](http://www.bls.gov/emp/ep_table_110.htm), last accessed on 4/23/18.
- <sup>134</sup> Ibid.
- <sup>135</sup> "Nursing Workforce in Texas: Demographics and Trends Report, web page <http://www.dshs.texas.gov/chs/cnws/WorkforceReports/2015/2015-Demographics-and-Trends.pdf>, last accessed on 4/23/18.
- <sup>136</sup> Ibid.
- <sup>137</sup> Texas Department of State Health Services: County Supply and Distribution Tables - Registered Nurses Web page <http://www.dshs.texas.gov/chs/hprc/tables/2016/16RN.aspx>, last accessed 4/23/18.
- <sup>138</sup> Texas Board of Nursing, web page [http://www.bne.state.tx.us/pdfs/education\\_pdfs/education\\_programs/ApprovedRNschoools.pdf](http://www.bne.state.tx.us/pdfs/education_pdfs/education_programs/ApprovedRNschoools.pdf), last accessed on 4/23/18.
- <sup>139</sup> HHSAS Database, as of 8/31/17.
- <sup>140</sup> RNs include public health nurses.
- <sup>141</sup> HHSAS Database, as of 8/31/17.

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- <sup>142</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page [http://data.bls.gov/oes/search.jsp?data\\_tool=OES](http://data.bls.gov/oes/search.jsp?data_tool=OES), Period: May 2017; last accessed on 4/23/18.
- <sup>143</sup> Ibid.
- <sup>144</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.html>, last accessed 4/23/18.
- <sup>145</sup> HHSAS Database, as of 8/31/17.
- <sup>146</sup> Ibid.
- <sup>147</sup> HHSAS Database, FY 2017 data.
- <sup>148</sup> HHSAS Database, as of 8/31/17.
- <sup>149</sup> Ibid.
- <sup>150</sup> Ibid.
- <sup>151</sup> HHSAS Database, FY 2017 data.
- <sup>152</sup> HHSAS Database, as of 8/31/17.
- <sup>153</sup> Includes RN II - Vs in public health roles and public health nurses. Note: Public health nurses are also registered nurses.
- <sup>154</sup> HHSAS Database, as of 8/31/17.
- <sup>155</sup> HHSAS Database, FY 2017 data.
- <sup>156</sup> Ibid.
- <sup>157</sup> HHSAS Database, as of 8/31/17.
- <sup>158</sup> HHSAS Database, FY 2017 data.
- <sup>159</sup> Includes Licensed Vocational Nurse II and III.
- <sup>160</sup> HHSAS Database, as of 8/31/17.
- <sup>161</sup> HHSAS Database, FY 2017 data.
- <sup>162</sup> HHSAS Database, as of 8/31/17.
- <sup>163</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page [http://data.bls.gov/oes/search.jsp?data\\_tool=OES](http://data.bls.gov/oes/search.jsp?data_tool=OES), Period: May 2017; last accessed on 4/23/18.
- <sup>164</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.pdf>, last accessed 4/26/18.
- <sup>165</sup> HHSAS Database, as of 8/31/17.
- <sup>166</sup> HHSAS Database, FY 2017 data.
- <sup>167</sup> HHSAS Database, as of 8/31/17.
- <sup>168</sup> Ibid.
- <sup>169</sup> Ibid.
- <sup>170</sup> HHSAS Database, FY 2017 data.
- <sup>171</sup> HHSAS Database, as of 8/31/17.
- <sup>172</sup> HHSAS Database, FY 2017 data.
- <sup>173</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>174</sup> HHSAS Database, FY 2017 data.
- <sup>175</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>176</sup> HHSAS Database, as of 8/31/17.
- <sup>177</sup> Ibid.
- <sup>178</sup> Ibid.
- <sup>179</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.pdf>, last accessed 4/26/18. Note: For Advanced Practice Registered Nurses.
- <sup>180</sup> HHSAS Database, FY 2017 data.
- <sup>181</sup> HHSAS Database, as of 8/31/17.
- <sup>182</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.
- <sup>183</sup> HHSAS Database, as of 8/31/17.
- <sup>184</sup> Ibid.
- <sup>185</sup> HHSAS Database, FY 2017 data.

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- 184 HHSAS Database, as of 8/31/17.  
185 Ibid.  
186 HHSAS Database, FY 2017 data.  
187 HHSAS Database, as of 8/31/17.  
188 Ibid.  
189 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 4/26/18.  
190 HHSAS Database, as of 8/31/17.  
191 Ibid.  
192 Includes return-to-work retirees. HHSAS Database, as of 8/31/17.  
193 U.S. Department of Labor, Bureau of Labor Statistics, Selected Occupational Projections Data, web page <http://data.bls.gov/projections/occupationProj>, Period: May 2016; last accessed on 4/26/18.  
194 U.S. Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, web page <http://www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm>, last accessed on 4/26/18.  
195 HHSAS Database, as of 8/31/17.  
196 Ibid.  
197 Ibid.  
198 U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page [http://data.bls.gov/oes/search.jsp?data\\_tool=OES](http://data.bls.gov/oes/search.jsp?data_tool=OES), Period: May 2016; last accessed on 4/26/18.  
199 State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.pdf>, last accessed 4/26/18.  
200 HHSAS Database, FY 2017 data.  
201 HHSAS Database, as of 8/31/17.  
202 Includes return-to-work retirees. HHSAS Database, as of 8/31/17.  
203 HHSAS Database, as of 8/31/17.  
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206 Ibid.  
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222 Includes return-to-work retirees. HHSAS Database, as of 8/31/17.  
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229 HHSAS Database, FY 2017 data.  
230 HHSAS Database, as of 8/31/17.

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- <sup>231</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.
- <sup>232</sup> HHSAS Database, as of 8/31/17.
- <sup>233</sup> HHSAS Database, as of 8/31/17. Note: Includes Psychologists, Behavioral Health Specialists, and Behavioral Analysts.
- <sup>234</sup> HHSAS Database, as of 8/31/17.
- <sup>235</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/Reports/Main/17-701.pdf>, last accessed 4/27/18.
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- <sup>237</sup> HHSAS Database, as of 8/31/17.
- <sup>238</sup> Ibid.
- <sup>239</sup> Ibid.
- <sup>240</sup> HHSAS Database, FY 2017 data.
- <sup>241</sup> HHSAS Database, as of 8/31/17.
- <sup>242</sup> Ibid.
- <sup>243</sup> Ibid.
- <sup>244</sup> HHSAS Database, FY 2017 data.
- <sup>245</sup> HHSAS Database, as of 8/31/17.
- <sup>246</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.
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- <sup>253</sup> HHSAS Database, FY 2017 data.
- <sup>254</sup> State Auditor's Office (SAO) FY 2017 Turnover Statistics.
- <sup>255</sup> HHSAS Database, as of 8/31/17.
- <sup>256</sup> Ibid.
- <sup>257</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page [http://data.bls.gov/oes/search.jsp?data\\_tool=OES](http://data.bls.gov/oes/search.jsp?data_tool=OES), Period: May 2017; last accessed on 4/23/18.
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- <sup>261</sup> Ibid.
- <sup>262</sup> HHSAS Database, FY 2017 data.
- <sup>263</sup> HHSAS Database, as of 8/31/17.
- <sup>264</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.
- <sup>265</sup> HHSAS Database, as of 8/31/17.
- <sup>266</sup> Ibid.
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- <sup>269</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.pdf>, last accessed 4/19/18.
- <sup>270</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.
- <sup>271</sup> HHSAS Database, as of 8/31/17.
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- <sup>273</sup> HHSAS Database, as of 8/31/17.
- <sup>274</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page [http://data.bls.gov/oes/search.jsp?data\\_tool=OES](http://data.bls.gov/oes/search.jsp?data_tool=OES), Period: May 2017; last accessed on 4/23/18. Note: The Employees are listed under the Occupational title of Occupational Health and Safety Specialists.
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- <sup>277</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.
- <sup>278</sup> HHSAS Database, as of 8/31/17.
- <sup>279</sup> Ibid.
- <sup>280</sup> State Auditor's Office (SAO) FY 2017 Turnover Statistics.
- <sup>281</sup> HHSAS Database, FY 2017 data.
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- <sup>283</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.
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- <sup>299</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page [http://data.bls.gov/oes/search.jsp?data\\_tool=OES](http://data.bls.gov/oes/search.jsp?data_tool=OES), Period: May 2017; last accessed on 4/23/18.
- <sup>300</sup> Microbiologists include molecular biologists.
- <sup>301</sup> HHSAS Database, as of 8/31/17.
- <sup>302</sup> Ibid.
- <sup>303</sup> State Auditor's Office (SAO) FY 2017 Turnover Statistics.
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- <sup>305</sup> HHSAS Database, as of 8/31/17.
- <sup>306</sup> State Auditor's Office, "A Biennial Report on the State's Position Classification Plan," September 2016, Report No. 17-701, web page <http://www.sao.texas.gov/reports/main/17-701.pdf>, last accessed 4/19/18.
- <sup>307</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, web page [http://data.bls.gov/oes/search.jsp?data\\_tool=OES](http://data.bls.gov/oes/search.jsp?data_tool=OES), Period: May 2017; last accessed on 4/23/18.
- <sup>308</sup> HHSAS Database, as of 8/31/17.
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- <sup>310</sup> Bill Malone, "May 2011 Clinical Laboratory News: Trends in Recruitment and Retention" Clinical Laboratory News, 37(5) (May 2011).
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- <sup>327</sup> Includes return-to-work retirees. HHSAS Database, as of 8/31/17.