Bureau of Substance Addiction Services

Treatment Program Workforce Data Update FY 2016-2023

Methods Overview

Reporting Periods

Programs are required to submit applications for licensure renewal every two years. For this analysis, application data in the eLicensing system was grouped into four different time periods based on approval date.

- Fiscal Year 2016 & 2017
- Fiscal Year 2018 & 2019
- Fiscal Year 2020 & 2021
- Fiscal Year 2022 & 2023

Sometimes programs submit a renewal application late or early, which can create application gaps in a Reporting Period (despite the program's continuous operation). Gaps in reporting are addressed by identifying multiple applications in an adjacent Reporting Period (whether renewal application or another type). Applications may be adjusted to the adjacent Reporting Period to capture the program's continuous operation historically. The intent of this process is to fill in as many gaps in reporting as possible while avoiding the creation of any new gaps. Adjustments followed a specific protocol based on which Reporting Period contained the gap.

- Reporting Period FY 16/17 – Adjustment from either FY 2015 or FY 2018.
- Reporting Period FY 18/19 – Adjustment from either FY 2017 or FY 2020.
- Reporting Period FY 20/21 – Adjustment from either FY 2019 or FY 2022.
- Reporting Period FY 22/23 – Adjustment from either FY 2021 or FY 2024.

Fiscal Years 2013, 2014, 2015 and 2024 were not included in the final analysis but were used to inform application adjustments.

Program & Staffing Counts

Program Count: Program count is a count of the unique Program License Numbers that are assigned by eLicensing.

Unique ID: Each program enters its own staff information. There is no system-wide unique identifier for individuals reported. This analysis creates a unique identifier to meet that need. When two or more names entered are similar, other available information associated with those individuals is compared to make the best determination as to whether which, if any, of the staff reported with similar names are the same individual. Associated information includes role type, year of birth, education, and certification/licensure. Where a match is determined, both names are assigned the same Unique ID, and the various ways an individual's names have been reported are noted. Different individuals who share the same name are distinguished to the extent possible.

Staff Count: Staff Count is calculated by counting Unique ID. Unique IDs are counted once per Reporting Period (or other category in analysis), even if an individual is reported by multiple programs.

Position Count: Unique positions for each program are identified through a concatenation of Unique ID, Staff Role Type, and Program License Number.

Note: Positions that are reported as vacant are included in position count, but not in staff count.

Program Mapping: Programs are assigned geospatial coding through Google Maps based on the physical address reported in eLicensing.

Retention

Worker retention is analyzed by identifying individuals who were reported in FY20/21, *and were reported again* in FY22/23. Retention is analyzed at multiple levels for each individual:

- **System level** retention is the aggregate of individuals reported in both FY 20/21 and FY 22/23 (regardless of program).
- **Program level** retention is the aggregate of individuals reported by the same program in both FY 20/21 and FY 22/23. This is also referred to as "within-program retention."
- **Role level** retention is the aggregate of individuals reported in the same Staff Role Type (regardless of program) in both FY20/21 and FY 22/23. Analysis delineates whether an individual is retained into the same Role, a different Role, or leaves the system entirely.

Retention is calculated as this proportion:

$$\frac{\text{\# of employees who were reported in both FY20/21 AND FY22/23}}{\text{the total number of employees reported in FY20/21}}$$

Note: This approach is a change from prior years, when a longer retention period was examined.

Race Categories

Options for reporting demographics are set by BSAS in the eLicensing reporting system. The application asks for "Race" and "Ethnicity" designations, as well as "Hispanic/Latino" designation. Ethnicity designations were not analyzed. However, BSAS decided to incorporate the Hispanic/Latino category with Race for this analysis. This analysis compares results across and within racial categories.

Race Categories as presented are comprised of two application items:

- Item 1: "Race" is a **multiple-selection** question where individuals can be reported by their employers with one or more categories, or no category at all.
- Item 2: "Does the employee identify as Hispanic/Latino?" This question can be responded with "Yes," "No," or "Decline to Answer."

In this analysis, *Hispanic/Latino* (renamed as "Hispanic/Latino/a/e" to more inclusively encompass "Hispanic/Latino, Latina, Latine") was added as a race category along with the other categories listed on the original application item titled *Race*. Those who were recorded with a "Yes" response for the Hispanic/Latino item were included in the "Hispanic/Latino/a/e" race category.

Race Category percentages are calculated by:

Count of Individuals Reported in Specific Race Category/All Individuals Reported Under **Any** Race Category

Note:

- *Decline to Answer responses are excluded from the calculation.*
- *Since individuals can potentially be reported in more than one Race Category, the distribution across categories may total over 100%.*

For Profit/Not for Profit Status

Program retention calculations are stratified by **For Profit and Not for Profit status**. This measure is created from the application field *Organization Type*, which was grouped into three categories:

Organization Type Categories	Category Groups for Analysis
For Profit Corporation Limited Liability Company Limited Liability Company, For Profit Limited Liability Corporation LLC Partnership PC Professional Limited Liability Company Single Member LLC Sole Proprietor	For Profit
Not for Profit Corporation Private Non Profit	Not For Profit*
City Agency Correctional Facility partnering with an existing OTP Mass State Agency or Institution Public Instrumentality	Other**

*As there were no programs that were classified as "Private Non Profit" in FY22/23, the Not for Profit group only consists of programs labeled as "Not for Profit Corporation."
**"Other" group was excluded from stratification analysis due to small number of programs included in categories.

Gender

Items are grouped from the application field *Gender Type* to create three categories for Gender:

Gender Type Categories	Category Groups for Analysis
Male	Male
Female	Female
Other Transgender Female to Male Transgender Male to Female	Other (Includes Transgender)

Salary Ranges

Salary ranges are categorized into $25,000 increment, non-exclusive blocks.

Average salaries are calculated by taking the midpoint of each salary range reported for all individuals (excluding reporting anomalies that did not match standardized salary range options), and calculating an average across individuals.

Data Exclusions

The following fields that are utilized in the analysis are free-text fields, without data entry validation:

Application Field	Relevant Analysis
Year of Birth	Staff Age
Average Hours Per Week	Full-Time/Part-Time Status
Years of Experience	Years of Experience in Substance Addiction Services

Data outside a reasonable rangeare excluded from analysis, e.g. Birth Year of 1879