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Abstract
National residential census data from residential programs for individuals with intellectual/developmental disabilities were examined to estimate the demand for Direct Support Professionals. Publicly available data and basic residential staffing formulae were used. While the number of individuals receiving residential supports and services increased about 28% over 11 years, the demand for Direct Support Professionals increased about 33%. Smaller group homes were noted to increase about 47% in demand for Direct Support Professionals. The shortfall in terms of Direct Support Professionals was estimated to be approximately 73,000 in the United States.

Keywords: IDD workforce crisis; supply and demand

1.0 Introduction
The United States has faced a longstanding workforce crisis in the intellectual disability field for over 30 years. This field has largely been unable to meet the demand for Direct Support Professionals, those individuals who are hired to provide hands-on support and instruction to people with intellectual disability. The President’s Committee on People with Intellectual Disabilities (2012) gave formal recognition to the challenges of hiring sufficient numbers of qualified staff in 2012, but the challenge clearly predates the formal recognition. The Core Indicator Project (2015, 2016, 2017, 2018, 2019, 2020, 2022) has administered annual workforce surveys since 2014, and their data suggest that the supply of qualified Direct Support Professionals has consistently lagged about 10% below the demand. The purpose of this paper is to examine the demand for Direct Support Professionals over time within the Intellectual and Developmental Disability field. It does not consider other healthcare areas that employ individuals in positions similar to Direct Support Professionals.

Demand for Direct Support Professionals derives largely from the growing number of individuals with Intellectual and Developmental Disabilities who are receiving residential supports and services. The State of the States project (State of the States, undated) summarizes the number of individuals with IDD who received residential support services from 2009 through 2019. Their interactive website breaks down the number of individuals in small sites (1 to 6 persons), medium sized sites (7 to 15 persons), and large sites (16 or more). For consistency with common reference, the medium and larger sites were collapsed and all were considered to be large sites. These data are presented in the figure immediately below.
The number of individuals being supported in out of family residential programs appears to have grown consistently over the 11 year period of time. The overall growth rate was about 28% (just less than 3% per year) without consideration of the size of the residence. When size of the residential home is considered, it is clear that all of the growth derived from the increase in number of individuals living in smaller sites. The total increase for smaller sites was approximately 47%, or just under 5% per year. The number of individuals living in larger sites declined approximately 28%. The data confirm that the Intellectual and Developmental Disability residential support system has continued to move towards smaller residential venues. These findings are entirely consistent with the deinstitutionalization movement, and they reflect a recognition about Conroy's (1992) warning about the detrimental impact of larger residential sites. In a sense, these are good news findings.

One concern, however, must be expressed. Conroy (2017) noted that the smaller group home model achieved dominance within our field in 1991. It is conceivable that this shift to smaller residential venues is contributing to the workforce crisis in the Intellectual and Developmental Disability field. This model, while supported with substantial positive outcome data (Conroy & Bradley, 1985), is recognized for being more staff intensive than earlier institutional models. For example, staffing a three person home will require at least one staff, while in an eight bed ward in a state developmental center, that single staff might be responsible for between four and eight individuals. The question is to what extent has the shift to smaller homes increased the demand for Direct Support Professionals.

2.0 Methods
It is possible to estimate demand for Direct Support Professionals from the number of people receiving residential supports and services from the different residential venues. It involves establishing the number of Full Time Equivalent (FTE) Direct Support Professionals needed to achieve the desired staffing levels, and dividing this number by the number of residents to establish a per resident metric. A basic assumption is that it is necessary to employ 4.2 FTE staff.
to cover a 168 hour week. Because these individuals will be responsible for more than one client, the 4.2 FTE value is divided by the number of clients supported. The resultant metric is then multiplied by the total number of clients served overall to estimate demand for DSPs. Census data used in these calculations derive from the State of the States project (State of the States, undated).

3.0 Results
Applying these calculations, it is apparent that staffing a three person group home will require 1.4 FTE staff per resident (4.2/3). A six person group home might reasonably reduce staffing on the overnight shift to a single staff, suggesting that such a program would require only 1.17 staff per resident to ensure coverage. Because Prouty, Lakin, and Coucouvis (2007) reported that approximately 2/3 of group homes support three or less individuals, calculations were adjusted accordingly to estimate demand.

Larger homes, such as state developmental centers, are typically able to function with slightly less staff. Although many state regulations permit staffing as light as one staff for every eight residents, a more supportive 1:4 ratio will be applied for larger settings, with an overnight reduction in staffing to the 1:8 ratio. Calculated in this manner, the applicable metric for the large centers is .875 Direct Support Professionals for each resident.

Figure 2 presents the calculated Direct Support Professional demand estimates for three person homes, 4-6 person homes, and homes for seven or more residents. Demand was calculated by applying the staffing metric to the census figures reported by the State of the States website. Overall the demand for Direct Support Professionals is estimated to have increased approximately 33% over the 11 years of study. When home size is considered, it is clear that demand for Direct Support Professionals has decreased about 28% in the larger residential homes, due to the declining census. Both sizes of group homes increased the demand for Direct Support Professionals by approximately 47% over the 11 years of study. Overall, the demand for Direct Support Professionals was approximately 729,565 in 2019.

![Figure 2. Demand for Direct Support Professionals Over Time.](image-url)
There is no believable count of the number of Direct Support Professionals actually employed within the American intellectual disability industry. The US Department of Labor unfortunately does not have a job title that specifically and solely refers to individuals who are employed in the support of individuals who have intellectual disability. A wide variety of job titles exist, and most overlap with nursing homes and other supported living arrangements. An inverse measure of Direct Support Professional supply can be obtained from published studies regarding the vacancy rate among Direct Support Professionals. The National Core Indicators project has administered workforce studies annually over the past decade, and summarizing these studies, it appears that the percentage of open Direct Support Professional positions has consistently averaged about 9.6%. These data are presented in Figure 3. A couple of single state studies (Spreat, 2018, Spreat, 2019) suggest higher rates, but these studies were perhaps only applicable to Pennsylvania. Of course, this 9.6 percent must be viewed against a growing demand. Growth in supply is suggested, but it is insufficient to catch up with the growth in demand. Given the estimated 2019 residential census of approximately 729,565, it is reasonable to speculate that the demand for Direct Support Professionals exceeds the supply by almost 73,000 workers.

![National Core Indicator DSP Vacancy Rate](image)

Figure 3. Vacancy rate for DSP positions reported in successive National Core Indicator Study reports.

**4.0 Discussion**

It is reasonable to speculate that shortages of this magnitude jeopardize the quality of existing programs and allow for the continuation of lengthy waiting lists for services and supports. One might suggest that a better equilibrium could be created between supply and demand by increasing the wages paid to Direct Support Professionals. It is noted that this was how Henry Ford solved a similar workforce problem in 1914 (Raff & Simms, 1987). The challenge associated with this recommendation is that most employers of Direct Support Professionals are small provider agencies that have little control over their pricing. The prices paid for intellectual disability supports and services are typically set by governmental agencies, and while these
agencies do not place limits of what an agency pay, the agencies are effectively constrained from making significant adjustments by their precarious fiscal health. Spreat (2019b) reported that approximately 1/3 of Pennsylvania intellectual disability provider agencies have expenses that exceed revenue each year, and that the average operating margin for an intellectual disability provider was only just over 1% per year. There is no room for adjustment.

Spreat (2021) has suggested that the crisis is largely maintained by the government’s practice of fixing prices that it will pay for IDD services. These fixed prices, in turn, limit the ability of provider agencies to compensate Direct Support Professionals to the point that the supply of individuals willing to work as DSPs matches the societal demand for such services. His argument is essentially that supply and demand for DSPs is not in equilibrium, and that a considerable increase in DSP wages is needed to establish an equilibrium. It should be noted, however, that it is possible to argue that supply and demand are always in equilibrium with the incentive structures affecting them. Note that while demand for DSPs and the number of residential service recipients has increased over time, the supply of DSPs has remained at roughly 90% of professed need. One might reasonable argue that legislative and administrative bodies that allocate funds and set prices are satisfied with this outcome.

Perhaps the five percent differential between census increase and demand for Direct Support Professionals may seem insignificant, but it should be recognized that the existing largely community based system is being supported on the backs of the Direct Support Professionals.

References


