

Fall 2019

## Characteristics of the Health Information Technology Workforce in Georgia

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### Recommended Citation

Ekpo, Imaobong; Akowuah, Emmanuel; Apenteng, Bettye; and Opoku, Samuel (2019) "Characteristics of the Health Information Technology Workforce in Georgia," *Journal of the Georgia Public Health Association*: Vol. 7 : No. 2 , Article 13.

DOI: 10.20429/jgpha.2019.070213

Available at: <https://digitalcommons.georgiasouthern.edu/jgpha/vol7/iss2/13>

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**Characteristics of the Health Information Technology Workforce in Georgia**Imaabong Ekpo, MBBS<sup>1</sup>, Emmanuel Akowuah, MS<sup>1</sup>, Bettye Apenteng, PhD<sup>1</sup>, and Samuel Opoku, PhD<sup>1</sup><sup>1</sup> Jiann-Ping Hsu College of Public Health, Georgia Southern University, Statesboro, GA**Corresponding Author:** Imaabong Ekpo • Georgia Southern University 1332 Southern Drive, Statesboro GA 30458 • (404) 988-3222 • [ie00146@georgiasouthern.edu](mailto:ie00146@georgiasouthern.edu)**ABSTRACT**

**Background:** Advancement in medical technology, as well as the Health Information Technology for Economic and Clinical Health Act, has in part influenced the demand for health information technology (HIT) workers. While other sectors have experienced a tremendous increase in the information technology workforce, the health sector lags in this regard. The aim of this study was to describe the characteristics of the HIT workforce in Georgia, relative to surrounding states and the United States.

**Methods:** The supply of the HIT workforce in Georgia, surrounding states, and the United States was estimated using data from the 2014-2016 American Community Survey (ACS). The 2010 ACS Occupation Codes and 2012 ACS Industry Codes were used to identify the HIT workforce. Population data for 2015, obtained from the US Census Bureau was used for standardization of the total supply of the HIT workforce. Data were analyzed using Stata 14.0.

**Results:** The number of HIT workforce supply for Georgia (206.4 per 100,000 population) trails national (275.4 per 100,000) and regional (233 per 100,000) estimates. In terms of demographic characteristics, Georgia has a more racially diverse HIT workforce, compared to the surrounding states and the nation but lacked Hispanic representation. Additionally, compared to the surrounding states and the US, Georgia has a higher proportion of females in this workforce (80.9%). Most HIT workers are employed in hospitals and work full-time.

**Conclusions:** The supply of the HIT workforce in Georgia currently trails regional and national estimates. With the advancements in medical technology and the HITECH Act, there is an increasing demand for health information technology workers. As such, attention should be paid to recruitment and retention efforts. This report may serve as a reference for future evaluation and monitoring of trends in the HIT workforce in the state.

**Keywords:** Health information technology, medical technology, supply, workforce, demographics  
<https://doi.org/10.20429/jgpha.2019.070213>

**INTRODUCTION**

Demand for the health information technology (HIT) workforce has increased rapidly, fueled, in part, by the Health Information Technology for Economic and Clinical Health Act, part of the 2009 American Recovery and Reinvestment Act, which mandated the adoption and “Meaningful Use” of HIT (Fenton et al., 2012). There are concerns that nationally, the supply of HIT professionals may not meet the demand (Health Research Institute, 2013). Little is known about the HIT workforce in Georgia. This report describes the demographic and practice characteristics of the HIT workforce in Georgia and surrounding states in comparison to the United States (US).

**METHODS**

Accurate estimation of the HIT workforce is difficult to derive since this workforce population is currently not licensed. We used data from the 2014-2016 American Community Survey (ACS) to estimate the supply of the HIT workforce in the state. The HIT workforce was identified using the following 2010 ACS Occupation Codes: 3510

(Medical Records and Health Information Technicians). In addition, individuals working in computer and information management-related occupations ((1005-7, 1010, 1020, 1030, 1050, 1060, 1105-7) were included only if they worked in the health sector (2012 ACS Industry Codes: 7970 (office of physician); 7980 (office of dentist); 7990 (office of chiropractor); 8070 (office of optometrist), 8080 (office of other healthcare professional, 8090 (outpatient medical center); 8170 (home health); 8180 (other healthcare services); 8190 (hospital); 8270 (nursing home); 8290 (residential care facility)).

The demographic (gender, age, race, and ethnicity) and practice characteristics (work setting and number of hours worked per week) of the HIT workforce were obtained for Georgia, collectively for the southeastern region defined as the states of Georgia, Alabama, Florida, North Carolina, South Carolina, and Tennessee (subsequently referred to as “region” in this report), as well as for the United States. The overall supply of the HIT workforce was standardized using population data for 2015, obtained from the US Census Bureau. Demographic and practice characteristics data are reported as frequencies. All data were weighted to account

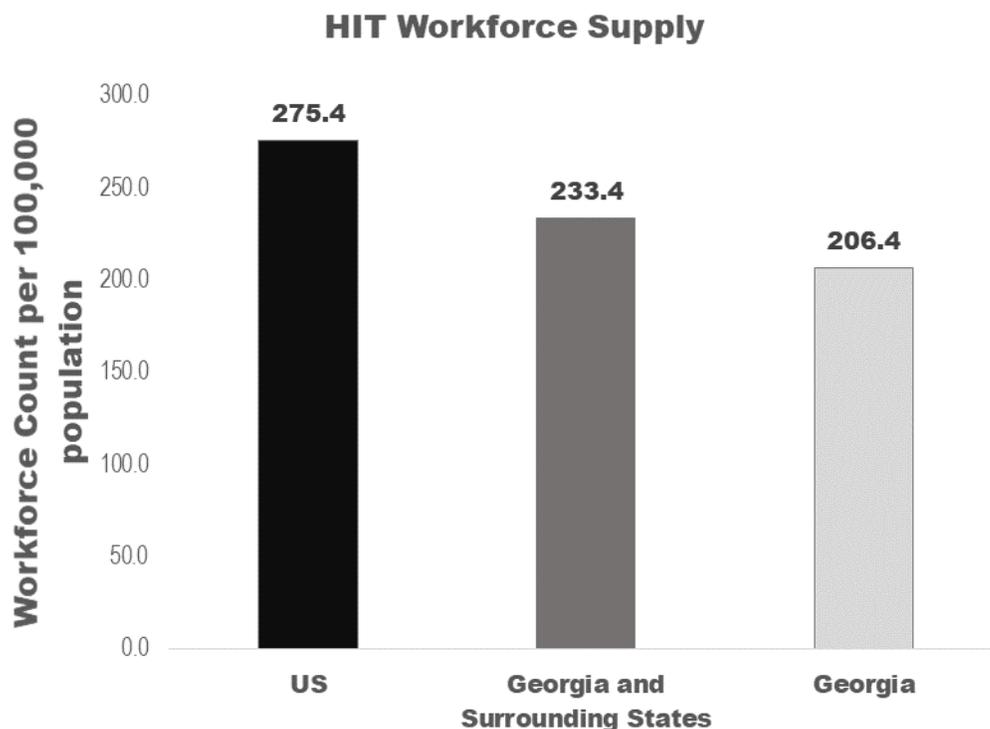
for the sampling design of the ACS and to obtain representative estimates. All analyses were completed using Stata 14.0.

## RESULTS

### Supply

The HIT workforce supply nationally was estimated to be 275.4 per 100,000 population between 2014 and 2016, which is higher than the supply for Georgia and the region. The HIT workforce supply for Georgia (206.4 per 100,000 population) was lower than national and regional estimates (Figure 1).

Figure 1. HIT workforce supply in Georgia, surrounding states, and the United States



### Demographic characteristics

The majority of the HIT employees in Georgia is female (80.9%). Compared to the region and the US, Georgia has a higher proportion of females in this workforce. The age distribution of the HIT workforce is somewhat similar for Georgia, the region, and the US. However, Georgia has a slightly higher proportion of HIT workers in the under 25 years age bracket (Georgia: 8.4%, Region: 4.4% and the US: 5.8%) and a lower proportion of workers in the 65 years and older age bracket (Georgia: 2.4%, Region: 4.3% and the US: 7.8%).

With respect to race, the HIT workforce in Georgia was found to be more diverse, compared to the region and the

nation (Georgia: 49.9% non-White, Region: 32.4% non-White and the US: 26.0% non-White). However, Hispanic representation is lower in Georgia compared to the region and the US (Georgia: 4.2%, Region: 7.7% and the US: 9.1%).

### Practice Characteristics

The majority of HIT workers work in full-time positions, working at least 31 hours a week (Georgia 87.9%. Region: 92.6% and the US: 82.3%). The hospital is the most common setting of employment for HIT workers in the state and region as well as nationally (Georgia 44.7%. Region: 45.1% and the US: 48.9%).

**Table 1. Demographic and practice characteristics of HIT workforce in Georgia, surrounding states, and the United States**

Characteristics	Georgia	Region (Georgia and Surrounding States)	United States
<b>Gender</b>			
Male	19.1	26.3	26.5
Female	80.9	73.7	73.5
<b>Age</b>			
Under 25 years	8.4	4.4	5.8
25-34	14.7	21.4	19.1
35-44	26.5	22.9	21.8
45-54	25.0	26.6	23.9
55-64	23.0	20.4	21.6
65 years and older	2.4	4.3	7.8
<b>Race</b>			
White	50.1	67.6	74.0
Black	47.9	26.7	13.2
Others	2.0	5.7	12.8
<b>Ethnicity</b>			
Hispanic	4.2	7.7	9.1
Non-Hispanic	95.8	92.3	90.9
<b>Hours Worked</b>			
20 hours or less	5.8	3.6	13.6
21-30	6.3	3.8	4.2
31-40	73.5	76.9	68
Over 40 hours	14.4	15.7	14.3
<b>Setting of Work</b>			
Hospital	44.7	45.1	48.9
Physician Practice	18.6	16.1	12.4
Outpatient Medical Center	5.2	7.0	7.7
Long-term Care (incl. Nursing Home, Home Health, Residential Care Facility)	7.8	7.5	7.1
Other Health Care Setting	5.6	10.6	9.7
Other	18.2	13.6	14.2

## DISCUSSION/CONCLUSIONS

This brief report described the supply and characteristics of HIT workers in Georgia. The findings indicate a shortage of HIT professionals in Georgia, compared to the region and the US. With the advancement of medical technology, increasing HIT adoption (Rasouli et al., 2012) and the expansion of telemedicine, the demand for health information technology workforce is expected to increase (American Telemedicine Association, 2006). Consequently, the shortages of HIT professionals in the state may worsen without the implementation of effective policies or interventions, such as those aimed at increasing HIT recruitment through the expansion of HIT-related training

programs and the integration of HIT competencies into the curricula of other health professions training programs. Additional efforts should be made to increase Hispanic and male representations in the workforce.

This study has a few noteworthy limitations. First, it defined HIT professionals using occupational codes from the ACS, derived from the Bureau of Labor Statistics' Standard Occupational Classification System. The count, as well as the characteristics of the HIT workforce, may vary depending on how the workforce is defined. For example, while information technology (IT), in general, is a male-dominated occupation (Beckhusen, 2016), the HIT workforce is not. This may be because health information technologists are combined with "medical records" into one

occupation classification code; individuals working in medical records are mostly female. To obtain a better representation of the HIT workforce, we included professionals in computer and information management-related occupations who were working in healthcare. Secondly, the use of secondary data from a self-reported survey placed a limitation on what could be assessed. There is also the potential for errors in the data that may impact the estimations.

Despite these limitations, the study is one of the first to examine the HIT workforce in Georgia, and its findings have implications for state recruitment and retention efforts.

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#### Acknowledgements

None.

**Statement of Student-Mentor Relationship:** The authors of this report, Imaobong Ekpo, a Master of Public Health student and Emmanuel Akowuah, a Doctor of Public Health student worked with their mentors/senior authors Dr. Bettye Apenteng and Dr. Samuel Opoku to complete this report as part of their academic research development at the Jiann-Ping Hsu College of Public Health, Georgia Southern University.

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