POPULATION HEALTH: IDENTIFYING SKILL SETS AND EDUCATION ALIGNMENT FOR HIM PROFESSIONALS

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Population Health: Identifying Skill Sets and Education Alignment for HIM Professionals

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Abstract

The COVID-19 pandemic has increased the emphasis on population health, therefore potentially amplifying demand for healthcare workforce professionals in this area. There is an urgent need to explore and define the roles of health information management (HIM) professionals in the population health workforce. This study sought to identify the skill sets and qualifications needed, and HIM education alignment with skills necessary for HIM professionals entering the population health workforce. An intentionally broad internet search of job postings was conducted to determine skills in population health. Population health-related job descriptions and qualification requirements were abstracted and analyzed using ATLAS.ti. Three common job categories were identified: management, analytics, and coding. Skill set requirements included soft skills, problem solving, project management, research, and data analysis. The study results identified HIM educational alignment and found that HIM professionals are generally a good fit to meet the increased need in the population health workforce.

Keywords: Workforce, population health, skill set, health information management, qualitative content analysis, COVID-19 pandemic

Introduction

The 2020 COVID-19 pandemic has impacted all aspects of society, most notably healthcare, the economy, social and cultural issues, and politics. One area that has become integral to fighting the pandemic is population health. Testing, tracing, research, data analysis, and public education have become keys to our society's response to the pandemic. This has demonstrated a need for a strong population health workforce. Based on the emerging need for additional population health employees, there is a role for health information management (HIM) professionals to examine current education and skill set preparation in population health, and to the population health workforce.

Population health focuses on the well-being of both sick and healthy people within a specific group. The term "population health" originated in Canada in 1997 and was defined as "the health of a population as measured by health status indicators and as influenced by social, economic, and physical environments, personal health practices, individual capacity and coping skills, human biology, early childhood development, and health services."[1] These overlapping conditions and elements shape the health of a population, and population health management identifies the trends

and patterns resulting in outcomes that are used to formulate and adopt policies advocating for the improvement in the welfare of those populations.[2] The conceptual framework for population health definitions include the following terms: public health, population health improvement, population health management (PHM),[3] and population health equity.[4] Researchers note that for population health initiatives to be successful, consideration must be given to social, environmental, and medical factors, including determinants of health.[5]

Population health, especially those functions related to information management, presents potential new opportunities for HIM professionals in the population health workforce.[6] While HIM professionals have not played a large role in population health to date, now is the ideal time for them to step into roles such as creating business intelligence (BI) reports for healthcare entities, analyzing big healthcare data, and leading health information exchange (HIE) implementations. Population health has evolved and become data-driven with increased data collection of health information brought about by the effective use of electronic health records (EHRs). Claims data produced by health information professionals through the abstracting of information and application of medical codes to patient encounters is a valuable tool used in PHM. In addition to the claims data, clinical data along with patient satisfaction survey data provides a more comprehensive picture of the care delivered, and provides useful information for quality improvement and cost control initiatives. With payment reform and the shift from reimbursement for volume to value, the use of PHM is essential for success in the value-based payment model. A focus on healthcare and community needs in association with data analytics is central to a population health approach. A deep understanding of a patient population impacts the types of healthcare services provided for disease prevention and disease management with a focus on disease reduction. This entails the capture and analysis of patient data as well as community information that together supports evidence-based care.[7]

Population health, as well as the entire healthcare system, is facing continuous challenges in improving health outcomes for all. The COVID-19 pandemic has pointed to many issues that exist today, including, the lack of automated software to alert patients to diagnoses, the ability to test and trace mass numbers of individuals, complex healthcare policies and laws, and the implementation of sustainable initiatives to manage population health. However, HIM professionals have a skill set to help improve population health. HIM academic programs are preparing students to become professionals in all areas of health care and health information, including population health.[8]

The AHIMA Council for Excellence in Education (CEE) is responsible for the continued development and updating of required curricular competencies based on the needs of and input from industry stakeholders. Educational HIM programs ensure graduates are competent in the recommended knowledge and skill sets outlined by the curricula competencies. In response to the AHIMA's HIM

Reimagined (HIMR) initiative, updated 2018 HIM Curricula Competencies along with revised and required Bloom's Taxonomy levels were introduced and approved for implementation by the AHIMA Council for Excellence in Education. All AHIMA accredited HIM education programs must be compliant with the 2018 AHIMA/CEE curriculum per the designated date in 2021.[9]

The 2018 HIM Curricula Competencies consist of six common domains representing the academic framework for the areas of mastery vital for all health information professionals regardless of academic level. With the 2018 HIM Curricula Competencies, previous subdomains were removed, and the competencies were revised in a broader context that allows for more flexibility allowing educators and academic programs to adjust to changes in educational demands. Specific curricula competencies are addressed in the following six common domains:[9]

- Domain I. Data Structure, Content, and Information Governance
- Domain II. Information Protection: Access, Use, Disclosure, Privacy, and Security
- Domain III. Informatics, Analytics, and Data Uses
- Domain VI. Revenue Cycle Management
- Domain V. Health Law and Compliance
- Domain VI. Organizational Management and Leadership

Methods

Study Design

This is a cross-sectional qualitative study in which data were collected from an intentionally broad internet search of job postings related to population health over a three-month period from December 2019 to February 2020. Using a search key word of "population health," ten HIM professionals from the AHIMA Foundation Research Network Population Health Workgroup conducted independent random searches for advertised population health positions posted to websites by United States employers. Each professional submitted five search results with the job titles, responsibilities and qualifications. Due to the fact that the data were drawn from public domain, institutional review board (IRB) approval was not needed.

Data Collection

A total of 50 job postings were collected, abstracted, and assembled into one data file, with three key data components of 1.) job title, 2.) job description, and 3.) job qualifications for each posting. One duplicate position was eliminated, resulting in 49 unique job postings.

All collected job titles were categorized into four groups: 1.) management positions, including different managerial level positions, such as director, manager, supervisor, and lead; 2.) analytical positions, including any job titles with analytical and technical aspects, such as analyst, health scientist; 3.) coding positions; and 4.) other positions, defined as all positions that were not included in

the previous three groups, such as consultant or faculty. Job descriptions included postings that described the responsibilities of the job. Qualifications included education level requirements, specific skills and technical specialty area requirements, and prior experience.

HIM Domains

2018 Health Information Management (HIM) Curricula Competencies were used for comparative analysis. Data related to job responsibilities were matched with each of six domains from the Competencies. The six domains included in the analysis consist of:

- Domain I. Data Structure, Content, and Information Governance
- Domain II. Information Protection: Access, Disclosure, Archival, Privacy and Security
- Domain III. Informatics, Analytics, and Data Use
- Domain IV. Revenue Cycle Management
- Domain V. Health Law and Compliance
- Domain VI. Organizational Management and Leadership

Data Analysis

Data coding was conducted for job titles based on the functions of the posted positions. After data coding, classification, and categorization, the master data were formatted in Excel and imported into ATLAS.ti scientific software for qualitative data analysis. Thematic content analysis was used to identify themes, and descriptive statistics were computed and summarized.

A total of four themes emerged from the search results, which included 1) job titles and job categories; 2) job responsibilities; 3) job requirements for education level and special skill sets; and 4) alignment between job responsibilities and HIM education domains/competencies. Thematic content analysis was conducted both manually and with the use of ATLAS.ti software.

For the purposes of the study, data were analyzed for job category, job responsibility, education and skill requirements, and alignment between responsibilities and HIM education domains and competences.

Results

Job Titles and Categories

A sample of fifty population health-related job postings were reviewed. One was a duplicate resulting in 49 postings to be analyzed. The results are summarized in **Table 1**. Of the postings analyzed, 33 (67 percent) of the job titles fell into a category entitled Management. This included roles such as coordinator, specialist, liaison, lead, or any title involved in the day-to-day managing process. The second category of job titles was Analyst & Technical, with 10 (18 percent) roles. All the job titles in this sample group were analysts. Medical Coding had two (4 percent) job titles from the postings, and four (8 percent) other titles including consultant, advisor, or educator were grouped

into a category labeled Other.

Education Requirements

The education requirements for the job postings were also analyzed and grouped by requirement. There were 55 instances of educational requirements included in the population health jobs in this sample. **Table 2** displays the educational requirements found in the postings, while **Table 3** displays the requirements divided by job category. Two of the jobs required a high school diploma or equivalent. Two required an associate degree. Two indicated a bachelor's degree was preferred, while 30 required a bachelor's degree. Sixteen postings indicated a master's or doctoral degree was preferred and three required a master's degree. Overall, of the 59 times education was mentioned in the population health job postings, 55 (93 percent) were looking for a bachelor's degree or higher, and 19 (35 percent) were seeking candidates with graduate education.

Skill-Set Requirements

The sample was also reviewed to identify the skills most cited in the job postings. One hundred seventy skills were mentioned in the postings. The most commonly occurring, related to social and communication skills, were grouped together and labeled soft skills. These were found in 40 (82 percent) of the 49 job postings. The skill sets, descriptions, and respective job categories are displayed in **Table 4** and **Table 5**. The second most common skill set, including problem solving, reporting, and spreadsheet skills were included in 17 postings (35 percent). Skills relating to workflow appeared in 16 (33 percent) of the postings. Project management (13), research (13), data analysis/visualization (12), electronic medical record (11), database (8), and classification systems (6) rounded out the list. Table 4 also includes the AHIMA 2018 Health Information Management Curriculum Competency Domains most closely associated with the skill sets. The domain occurring most frequently was Domain III Informatics, Analytics, and Data Use, which was most closely related to six of the identified categories of skills. Domain VI Organizational Management & Leadership matched most closely with the two categories of skills appearing in the most job postings, Soft Skills (40) and Problem Solving (17).

AHIMA Competencies

A total of 166 skills were identified in the sample of 49 population health job postings. The skills from the population health job posting were paired with the AHIMA 2018 Health Information Management Curriculum Competency Domains that best matched the description. In the sample of 49 job postings, 18 items were mentioned that matched with Domain I. Data Structure, Content, and Information Governance. Six matched with Domain II. Information Protection: Access, Use, Disclosure, Privacy, and Security. Domain III. Informatics, Analytics, and Data Use, matched with 44 skills mentioned in the postings. Domain IV. Revenue Cycle Management, had two job responsibilities and/or qualifications that matched, and Domain V. Health Law & Compliance, was mentioned 10 times. Domain VI. Organizational Management & Leadership, matched the most skills,

86. **Table 6** shows these results matched with examples of the job titles in which the domains were found and the categories of skills identified. **Table 7** includes the job categories in which the domains were included.

Discussion

This study assessed skill set and education requirements for positions in population health using data extracted from random population health job postings. The skills and requirements were mapped back to the AHIMA curriculum domains for the purpose of evaluating the knowledge skills and abilities required by CAHIIM accredited programs. We also examined whether HIM professionals and graduates would satisfy common minimum job requirements in the population health related field of practice. The results of this study suggested that HIM graduates and professionals generally possess the skills listed as required in population health related job postings. This study identified HIM graduates and professionals as viable candidates capable of successful performance in population health management positions.

Skills for population health positions identified from our study matched previous literature.[10] No major gaps between HIM education and population health skill sets were observed. All skills required in the job postings mapped directly back to one of the six AHIMA domains. The majority of the skills such as data analysis, EHR, problem solving, and soft skills, fell within Domain III. Informatics, Analytics, and Data Use or Domain VI. Organizational Management & Leadership. HIM students and practicing professionals receive extensive education and training within these domains. Additionally, HIM professionals receive training in coding systems, electronic medical records systems, and anatomy and physiology that provide a broad foundational skill set that can be readily applied to population health. While all skills listed in the population health job postings map back to the AHIMA curricular domains, there may be opportunities to expand or strengthen some domains and skills related to population health. The results from this study highlight the importance of skills and competencies taught in the leadership and data analytics related domains in HIM education.

The limitations of the study should be noted. First, this study did not identify the level of skill or depth of knowledge required to be successful in the population health jobs. An additional study using job descriptions, position analysis, or manager survey would be required to obtain data at this level of detail. Second, the results from this study have limited generalizability as the job postings were selected at random and not obtained using purposeful or systematic sampling techniques. The small sample size could be another drawback of the study that limited our data collection and analysis at a broader content perspective.

While further study is needed, this study opens the door for HIM professionals in the population health realm. Additional study can lead to analysis of areas in which HIM education and training can be strengthened in the areas of population health to best prepare HIM professionals to fill these

roles. Further in-depth analysis would be required to identify and understand any knowledge gaps among HIM professionals or to identify areas for improvement in the AHIMA curriculum to strengthen the job opportunities of HIM graduates seeking employment in the population health field.

Conclusion

The results of this study showed a potential opportunity for HIM professionals in the population health field. The skills required as found in the population health job postings align with the curriculum competencies required for HIM education. With the projected increased demand for population health professionals due to the COVID-19 pandemic, HIM professionals provide an additional source of skilled employees. HIM professionals are well versed in the skills needed in population health, including data analytics, project management, community health assessment, EHRs, and systems thinking. Future study should attempt to develop strategy for continuous improvement of HIM skill sets in population health workforce and education.

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