Leveraging Public Data Through Automated Collection for Program Assessment and Improvement

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Introduction

OU-HCOM has leveraged on the availability of public data to assess and evaluate if the College is meeting certain aspects of its mission and vision. Those aspects include placing graduates in areas with the highest need (i.e., Health Professional Shortage Areas & Medically Underserved Areas as defined by the Health Resources and Services Administration (HRSA) and/or professions with the highest shortages of specialists as outlined by the AAMC report, AAMC, 2018), that is, primary care, surgical specialties and other specialties. Through automating the process of public data collection from HRSA, Rural Health Information Hub (RHi) and the National Plan and Provider Enumeration System (NPPEs) by the means of three in-house developed applications, the Office of Assessment and Accreditation at OU-HCOM is able to retrieve above-mentioned data based on alumni addresses.

Objectives

Application of computer technology to automate data collection and reporting, particularly of information core to institutional outcomes assessment, is long overdue. Furthermore, it enables labor to be redirected to more fruitful teaching, learning, and assessment elements of the academic enterprise while increasing data quality and accuracy.

The objectives of this poster-presentation is to provide the tools that facilitate automatic public data collection of HRSA defined shortage areas, geographic location data (e.g., metropolitan areas; percentage of rural population, etc. as defined by the U.S. Census Bureau) for tracking a medical school’s post-graduate. In addition, we offer a scraper that retrieves National Provider Identification (NPI) to improve alumni tracking efforts, including easier tracking of board certifications.

Innovative Approach

High need for data-driven decision-making, calls for enhanced sources of information both internal and external. The Office of Assessment and Accreditation has successfully automated processes of collecting public data and has leveraged on the information to assess and improve program outcomes. In addition, the use of web applications enables to redirect hundreds of labor hours on complex tasks otherwise spent on repetitive work of data collection. Wide use of computer technology to automate data collection and facilitate advanced reporting, contributes to increased data transparency, improved decision-making process and continuous quality improvement efforts. Tracking and publishing data on osteopathic physicians, increases awareness of osteopathic medicine and promotes the osteopathic profession.

- **Direct cost savings:** at the minimum wage in Ohio (e.g., $9.25) after replacing manual work: ~$725 per 1000 records. As the number of alumni increases, the cost savings increase. In 2018, the direct cost saving at OU-HCOM increased $1,500 per year
- **Time savings:** over 30 hours of manual labor per 1000 records
- **Opportunity cost:** The efforts directed at manually collecting HRSA data can be redirected to other valuable projects
- **Improved data accuracy**
- **Improved efficiency**
- **Accommodates grant reporting needs** for agencies aimed at enhancing health access and quality in rural and/or underserved areas

- **Advanced data visualization and reporting:** HRSA data allows creation of interactive maps to visualize a D.O. school’s impact in the area and the nation
- **Limitations:** The scraper requires availability of a database containing valid students’/graduates’ in training/practicing addresses (i.e., street, city, zip code, state)

Results

The HRSA web scraper and detailed instructions are available for download through the following link: https://goo.gl/PHQmD2

**HRSA Web Scraper Access Link**

The mission, vision and goals of osteopathic medical colleges in the U.S. and the national reports by HRSA & AAMC, show the service to communities, particularly those that have the greatest need, is a priority. A tool that enhances the identification of medical trainees and graduates practicing/training in federally designated underserved areas and rural areas is invaluable, particularly to the osteopathic medical schools that excel in meeting the social mission of the medical profession. The scraping oFilter automated data collection process that yields cost savings, improves efficiency and data accuracy, and advances the quality of data used to determine a college’s impact on the health care needs of the region, state and nation.

Conclusion

**References**


HRSA Data Workbench. Final draft accessed by author: https://interactivesolutions.arcgis.com/usapsp/arcgis/Map/View/StorageAreas.aspx