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A study of occupational employment and retention using linked occupational licensing, education and population registry data

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Objectives

Shortages of healthcare professionals are an ongoing challenge, but administrative data systems typically lack systematically collected data on occupation. This study outlines the development of data sharing agreements with occupational licensing authorities in New Brunswick, Canada, and uses resulting linked data to study the employment and retention decisions of professionals.

Methods

We describe engagements with the licensing authorities of three regulated occupations - registered nurses, paramedics and social workers - that led to the development and approval of data sharing agreements with each authority. We focus particular attention on data safeguards and the role of those authorities in the subsequent use of their data. We then outline the data sharing and linkage processes that combined occupational regulatory data with postsecondary education data and population registry data drawn from public health insurance records. Finally, we present results on the employment and retention outcomes of individuals licensed to practice in these occupations.

Results

We engaged with senior administrators in the licensing bodies for three regulated health occupations in NB to identify priority questions and challenges around recruitment and retention of individuals in those occupations, including consideration of new pathways to licensure such as practice-ready assessment. These discussions led to the development of formal data sharing agreements between the licensing bodies and our organization, a provincial university-based data custodian, that involved the transfer of identifiable, linkable person-level registry information. Separate analyses were undertaken of employment and retention decisions of individuals in each occupation. Common themes identified for each occupation include significant rates of exit within five years of commencing work for those individuals not originally from NB, but not for NB-born individuals, even those who were educated outside

the province.

Conclusion

Regulatory data from licensing bodies is a valuable source of information on employment in specific occupations of interest when broader population-level systematic collection of data on occupation of employment is unavailable. Linked person-level data is crucial for understanding entry into and exit from health occupations facing chronic shortages.

