

Where it's at - linking data geographically.

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Introduction

Most public health-related concepts and outcomes can be defined as to their geographic location. The surroundings often have a strong influence or interactions with studied phenomena. For this reason a good understand and accurate geographic placement, linking, and aggregation of studied concepts is a critical yet often underestimated procedure.

Objectives and Approach

The main objectives of this presentation are: 1) an easy to understand review and explanation of geographic delineation markers in common healthcare databases, and 2) ways and pitfalls of geographic data linkages. Common point- and area-defined databases will be described. Nuances of 'point-to-area', 'area-to-area' linkages will be discussed, with additional explanations of scale and zone effects. Examples of common linkages between the following common spatial delineators will be explained: Postal Code Conversion File (PCCF), small area Canada Census units, common health system geographies (e.g. sub-regions, LHINs). Frequently committed errors and best practices in geographic data linkages will be discussed.

Results

Examples of the influence of various methods of geographic data linkages on study simulated outcomes will be shown.

Conclusion/Implications

Improper geographic linkage procedures can lead to incorrect study results. Enhancing the knowledge of geographic concepts in public health research and promotion of correct procedures in spatial placements, linkages and aggregation are the main take home messages of this presentation.

