Abstract: Chilean Health Informatics Workforce, theoretical estimation.

Problem
One of the essential ingredients for health information technology implementation is a well-trained and competent workforce (1). In Chile it is not known how many professionals in the area of health informatics exist, nor how many are required to implement and maintain quality Health Information Systems (HIS).

Solution
Different methods of theoretical estimation of the workforce in Health Informatics will be implemented, based on specialized international evidence and data that characterizes health facilities in the national context. This estimation might allow the generation of a theoretical description of the current and future situation of the workforce, establishing gaps in human capital that will require training and certification.

Methods
Two methods of analysis were used:
Method 1: Based on the proportion of full-time equivalents (FTEs) by number of beds, considering the Electronic Medical Record (EMR) Adoption Model (EMRAM) (1)(2).
Method 2: Based on the proportion of Health Information Technology (HIT) workers by healthcare personnel (non-HIT) nationwide (3).

Variables
Full-time equivalents (FTEs): Total hours worked divided by average annual hours worked in full-time jobs.(4)
Hospital beds: Number of beds that are maintained, staffed and immediately available for use (5).
Health information technology (HIT) worker: Person with knowledge not only of information technology, but also of healthcare, business and management, and other disciplines (3).
Non Health information technology (non-HIT) worker: Professionals and technicians who perform functions in the health area.

Hypothesis
The international methods of estimation for Health Informatics workforce can be extrapolated to the Chilean context.

Objectives

Estimate the Chilean Health Informatics workforce using international analysis methods.

1. Review specialized literature in Health Informatics workforce
2. Select methods of analysis
3. Evaluate the quality of available data of the Chilean reality
4. Implement selected methods
5. Compare workforce estimates

Results

Method 1: In Chile there are 38,138 hospital beds (6); 47% of hospitals are in EMRAM 0, and assuming 53% is at least in EMRAM 1, **2,320 FTEs** are needed today. If all hospitals in Chile were in EMRAM 7, there should be **15,675 FTEs** to maintain that scenario.

Method 2: There are 437,337 registered health workers (7); the HIT/non-HIT proportions vary from 1/48 to 1/52 (3). There are **8,410 to 9,111 HIT workers** required.

Outlook

This first step in the description of the current situation and gaps, can help the proper establishment of training routes and certifications needed to solve today needs and upcoming challenges.

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