

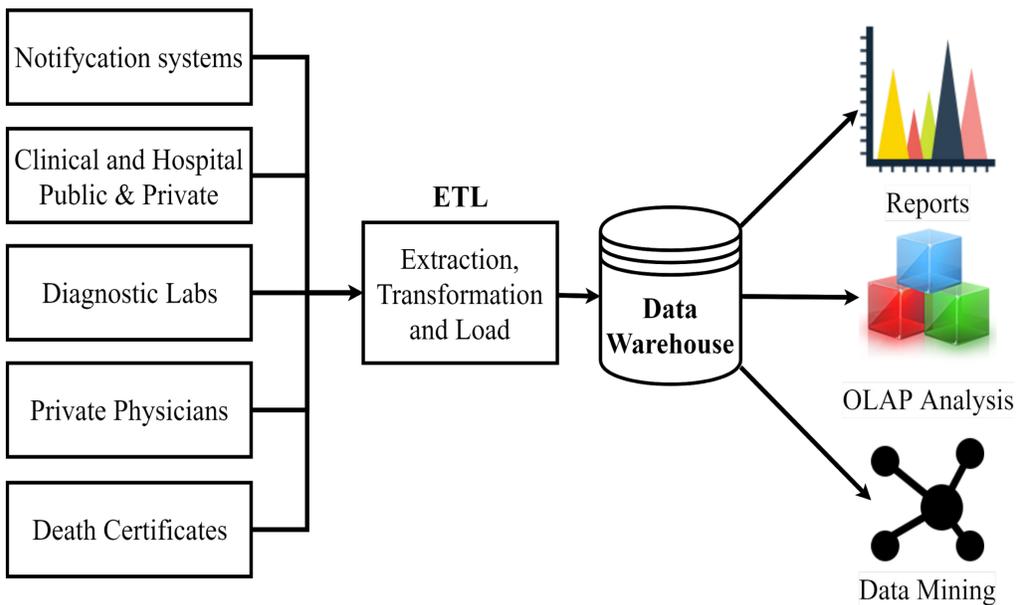
Using Health Ministry mass notification systems for improving data quality in Cancer Registries

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DATA WAREHOUSE

Data Sources



INTRODUCTION

In Colombia, cancer notification is compulsory since 2015. However, reliance solely on passive (electronic) registration practices does not seem to be an appropriate strategy to obtain complete accurate incidence data. Having good quality statistics on cancer burden is essential to make an accurate diagnostic of the cancer problem and to design, implement and monitor control measures. Notification systems on cancer implemented by the Latin American Health Ministries have certain limitations in terms of completeness, comparability and data validity

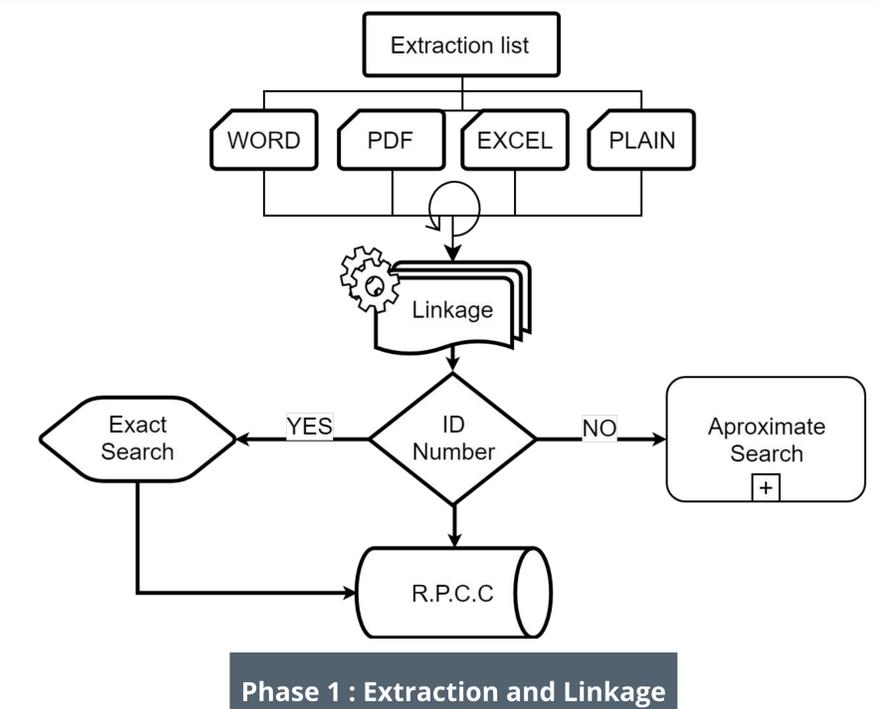
METHODS

RPCC monthly received flat files with general mortality data from the Municipal Health Secretary and breast, cervix and childhood cancer data from the Public Health Surveillance System. A set of instructions to process structures during data extraction was defined and rules for naming tables, parameters and relations were specified. Data was debugged through text-processing functions using regular expressions, control fluxes and nested loops. Data was stored in a transactional and analytical model based on facts-dimensions relations.

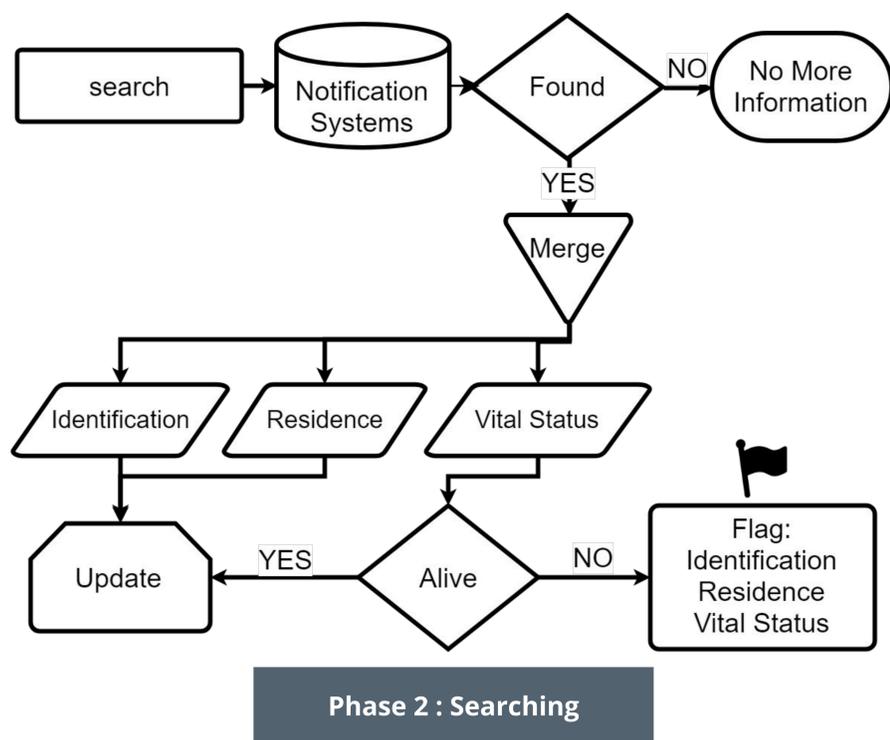
RESULTS

In 2018, the Cali Municipal Secretary of Health notified to RPCC 3562 deaths from cancer in all sites and 3196 cases of breast, cervix and childhood cancer, of which 46% were new cases. Data from notification systems updated identity (9%) and residence (23%) of 3662 prevalent cases. Death certificate updated vital state and last-contact date of 97% of these.

Extraction and Searching



Phase 1 : Extraction and Linkage



Phase 2 : Searching

CONCLUSIONS

It's a priority to implement schemes, structures and tag languages for standardizing processes and improving interoperability of cancer registry systems in Latin America. Notification systems contribute improving exhaustivity and quality of data in cancer registries.

References: [1] L. Bravo, "Estimating the incidence and mortality of cancer in Colombia: What are the best data for public policies?," *Colomb. Med.*, 47, p. 3, 2016. [2] F. López & V. Romero, *Mastering Python Regular Expressions Leverage regular expressions in Python even for the most complex features*, Packt Publishing, Birmingham, 2014. [3] P. Ramachandran, N. Girija, & T. Bhuvaneshwari, "Developing a Decision Support System Using Cancer Data Warehouse," *Int. J. Sci. Eng. Res.*, 5(9), pp. 238-245, 2014.



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