Electronic Certification of Death in Slovenia – System Considerations and Development Opportunities

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Introduction

- Facilitates morbidity and mortality surveillance, and consequently supports evidence-informed health policies and prevention strategies

- Monitoring population health, epidemiological studies and international comparisons

- Often inadequate and fragmented (diagnostic/coding errors, missing information, unavailability of medical records, etc.)

- eDeath certification:
  - access to deceased's medical record
  - faster execution of business processes /speed of data transmission
  - the confidentiality of personal data
  - data archiving and standardization of death certification practices

Motivation and research objectives

- The current death certification practice in Slovenia is obsolete and non-compliant with the legislation in some parts

- It prevents the cross functional integration of processes and considerably inhibits the utilization of the stakeholders' organizational capabilities.

- Interrelated research objectives:

  - An overview and analysis of the death certification practice in Slovenia and identification of related deficiencies and system inconsistencies.

  - Conceptualization of ICT-based model of death certification including renovation of business processes and organizational changes.

Methods

- Focus group methodology (January 2014 - December 2015)

- The final sample size comprised 29 experts (ministries and public bodies, coroners, and ICT industry).

- Equal distribution in terms of gender, age between 40–60 years

- The role of the participating experts was twofold:

  - analysis of the existing death certification practice,

  - provide their vision of the transformation, and propose a conceptual design of the ICT-based death certification model.

Results 1

- The occurrence of death generates a very complicated course of action that triggers activities in different institutional subsystems

- **Legal and administrative issues**

- Regulated from three perspectives: medical, administrative and general

- Several inconsistencies concerning legal and administrative issues were revealed:

  - Non-compliance with the existing legislation in the field

  - Specific authorizations and licenses to the coroners have not been issued

  - Divergence between legislation and practice can be frequently detected

  - The normative acts do not foresee the possibilities for eDeath certification

Results 2

- **Education and training issues**

- Coronary service in Slovenia is exclusively performed by the medical doctors

- Education and training programs for post mortem examination service have not been defined

- **Organizational issues**

- Although rather clear and strict legal provisions, there are several organizational discrepancies in practice:

  - A network of post mortem examination services has not been established

  - Official post mortem examination services are available only in large medical centres (services in rural areas are mainly carried out by family doctors)

  - Inconsistent practices (between municipalities and large medical centres)

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Results 3

- **Informational issues**

- Insight uncovered significant inconsistencies and shortcomings:

  - Death certification process is not optimally organized and structured (paper-based manual data entries)

  - Inadequate legal regulation and non-compliance

  - Unresolved issues concerning the licensing, status and jurisdiction of the coroners

  - Unsecured and untimely information flows between the main stakeholders

- The issues revealed are manifested in several limitations:

  - The slow data and information flow between the stakeholders and the absence of fast and effective control of the data entered (paper-based forms, doubled data)

  - Rights of access to information are vaguely defined (unauthorized access)

  - Inaccessibility of data from the medical records of the deceased, etc.

Conceptualization of ICT-based model of death certification

- Addressing the identified issues (ICT-based solution, promotion of the national guidelines)

- Conceptual proposal:

  - Exceeds the current incapacities concerning the data flows

  - Access to deceased's medical documentation

  - Higher quality and control of data, adequate documentation and archiving

  - Protection of personal data

  - Optimized and streamlined business processes and considerable organizational changes (regulatory amendments, certification of coroners, education and training, network of coronary services, etc.)

  - Redefinition of functions and relationships between the main actors, as well as a reconfiguration of the technological, organizational, and regulatory elements according to declared public health objectives

Conceptual design of ICT-based model of death certification
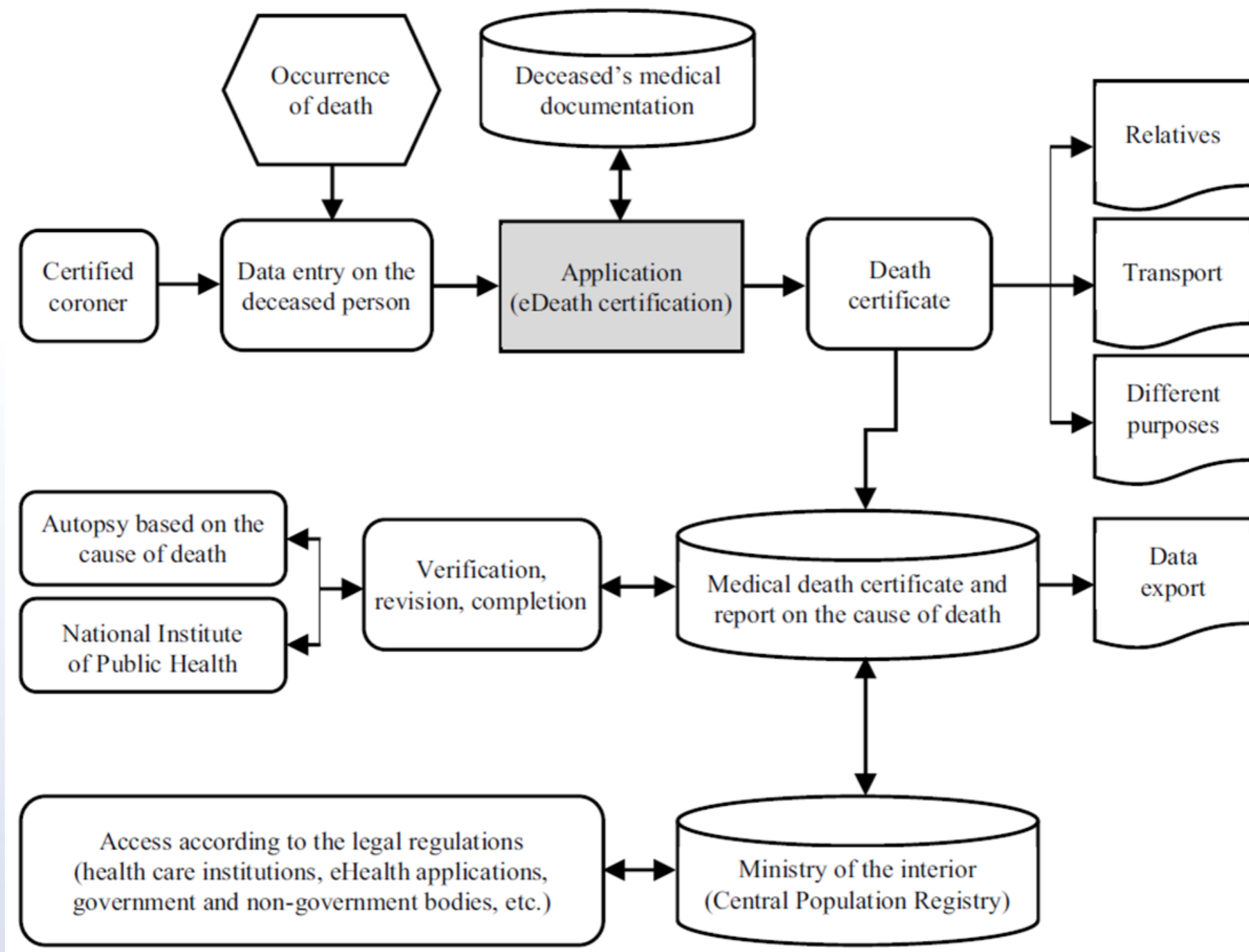
Discussion

- Consider the wide array of factors from the health care and administrative ecosystems

- The main methodological dilemmas:

  - somewhat arbitrary identification of the potential effects of informatization,

  - conceptualization of the transformed death certification model (hypothesized without prior pilot testing and practical validation in the health care environment)

- The research presented does not seek to impose a 'one-size-fits-all' solution

- A valuable insight into the complex dynamics of the existing death certification practice

- The groundwork for further developments in this area

- Better utilization of public health resources and tangible public health benefits

Thank you!

Questions?

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