Review Article

Health Information Governance Program: A Review on Components and Principles

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Abstract

Objectives: The health information governance (HIG) program is an extensive organizational framework for information management across its lifecycle. This program is important as a strategy for the materialization of high-quality care for individuals, social health, and the reduction of the costs of care and the reliability of health information. Considering the spectrum of this program in pioneering countries, the current review aimed to study the HIG program in the selected countries.

Methods: This review article was conducted in 2017 by searching for relevant English language articles in PubMed, Scopus, ScienceDirect, and Google Scholar databases, along with the websites of relevant organizations such as Infoway and the American Health Information Management Association. The key terms included, but were not restricted to, 'health information governance program', 'health information management', and 'health information governance components'. Finally, the data were analyzed with respect to the aim of the study.

Results: The components of the HIG program, which are classified into 18 main groups, are the principles of this program including nine dimensions of accountability, goal, transparency, integrity, satisfaction with collection and disclosure, protection, compliance, availability, along with retention and disposition. Some officials and legal and natural roles are common among the three countries while some others are specific for each country.

Conclusions: Considering the results of the present study, it is suggested that a strong governance structure together with the policies and regulations of health information technology should be taken into consideration in establishing a HIG program. By developing such a program at a national level, new roles are required to facilitate the implementation of the program.

Keywords: Information governance, Healthcare, Health information management

Introduction

Information is critical for the fulfillment of the main aim of health care organizations, which is the delivery of health care services (1-3). Health organizations should invest in managing and controlling their data. To this end, information governance (IG) is essential (4, 5). IG as a strategy could guarantee that information is an important asset that should be used for supporting the organization's decision-making (6-8). The challenges facing the health industry, including increasing the number of applied information systems within and across health care organizations, the growing and diverse volume of data, extensive use of health information, and the necessity of the integrity and interoperability of information systems have emphasized developing the health information governance (HIG) program (9,10). In the field of health care, this program is of particular importance in terms of delivering high-quality care for individuals, improving public health, reducing the cost of health care services, and ensuring the reliability of health care information (9). The focus of the HIG is on the processes, policies, guidelines, and standards to ensure that health care information is used properly (11). Health care organizations in pioneering countries have set principles for the IG program (12). For example, the American Health Information Management Association (AHIMA) published the HIG program as a strategy necessity for the health care industry in 2014. Further, HIG has an important role in facilitating health care provided using the information system at all levels of health care services (13,14) and setting up 8 principles for the HIG program addressing accountability, transparency, integrity, protection, compliance, availability, retention, and disposition.

In the United Kingdom, there is a model for the HIG program and the Health and Social Care Information Center (HSCIC) is in charge of this program (15). In addition, the UK Department of Health and Social Care and National Health Service (NHS) attempts to develop appropriate approaches and supportive programs required for the HIG program (16).

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In Canada, many health care organizations established structures and processes with a chain of accountability for handling privacy breaches and security incidence after recognizing the importance of IG (17). However, there are common aspects in relation to HIG among a number of provinces. Therefore, there have been attempts to overcome this issue through developing a comprehensive mechanism for governing health information. Accordingly, the development of IG programs in health care is essential in improving health care and will bring valuable experiences for developing countries. The current study was conducted to compare HIG programs in selected countries in order to identify HIG components and principles.

Methods

This review article was conducted in 2017. Three pioneering countries with progressive development in HIG in recent years (i.e., the US, the UK, and Canada) were selected based on the aim of the study. Search for articles was performed in several databases such as ScienceDirect, PubMed, Springer Link, Google Scholar, Scopus, Ovid, and ProQuest. In addition, the websites of AHIMA, the Ministry of Health, and relevant organizations in the selected countries were checked for finding further relevant information. The searches were limited to English- language articles and documents regardless of the date of publication. It should be mentioned that article type and research methods were not among the exclusion criteria, and all types of articles with different research methods were included in the study.

The applied key terms for searching publication included, but were not limited to, 'information governance', 'health information governance', 'information governance in healthcare', 'components of information governance', and 'information governance model'. A combination of these terms was used for finding relevant publications in the selected countries. All documents, web pages, and articles related to HIG in three selected countries were included in the study. Data were collected using a data extraction form designed based on study objectives and included the general information of documents, components, and principles of HIG.

Three authors checked the titles and abstracts to determine the eligibility of the identified articles. Other authors further checked the articles to ensure that the results met the required criteria. Data were extracted by two authors via the mentioned checklist. The content of the relevant publications was analyzed and the results were reported in line with the objectives of the study.

Results

The HIG program in the selected countries was set and run by considering principles and components. The principles of the program including accountability, goal, transparency, integrity, collection satisfaction and disclosure, protection, compliance, availability in addition to retention and disposition were taken into consideration by pioneering countries. However, the axes of this program in every country have similarities and differences based on its health and treatment structure.

The findings of the present study showed that the similarities and differences of the components of the HIG program in the selected countries are classified into 18 categories (Table 1).

According to Table 1, the HIG program is more inclusive in the US than in the UK and Canada.

Data governance, change management, and project management are the components taken into consideration in HIG programs in the US and Canada. Risk management and monitoring are the common components of HIG programs of the US and the UK.

Other findings related to the principles of the HIG program in the selected countries are presented in Table 2.

Table 2 compares the official bodies responsible for the HIG program in the selected countries, and legal and natural officials were compared accordingly.

Based on the findings (Table 2), various legal and natural persons are responsible for the HIG program in each country. Some of the officials are common among the three countries whereas some others are specific only to one country.

Discussion

The review of the principles of the HIG program in the selected countries demonstrated similarities, remarking the significance of the principles in appropriately running the program since each of the selected countries addressed the principles considering the structure of their health care system. Dong et al and Datskovsky et al reported similar results in their study of the HIG program in Canada (18,19).

In the definition of the IG program presented by Association of Records Managers and Administrators (ARMA), it includes principles, standards, and legal requirements (14). In other studies, the IG program is composed of principles and components. A detailed review of the component of the program revealed that standards and legal requirements are considered part of the component, and this supports the notion suggested by ARMA.

Findings related to the component of the HIG program also indicated similarities including the management of

Table 1. The Similarities and Differences of the Components of the Health Information Governance Program in Selected Countries

Components of the Program	Countries Being Investigated		
	US	UK	Canada
Management of information and records	✓	✓	✓
Management of information life cycle	✓	✓	✓
Data governance	✓	✕	✓
Information technology governance	✓	✕	✕
Information technology	✓	✓	✓
Confidentiality and security of cyber-information	✓	✓	✓
Information quality	✓	✓	✓
E-discovery	✓	✕	✓
Risk management	✓	✓	✓
Change management	✓	✕	✓
Project management	✓	✕	✓
Roles and responsibilities	✓	✓	✓
Training human resources	✓	✓	✓
Rules and regulations	✓	✓	✓
Working methods and policies	✓	✓	✓
Standards	✓	✓	✕
Compliance with rules and regulations	✓	✓	✕
Program monitoring	✓	✓	✕

Note. ✓Availability of documents and resources; ✕No access or unavailability of resources.

information and records, management of information lifecycle, attention to information security and confidentiality, and risk management. Moreover, other areas of similarities were training human resources of the organization in relation to the HIG program, attention to information technologies, and compliance with rules and regulations and policies in the area of information management (14,17-19). Numerous similarities of the HIG program in the countries under study could suggest the importance of these aspects in governing the program.

Information technology governance was only highlighted in the HIG program of the US while such a component was not part of the program in the UK and Canada. This difference could be due to the IG structure and policies in the US, putting a greater emphasis on crucial parts such as information technology governance (20,21). Therefore, it is suggested that other countries pay attention to governing information technology in their HIG program based on the results of this study.

With respect to other components of the program, findings showed that certain standards and criteria set for monitoring HIG in the US and the UK and these standards have been practically applied for evaluating the program in health care organizations (22,23). Despite the presentation of an IG model, a component of which is program monitoring (18), there was no available information in relation to the criteria for monitoring the program in Canada. Considering the importance of monitoring and evaluating the HIG program, the AHIMA has recently developed Information Governance Principles for Healthcare (IGPHC) with eight dimensions to ensure an effective HIG program (19,24). Therefore, setting clear and specific plans for monitoring and evaluating the program and the responsible bodies should consider monitoring criteria when setting the HIG program.

In relation to regulations, policies, and standards in the HIG program in the countries under study, the UK enjoyed a more specific framework compared to the other two countries. This could be due to the centralized structure of the health system in the UK and close collaboration between the Department of Health and NHS at a national level. However, because of a decentralized structure, health information management associations appeared to play a more active role in setting up a comprehensive HIG program in the other two countries (22,25).

Regarding official bodies in charge of the HIG program,

Table 2. Comparing the Officials of HIG in the Selected Countries

Selected Countries	US	UK	Canada
Legal officials	• American Health Information Management Association • IG Strategic Committee • IG Council	• UK Department of Health and Social Care • NHS Digital • NHS Connecting for HIG Program Board • Care Quality Commission • IG Assembly • IG National Committee • Caldicot Council	• Canadian Health Information Management Association • Advisory Group on Information Management (Alberta Province)
Natural officials	• CIGO • IG program manager • Information management and IG advisor • Health information manager • Chief health information officer • Data official • Data senior official • Working units officials • Data architect	• Executive manager • Caldicot official • Official in charge of risks threatening information • Official in charge of information security and privacy • Data official • Working units managers • All the personnel	• CIGO • IG program manager • Official in charge of information security and privacy

Note. HIG: Health information governance; NHS: National health service; CIGO, Chief IG officer.

the findings indicated that they are determined based on the regulations, policies, and components of the program. In the US, the focus is mainly on managing the HIG program through considering roles such as a program manager or a program advisor (22). In addition, attention to data governance, as a key component in the HIG program, (26,27) led to defining and setting roles such as a data officer, a senior data officer, and data architects in the US (22).

Considering the regulations and policies of the country about HIG, the roles have been determined with a great deal of emphasis on maintaining confidentiality, protecting information security, and managing risks that threaten information in the UK (28).

Similar to the UK, attention has been paid to defining roles such as a 'privacy officer' and an 'information security officer' in Canada, highlighting the significance of information security and privacy in healthcare organizations. Canada, similar to the US, has considered the senior officer of IG as one of the major roles in relation to the HIG program, which can be due to the attention of these countries to the definition of new roles with regard to this program.

In relation to responsible bodies in the HIG program, AHIMA is in charge of setting the IGPHC in the US. Additionally, this association developed a model called the "Information Governance Adoption Model" to help health care settings to run information governance activities (4,29). HSCIC is in charge of the HIG program (Digital NHS) in the UK (30). In this country, the standards and requirements of the program are set in collaboration between the Department of Health and the NHS, and a new release of requirements is annually prepared for evaluating the program (23). In Canada, the Canadian Health Information Management Association is responsible for setting the HIG program at the national level (25), and the program is managed at a higher level by the minister of health in each province. Furthermore, information governance activities are performed in accordance with the regulations and policies of the provinces. The findings of the current study indicated that the countries under study determined officials for the HIG program and specified the scope of their responsibilities. However, there were differences, which appeared to be due to the differences of policies in the countries. Therefore, the HIG program should be set by considering structures and regulations in other countries in order to provide an appropriate context for running the program. The most important difference of this study against other related studies was providing comprehensive HIG components and principles which were not found in any other studies.

Based on the findings of the current study, a strong supervisory structure, policies, and regulations available in each country in the area of health information technology should be taken into consideration in establishing a HIG program. For developing a HIG program across the country, new roles should be defined in relation to the program, including the program manager, the program advisor, the data officer, the senior data officer, and the data architect to facilitate the implementation of the HIG program. In addition, the senior officer for the HIG program could contribute to the successful development, implementation, and assessment of the program.

Health information management associations in different countries could play an active role in the development and implementation of the HIG program and should be involved in setting and running the HIG program. In countries where this association has not been established or it might not play an active role in relation to health information, developing such an association is crucial. Further, necessary advice should be sought from relevant organizations in all stages of preparation, implementation, and assessment of the program to develop an appropriate context for successfully running the program. The results of this study could be regarded as a guide for developing countries to develop their HIG program.

Although the current study focused on the components and principles of the HIG program, no empirical study was found to address these aspects. The availability of empirical results could help obtain a deeper understanding of the components and principles of the HIG program in practice. However, the current study addressed these principles and components in three pioneering countries, and this could help other countries structuring their HIG program.

Authors' Contribution

RR, FR, and FA designed the study. RR and FA supervised the study. RR and FR prepared the preliminary draft of the manuscript. FR and FA checked the technical aspects of the manuscript. HM, HE, and FR revised the manuscript critically. all authors read and approved the final draft of the manuscript.

Conflict of Interests

Authors have no conflict of interests.

Ethical Issues

Not applicable.

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