

# Patients' Privacy Rights Protection: A Survey of Healthcare Centres from a Swiss Perspective

**Marvin Ama-Amadasun**

Faculty of Business and Management, UGSM-Monarch Business School, Switzerland

## Abstract

The magnitude of breaches of patient privacy rights leading to unauthorized access of medical records is on the increase. This has resulted in global financial losses, especially in healthcare sectors. Given the lack of understudied research on the role of patient privacy rights, especially in a Swiss context, the current study examines the perceptions of patients and healthcare practitioners with respect to patients' privacy rights protection within Switzerland. It employs a qualitative research method by phenomenological approach using semi-structured in-depth interviews and follow-up interviews administered to patients and caregivers within the listed healthcare Institutions in Switzerland. Data were generated from 44 healthcare centres with a sample size of 45 participants. The findings showed lack of awareness and enlightenment; inconsistencies and non-uniformity in regulations, laws and standard; and lack of safeguards relating to administration and organisation. The paper concludes by suggesting the need for consistent education, administrative and organisational safeguards, strict compliance with laws and regulation, as guidelines and drivers for effective privacy right protection for patients. Furthermore, the paper recommends a central authority to align the various patient privacy regulations and procedures across Swiss cantons. Finally, the study provides suggestions for further and future studies.

## Keywords

Patient Rights, Privacy, Medical Information, Caregivers, Switzerland.

## I. Introduction

Medical information is increasingly being stored in computer databases that permit efficiencies in providing treatment and processing of clinical and financial services [1-2]. This has also diminished patient privacy, thereby creating avenues for unauthorised access leading to identity theft of medical records, [2-5]. For example, the impact on patient privacy has resulted in increased potential for misuse, especially in the form of non-consensual secondary use [1], [6-8]. Patient privacy should also be seen as personal concerns with emphasis on how physicians facilitate the patient's perception of physical, interactional and psychological privacy [9]. Often, incidents on the non-consensual use of patient medical information are reported in the media, but the concerns about the proper protection of the privacy right of patients and its sensitive data tends only to grow gradually.

The absence of adequate privacy protection through inconsistencies and non-uniformity in existing laws and regulations has resulted in global financial losses, especially in healthcare sectors. According to a global survey involving 350 companies (11 countries) conducted by [10], the global cost of data breach is averaged at US\$154 for a stolen data and about US\$365 for healthcare data breach. Although, there have been national and international laws, technological safeguards on protecting privacy rights of patients, for instance, the European Charter for Patient Rights, the United Nations Declaration of Human Right and HIPAA, among others. Unfortunately, effort to have consistent and uniform legal and

technological guidelines across healthcare institutions has not yielded significant results. Besides, there seems to be an under researched or insignificant quality of research within healthcare setting in the context of patient right protection. Thus, this creates lack of knowledge on the issues and awareness of patient rights. Continuing with this current situation does not provide adequate analysis for ameliorating privacy protection of patient rights in healthcare, particularly in the context of Swiss healthcare centres. Developing more informed insights and knowledge on patients' perception of privacy rights and patient rights awareness could help better implement the legal and technical guidelines. The present research makes notable contributions to knowledge and healthcare centres with regards to privacy rights of patients by suggesting measures as the drivers that supports protection of privacy rights of patients while ensuring safety and security of patient dossiers. Finally, the findings will help various stakeholders to get insights and provide guidelines for health practitioners, healthcare vendors, government, policy makers and other stakeholders

## A. Objectives of the Study

### 1. General Objective

The general objective of this study is to explore patients and caregivers' perceptions on the patients' privacy rights protection in healthcare centres from a Swiss context.

### 2. Specific Objectives

- To explore the perceptions of privacy rights of patients protection in healthcare centres from a Swiss perspective;
- To provide suggestions for a framework of privacy protection that can be used in Swiss healthcare centres, and;
- To provide recommendations that a central authority be created to align the various patient privacy regulations and procedures across cantons, and;

## B. Significance of the Study

The present research makes notable contributions to knowledge with regards to the protection of patient rights in healthcare centres from a Swiss perspective. The findings of the current study are imperative to various stakeholders of healthcare, namely: healthcare investors, healthcare vendors, policy makers, and corporate investors, among others. The findings will help the beneficiaries to make thorough reflections, investment strategies and critical decisions. The healthcare and central government policy makers would also benefit by getting insights from the study in coming up with the effective and efficient healthcare policies, guidelines that will enhance patient privacy right protection, improve healthcare delivery and economic growth. Finally, this study will provide areas for further and future research that can be utilize to add values to the body of knowledge in the scholarly literature.

## C. Scope of Study

The scope of this current study is to examine the perceptions

of patients and healthcare practitioners with respect to patients' privacy rights protection within Switzerland. The study was carried out only in the German parts of Switzerland and conducted using the listed Swiss participating hospitals for six consecutive years (2005-2011).

## II. Literature Review

### A. Patients Rights to Privacy-Awareness

Patient rights basically affect the freedom of patient to autonomy [11]. [12], showed in a study that only 23% of the respondents were aware of the patient's right. [13] asserts that 63% of the patients were not aware of their rights in receiving healthcare services. In corroborating with the low rate of patients' awareness by patients as asserted above, [14] stated that about 74.8% of patients are not aware about their rights. In relation with the above, [15] stated that 23% of the patients were not aware of their rights in a study carried out in Turkey. [15] contends that the right to confidentiality in Greece was not considered as a right to privacy, 84% of patients were not aware of legislation and that several patients relied on the physicians for decision making. Moreover about 60% of them are ignorant of the European Convention of Human Rights.

### B. Rights of Patients

The observation of patient rights is one of the effective measures of patient's satisfaction [16], [17]. [17] stated that the awareness of patient's rights and measuring them enhances the satisfaction of patients. It is believed that creating awareness on patient rights in healthcare settings will specifically maintain patient dignity. According to [18] some studies revealed that there is a discrepancy between the respect for patients by physicians as declared by laws and its applicability in real life. [19] opined that physician should however give attention to their patients with regards to privacy, rights to information and confidentiality. Although, the European Charter Of Patients' Rights [20] listed (14) rights of patients, but there is no substantial report as to the evaluation of privacy perception of respect for patients by physicians and nurses.

### C. Patients Privacy Rights Protection

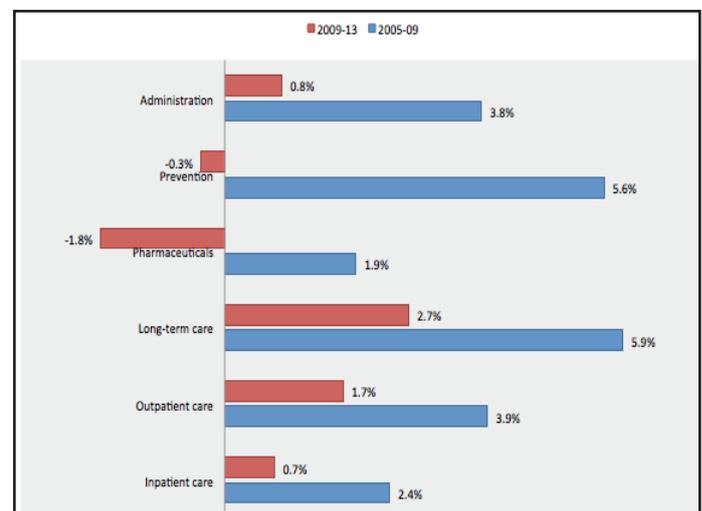
The Health Insurance Portability and Accountability Act, HIPAA of 1996, was the first federal law to address privacy protection, [21]. According to [22] the major goal is the protection of privacy of individuals who seek care and healing. One of HIPAA's administrative simplification regulations includes privacy, which defines standards for appropriate and inappropriate disclosure of medical information and patient's right protection [23]. The original HIPAA rule demands that the healthcare entity have to get a written consent for the disclosure of medical information for treatment and other health related services [11]. The information of patients must be protected from unauthorised access in order to protect privacy of patients [24]. Although the need for protection of privacy with respect to patients' rights and patients' dossiers have been stressed, but there seemed different privacy discourses.

[25] argues that, in healthcare reform and marketplace changes, there should be improvement in the protection of medical information. [26], pointed out that keeping patients' information private by professionals, promotes effective medical treatment by establishing trust in the patients-providers relationship. A study by [27], showed that 32% of patients indicated that their psychosocial privacy had not been respected. [28], argued that protection of privacy allow individuals to count on their private

and public distinctions in communications. This study aims to provide suggestions and recommendations on the patients' privacy rights protection.

### D. Swiss and International Healthcare Systems

According to [29] all citizens or residents are mandated to have insurance coverage under the 1996 Health Insurance Law. Health is one of the most vital assets for every individual [30]. [29] stated that Switzerland's health costs ranked one of the highest in the world after U.S and Norway amounting to CHF 7,833 (US\$ 5,144) per capital in 2009. Switzerland is a federal state comprising of three institutional levels: the Confederation-Federal (central state), the cantons (26) and the municipalities (2740) [31], [32]. In Switzerland, the healthcare system is regulated by several legal frameworks [33]. Thus, there are 26 ministries of health and 26 legal frameworks that are responsible for setting the health laws. According to [34], the current Swiss healthcare system came into effect in 1996 under the insurance law of 18 May 1994. According to [35] the decrease in healthcare expenditure as witnessed in many OECD countries, has resulted in low spending between 2009 and 2013, Fig. 1.



Source: Adapted from Ponemon Institute, 2015  
Fig. 1: National Healthcare Expenditure, 2009-2013

[36] stated that there are three main healthcare models, namely: Beveridge (Private), Bismarck (Public & Private) and Private Insurance. For instance, according to [37] Swiss healthcare system is both private and public with cantonal and federal responsibilities making it very diversified and complex. Healthcare systems are unique across the globe and are influenced by their different political system, tradition and history, [36]. [37] stated that the amount spent on any healthcare program does not equate to the quality. They argued that, 'public' type of healthcare tends to expend less, as when compared to 'private', and private & public. They stated that the less spending seems not to be associated with discrepancies in the outcomes of quality of healthcare. According to [38-39], the number of countries enacting data privacy laws are on the increase. [39] argued that it is imperative to know that data privacy laws expansion seems necessarily not privacy protection improvement, as there is no enforcement in some of the laws of privacy. The present research integrates a compliance measure as one of the major drivers to enforcing and improving protection of privacy rights while safeguarding the security of medical information.

### III. Materials and Methods

#### A. Introduction

The present study employs a qualitative research method by phenomenological approach using semi-structured in-depth interviews and follow-up interviews administered to patients and caregivers within the listed healthcare Institutions in Switzerland. This section covers the research design incorporating research instruments, population, sampling size and techniques; data collection and analysis.

#### B. Research Design

Research design, as stated by [40], refers to the data collection, analysis, interpretation, and reporting procedures in research studies.

#### C. Research Instruments/ Data Collection

The research instrument used in the present study is a questionnaire as presented in the Appendix section, comprising the participant profiles and the survey. The data was collected using a personal computer, writing materials, and; semi-structured interview questionnaires. The study conducted open-ended questions and the participants were assured that there are no correct or incorrect answers. Open-ended formats allows for the participants to use their own colloquial speech. The method according to [41] is considered the most appropriate in order to capture subtle meanings and personally held beliefs, without imposing external thought complexes on the participants. Six (6) interview-questionnaires were administered within the selected target participants. There were follow-up interviews based on acceptance of the participants, after the initial interviews. Each interview was scheduled to last between fifteen and twenty-minutes time frame.

Prior to the interview process, an introductory e-mail requesting participants' permission was sent to the prospective interviewees. Each participant was advised to select a fifteen to twenty minutes time frame as deemed convenient. It is necessary to note that to generate a more spontaneous and unhindered conversation with the participants, no interview questions were given in advance. A formal introductory speech or overview of the interview was discussed on the date of scheduled appointment. To effect proper interview coordination, the participants were called or e- mailed to verify the reception of their respective e-mails. Each participant was given the option of contacting the researcher within an interval of one week to ensure the reception of e-mails.

#### D. Target Population and Sampling Frame

The target population for this study comprised patients, nurses and physicians within the private and the public healthcare centres. The healthcare centres comprised of 44 listed Swiss participating hospitals for six consecutive years between 2005 and 2011. It employed a sample size of 45 participants (15 each of patients, nurses and physicians) randomly selected during the initial interviews and 10 at the follow-up interviews. Data was analysed using MaxQDA qualitative analysis software.

#### E. Data Distillation and Presentation

The present study categorized the responses from the respondents into two parts, namely, the synthesized participants' profiles (Tables 1-3) and the survey (Tables 4-7). Six (6) classifications resulted from the survey during the initial interviews. This information was then coded and distributed into several tables and tally charts to illustrate the results. The classifications arising from the follow-up

interviews are presented in Tables 4-7. Tally charts represent way to identify significance of findings. It is believed that this method provides enhanced understanding of the phenomenon of study and deepens the understanding and effectiveness of the study in the context of the research domain [42]. The presentation of data is categorized as follows

- Category One: Information Relating to Personal Definition of Privacy Right;
- Category Two: Information Relating to Privacy Rights of Patients upon Admission;
- Category Three: Information Relating to Protection of Privacy Rights of Patients;
- Category Four: Information Relating to Denial of Medical Information;
- Category Five: Information Relating to Confidentiality of Medical Information; and,
- Category Six: Information Relating to Discussion of Medical Information by Nurses and Physicians.

### IV. Research Results / Findings And Discussions

#### A. Introduction

This section presents the discussions of the research findings of the study. This study is grounded on results generated from the triangulation of content analysis of seminal literature, semi-structured and follow-up interviews.

#### B. General Findings and Discussions

[43] contends that if personal data of patients should be guaranteed confidentiality, integrity and availability, then there is the need for better protection. The present research findings showed that out of forty-five participants interviewed, twenty-nine (64.4%) of them believed that the privacy rights of patients could be protected. The current research also revealed that nine (60%) of fifteen patients interviewed believed that there is not enough confidentiality regarding their medical information. From the perceptions of patients, the study believed that caregivers are at the centre of access of their medical information. Findings showed that the doctors could forward medical reports to a specialist without the consent of a patient. In comparison, misuse of medical information according to [44], will normally occur where there is perceived value of personal information to third parties. The research unveiled the negligence of some medical staff resulting from medical confidentiality. About six (40%) out of fifteen nurses interviewed relating to the discussion of medical information of patients while other people are in the room, stated that they either had comments or knowledge about it. On the other hand, seven (53.8) out of thirteen physicians who gave responses stated that they either had comments or knowledge about it.

From the follow-up interview of the present research, 70% of the respondents believed that technological, legislative and regulatory measures affect the protection of privacy rights of patients. The research findings also indicated that systems' inconsistency, which present barriers to accurate and miss information exchange; non-uniformity of standards and ineffective legal frameworks hinders the effective protection of privacy rights of patients. From the follow-up interviews to enable the participant to give an in-depth understanding into the subject domain, 90% of the interviewees responded that education and enlightenment on privacy rights of patients upon admission positively affects its protection. Findings also indicated that, twelve (80%) out of fifteen

participants interviewed comprising nurses and physicians stated that no information about privacy right was given to patients upon admission into the hospital. On the part of physicians as respondents, the research findings indicated that all the fifteen (100%) physicians stated they do not normally brief patients about their rights upon admission. In contrast to giving information, many physicians opined that the station resident normally carries out admission procedures. According to [16], the awareness of patient's rights and evaluating them enhances the satisfaction of patients. The inability of some of the respondents to provide a clear definition and the absence of knowledge of some form of human right contexts as shown in the study was inconsistent enlightenment and education on rights of patients by the healthcare practitioners.

The research admonishes the need for organisational and administrative safeguards. When a healthcare centre has poor administrative or organisational safeguards, there is insecurity in maintaining and ensuring a high level of data security with regards to electronic patient dossiers. Furthermore, there are data breaches and data/identity thefts, patient's dissatisfaction as well as organisation's financial losses, image or reputation, and loss of competitive and comparative advantages. In the current research findings, nine (60%) out of fifteen of the nurses interviewed stated that relaying of medical information for treatment was possible when other people are in the room. Contrasting the above, some nurses maintained that information were only relayed with consent and to relatives present. A serious threat to personal health information confidentiality in healthcare centres according to [45], is the poor design and careless administration of control of accesses. The ways in which the healthcare organisations manage the affairs of the healthcare will affect the security and privacy of the medical information of patients and their rights. On the follow-up interview findings, it was evident that all 100% participants believed that organisational and administrative measures positively impact the protection of privacy rights of patients. They believed that the measures would encourage the medical staff to obey the laws and other guiding rights of patient in the hospital. The research suggests that organisational and administrative coordination of medical information dissemination be governed by the principles of honesty, trust, transparency, confidentiality and integrity.

The research findings showed that certain caregivers often ignore some of the rights of patients, especially if faced with the situation of life and death, while many are not aware of certain laws. The research findings revealed that in a situation of severe illness of a patient that requires immediate surgical intervention, a physician may intentionally bypass some of the patient rights, especially when a patient's consent is needed. 70.7% of both nurses and physicians interviewed comprising twenty-nine out of forty-one responses pertaining to patients' denial of medical information acknowledged that they bypassed some patient rights and human right context during treatments. From the follow-up interviews, 90% of the respondents believed that compliance with patient right laws and human right contexts in healthcare environment positively affect the protection of privacy rights of patients. Many of them gave reasons for the non-compliance as emergency situations and consents among others. Furthermore, it was revealed that many of the doctors and nurses were not aware of the 1998 Human Right Act [12]. Although, there have been national and international laws, technological safeguards on privacy rights of patients, unfortunately, effort to have consistent and uniform legal

and technological guidelines across the healthcare centres has not yielded substantial results. The aforementioned components proved to be inadequate when understanding what constitutes the purpose of protection of privacy rights of patients. Therefore, the need for compliance with patient right laws and human right contexts in healthcare environment will have a positive impact in the protection of privacy right of patient.

### C. Summary of Findings

The findings are outlined as given below:

- Poor and unclear definitions of privacy concepts;
- Lack of awareness of rights of patients and some of the human right contexts;
- Inconsistent and non-uniformity of existing laws and regulations;
- Lack of transparency and trust, and non-compliance with medical information dissemination; and,
- Mixed perceptions on the impact on protection of privacy rights of patients.

It is hoped that the current findings will provide:

- Understanding on the importance of awareness towards the education of patients and healthcare practitioners;
- Insights into values for protection of privacy rights of patients and other human contexts;
- Improvement on organisational and administrative safeguards, through thorough reflection, critical thinking and decision-making abilities; and,
- Improvement on patient-physician relationship, through compliance with patient right and human right contexts (trust, dignity and confidentiality).

### V. Conclusion and Recommendations

The present study aims to examine the perceptions of patients and healthcare practitioners with respect to patients' privacy rights protection within Switzerland. The following paragraphs provide conclusions for the resultant findings as well as recommendations and suggestions. It makes a notable contribution to knowledge and healthcare centres with regards to privacy right of patients. Furthermore, the research provides recommendations that a central authority be created to align the various patient privacy regulations and procedures across the 26 cantons. Adhering to the above findings and recommendations, It is hoped that the field of protection of privacy right of patients will develop further into a unique domain of study in both academia and practical application. The knowledge gained through the present research, will be the most important contribution to the academia, the professional communities and the healthcare centres in Switzerland and the rest of the world.

The present study is a unique one with respect to privacy protection of patient rights. There is need for significant quality of research within the healthcare. The research suggests that education and enlightenment have positive impact on protection of patients; compliance, organisational and administrative safeguards have positive impact on and that technology, legal, and regulatory measures also have positive impact on patient privacy rights protection. This study also suggests that future study be carried out to cover other parts of Switzerland and that recommendations should include other healthcare and health related institutions.

Finally, the research recommends that a central authority be created to align the various patient privacy regulations and procedures across the 26 cantons. Below is a list of recommendations:

1. That a central authority across the 26 cantons build upon and compliment organisational and administrative safeguards, including administrative requirements, to ensure strict compliance and monitoring within healthcare centres. This will also ensure that human resources are developed and that sound capacities are created to serve in the relevant areas of responsibilities;
2. Engaging in a robust and effective public campaign and education in order to create awareness about patient privacy policies and procedures.;
3. Ensuring a regulatory and legal settings that allows exchange of information amongst healthcare practitioners and stakeholders, including use and disclosure of health information; Prohibit health information dissemination from the sales of data; and that there is re-disclosure prohibitions for third party;
4. To prohibit and sanction healthcare establishments should there be any form of inconsistencies, non-uniformity and non-adherence to laws and regulations, and implementations of measures. This will serve as deterrence to other healthcare centres;
5. To work with designated stakeholders from the healthcare sectors in order to identify and address the various laws and regulations that forestall the measures relating to implementation of patient right laws and other human rights contexts. This will ensure that protection with respect to privacy, security and confidentiality of patient dossiers are readily and consistently addressed;
6. To monitor the control and verification of checklists to ensure that patients' complaints with respect to their privacy rights and perceptions of care are complied with and adhere to at regular intervals; ensure caregiver and patient control over access and health information dissemination;
7. Ensure that patients, physicians and other caregivers are involved in the development of novel technologies, critical thinking and decision making abilities, by constantly including them at the initial stage and by requesting their advice and feedback;
8. Helping in creating an efficient and effective system of segregation of duties and updating of functional procedures and policies;
9. Ensure that services in which measures for implementations are based, are transparent, reliable and free from religious, social, and political distinctions;
10. To help in ensuring the ease in which healthcare centres progresses in support services that enables the transition of health information and other related information from paper based to technology based systems; and,
11. To revisit policies and procedures, reevaluate and ensure that there is a regular control and compliance relating to patients privacy regulations and procedures to maintain consistencies and uniformity within cantons.

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Marvin Ama-Amadasun has over 19 years as an entrepreneur, IT / Project management and Engineering services. He has diverse training courses and seminars in the areas of Software Testing, Prince2, Management of Risk (MoR), PMI-RMP, IT Services and Project Management with regards to IT Security and Privacy, Biometric Systems, Biomedical and Imaging Technologies. He is certified in

Software Testing, ITIL v3, Prince2 and MoR. He is an MPhil and a PhD graduate in Information Systems and Technology from UGSM-Monarch Business School in Switzerland. He holds Certificate of Advanced Studies from ETH, Zurich, a M.Sc. in Biomedical Engineering from the University of Berne / ETHZ Switzerland and a B. Sc. in System Engineering from the University of Applied Sciences, North-Western Switzerland. He also holds a Diploma of Electrical & Electronics Engineering from Auchu Polytechnic in Nigeria. He is a member of IEEE, Swiss Engineering, Electrosuisse, ACM, PMI, ISACA and BCS, among others.

## Appendix

Table 1: Synthesised Physician Profiles

Gender	Number of Participants	Age Range	Organisation (Pub. / Pri.)	University Education
Male	10	1 (18- 33) 5 (34- 49) 3 (50 and Above) 1 (No Age Declared)	15	10
Female	5	4 (18- 33) 1 (34- 49) 0 (50 and Above)		4
	Nationality	Nationality Not Stated	Other Qualification	Qualification Not Stated
Male	2 CH 1 CH/CAN 1 USA/CH 2 DE 1 USA	3	0	0
Female	4CH	1	0	1
Legend				
PPRP-D#: Protection of Privacy Right of Patients-Physician Number Pri: Private; Pub: Public; DE: Germany			IT: Italy; CH: Swiss USA: United States Of America; CAN: Canada	
Source: Marvin Ama-Amadasun, 2015				

Table 2: Synthesised Patient Profiles

Gender	Number of Participants	Age Range	Organisation (Pub. / Pri.)	University Education
Male	11	2 (18- 33) 5 (34- 49) 4 (50 and Above)	15	5
Female	4	3 (18- 33) 1 (34- 49) 0 (50 and Above)		2
	Nationality	Nationality Not Stated	Other Qualification	Qualification Not Stated
Male	6 CH; 1 IT 1 AFR	3	4	2
Female	2CH	2	2	0
<b>Legend</b>				
PPRP-P#: Protection of Privacy Right of Patients-Patient Number			IT: Italy; CH: Swiss	
Pri: Private; Pub: Public			AFR: African	
Source: Marvin Ama-Amadasun, 2015				

Table 3: Synthesised Nurse Profiles

Gender	Number of Participants	Age Range	Organisation (Pub. / Pri.)	University Education
Male	1	1 (18- 33) 0 (34- 49) 0 (50 and Above)	15	1
Female	14	2 (18- 33) 8 (34- 49) 4 (50 and Above)		3
	Nationality	Nationality Not Stated	Other Qualification	Qualification Not Stated
Male	1 POR	0	0	0
Female	6CH; 1 IT/CH 1 TUR	6	11	0
<b>Legend</b>				
PPRP-N#: Protection of Privacy Right of Patients-Nurse Number			CH: Swiss; AFR: African	
Pri: Private; Pub: Public; IT: Italy			POR: Portugal; TUR: Turkey	
Source: Marvin Ama-Amadasun, 2015				

Table 4: Tally Chart on Impact of Organisational and Administrative Measures on Protection of Privacy Rights of Patients

PPRP-P# PPRP-N# PPRP-D#	It has positive impact	It has negative impact	It has negative and positive impacts
PPRP-P1	✓		
PPRP-P7	✓		
PPRP-P8	✓		
PPRP-P12	✓		
PPRP-N4	✓		
PPRP-N7	✓		
PPRP-N13	✓		
PPRP-D1	✓		
PPRP-D8	✓		
PPRP-D15	✓		
<b>Total</b>	<b>10</b>	<b>0</b>	<b>0</b>
<i>Source: Marvin Ama-Amadasun, 2015</i>			

Table 5: Tally Chart on Impact of Technological, Legislative and Regulatory Measures on Protection of Privacy Rights of Patients

PPRP-P# PPRP-N# PPRP-D#	It has positive impact	It has negative impact	It has negative and positive impacts
PPRP-P1			✓
PPRP-P7	✓		
PPRP-P8		✓	
PPRP-P12			✓
PPRP-N4	✓		
PPRP-N7	✓		
PPRP-N13	✓		
PPRP-D1	✓		
PPRP-D8	✓		
PPRP-D15	✓		
<b>Total</b>	<b>7</b>	<b>1</b>	<b>2</b>
<i>Source: Marvin Ama-Amadasun, 2015</i>			

Table 6: Tally Chart on Impact of Enlightenment / Education upon Admission on Protection of Privacy Rights of Patients

PPRP-P# PPRP-N# PPRP-D#	It has positive impact	It has negative impact	It has negative and positive impacts
PPRP-P1	✓		
PPRP-P7	✓		
PPRP-P8		✓	
PPRP-P12	✓		
PPRP-N4	✓		
PPRP-N7	✓		
PPRP-N13	✓		
PPRP-D1	✓		
PPRP-D8	✓		
PPRP-D15	✓		
<b>Total</b>	<b>9</b>	<b>1</b>	<b>0</b>

*Source: Marvin Ama-Amadasun, 2015*

Table 7: Tally Chart on Impact of Compliance with Right of Patients and other Physician Confidentiality Laws on Protection of Privacy Rights of Patients

PPRP-P# PPRP-N# PPRP-D#	It has positive impact	It has negative impact	It has negative and positive impacts
PPRP-P1	✓		
PPRP-P7	✓		
PPRP-P8			✓
PPRP-P12	✓		
PPRP-N4	✓		
PPRP-N7	✓		
PPRP-N13	✓		
PPRP-D1	✓		
PPRP-D8	✓		
PPRP-D15	✓		
<b>Total</b>	<b>9</b>	<b>0</b>	<b>1</b>

*Source: Marvin Ama-Amadasun, 2015*