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Empowering HIM Professionals Through A Global Voice

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PREFACE

On behalf of the International Federation of Health Information Management Associations (IFHIMA) and the Saudi Health Information Management Association (SHIMA), we are pleased to present the proceedings of the 19th IFHIMA International Congress held in Dubai 2019.

IFHIMA was established in 1968 as an opportunity for the exchange of information, education, and networking for Health Information Management professionals globally. IFHIMA serves as the global voice of the profession, and is in official relations with the World Health Organization, with non-governmental organization (NGO) status.

The IFHIMA Congress is held every three years in one of the 23 federation member countries spanning five continents. This Congress was the first time to hold this event in the Middle East, and also served as a celebration of the 50 year anniversary of IFHIMA!

The Congress theme "Empowering HIM Professionals through a Global Voice" supports the work and importance of the profession and practitioners, and highlights the ever evolving technological changes and challenges faced throughout the healthcare industry. With a diverse program, the Congress was attended by many disciplines within health information/informatics/care delivery. Delegates had the opportunity to meet with representatives and attend presentations by educational partners, colleagues, related vendors, plus many valued stakeholders. The Congress provided an opportunity for participants to not only learn, but to network and exchange information and ideas on an international scale.

We trust you will find these proceedings informative and inspiring.

Marci MacDonald President IFHIMA Hussein AlBishi President SHIMA

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ABSTRACTS: ORAL PRESENTATIONS

Using Global Recruitment Data to Predict Workforce Trends in Health Information Management

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Introduction

Digital health has enabled a global transformation in healthcare, creating opportunities across service delivery, management, technology, and workforce. Whilst the extent of digitization has been well documented in most countries, the global change in the health information workforce remains unknown, Identification of growth areas will enable employers to reshape and reconfigure their workforce to meet future demand, and educators to adapt curriculum to meet industry needs. The objective of this study was to identify growth workforce areas through the analysis of current recruitment trends globally.

Methods

The data for this study was sourced during September 2018 from the online employment-related search engine Indeed for 64 countries. Using the American Health Information Management Association competency areas as a guide, a list of 10 terms (listed in Table 1) were applied in search strings to identify relevant job postings. In each search string the term "health" was used as a qualifier to exclude job postings not related to healthcare. With permission from Indeed.com, the application programming interface (API) was queried to extract the job description and requirements from the text in each job posting. Once the data had been cleaned, removing duplicate job postings and stripping the white space, word stems, and common English words (i.e., stopwords), the extracted data was analyzed using the R statistical software package. A heatmap was used to compare the frequency of postings across all countries and the 10 workforce areas.

Results

The analysis identified trends across workforce areas in health information management. Whilst there continues to be job opportunities across areas such as health information technology, health leadership, health project management, ad health research, there continues to be growth in health compliance roles. Opportunities in health data analysis are increasing globally, with countries such as the United States, the United Kingdom, Canada, Australia, and India each advertising more than 250 positions during the study period. Table 1 displays the data for the ten countries with the most job postings in total during the study period. Even within these the countries, the aforementioned trends can be seen. In countries such as the United States, the United Kingdom, Canada, and Australia there are a higher number of advertised positions across areas such as Health Informatics, Health Consumer Engagement, Clinical Documentation Improvement, Health Information Governance, and Health Data Analysis compared to other countries.

These are identified as global growth or emerging workforce areas for health information professionals. Table 2 shows the top ten countries by number of relevant job postings within each of these areas.

Conclusion

Analysis of recruitment data shows a global trend in the areas of Health Informatics, Health Consumer Engagement, Clinical Documentation Improvement, Health Information Governance, and Health Data Analysis. Employers and government should reconfigure their health information workforce in these areas to meet future needs. Whilst these findings will inform educators, they will also inform the future redevelopment of the IFHIMA Global Health Information Curricula Competencies.

Workforce	United	United	Canada	Australia	India	China	Ireland	Netherlands	Germany	Singapore
areas	States	Kingdom								· · ·
Health	9.2%	2.2%	2.2%	0.6%	0.7%	0.7%	0.1%	1 7%	1.4%	0.4%
Informatics	5.270	2.270	2.270	0.070	0	0	0.170		1.470	0.470
Health										
Consumer	10.2%	4.7%	3.4%	2.4%	1.9%	1.1%	1.3%	1.4%	1.9%	1.4%
Engagement										
Clinical										
Documentation	10.3%	5.6%	6.3%	3.4%	2.3%	1.7%	1.8%	1.3%	0.7%	0.7%
Improvement										
Health										
Information	9.9%	12.6%	5,4%	6.2%	1.9%	0.9%	1.3%	1.2%	0.8%	0.5%
Governance										
Health Data	0.494	10.000				2.00/				6.007
Analysis	9.4%	10.5%	11.0%	11.1%	12.3%	7.9%	D.0%	0.8%	0.4%	0.9%
Health	10.09/	12.10/	12.10/	12.00/	12.49/	16.50/	10.00/	12 (9)	12.00/	17.64/
Compliance	10.0%	12.1%	15.1%	15.8%	15.4%	10.3%	18.879	12.0%	12.8%	17.270
Health	10.00/	12.00/	10.00	11.00/	14.70	10.00/		20.10/	25.24/	14.15
Research	10.0%	12.8%	13.0%	14.8%	10.7%	18.9%	11.0%	20.1%	20.5%	10.4%
Health										
Information	10.5%	13.9%	16.0%	17.3%	19.8%	12.7%	16.5%	19.4%	15.2%	13.3%
Technology										
Health	10.00/	10.001		4.6.794	17.101	21.00/	22.44		10.00/	24.027
Leadership	10.2%	13.5%	14.9%	10.7%	17.4%	21.9%	22.6%	14.4%	18.8%	21.0%
Health Project	10.2%	12.1%	13.6%	13.7%	13.6%	17.7%	20.4%	22.1%	17.7%	23.0%

Table 1: Distribution across workforce areas for top 10 countries by number of job listings

Table 2: Top 10 countries by number of job listings across the five growth workforce areas

Health Informatics	Health Consumer Engagement	Clinical Documentation Improvement	Health Information Governance	Health Data Analysis
United States (369)	United States (410)	United States (413)	United States (399)	United States (378)
United Kingdom (65)	United Kingdom (139)	United Kingdom (167)	United Kingdom (375)	United Kingdom (311)
Canada (58)	Canada (89)	Canada (166)	Australia (148)	Canada (303)
Romania (38)	Australia (56)	Australia (80)	Canada (141)	Australia (263)
Netherlands (24)	India (39)	India (47)	South Africa (40)	India (256)
Germany (20)	Germany (27)	China (30)	India (39)	China (143)
India (15)	Netherlands (20)	Ireland (28)	Ireland (19)	Poland (94)
Australia (14)	Poland (20)	Belgium (20)	Nigeria (18)	Ireland (85)
China (12)	China (19)	Switzerland (20)	China (17)	Netherlands (\$1)
Switzerland (10)	Ireland (19)	Netherlands (18)	Netherlands (17)	Singapore (77)

The Antipodean Health Information Workforce: Findings from the Australian and New Zealand Censuses

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Introduction

The health information workforce (HIW) in Australia and New Zealand (NZ) consists of people working in health roles in clinical coding, costing analysis, data analysis, informatics, information management, information services, information technology or librarianship. This workforce has been poorly described; a lack of empirical data hinders forecasting and planning for future needs. This study aimed to provide an overview of the Antipodean HIW.

Methods

Data were drawn from two sources: the Australian HIW Census conducted in May 2018 and the NZ HIW Census conducted in November-December 2018 (Census details are online [1], [2].) Participants self- identified as working in a role where the primary function was related to developing, maintaining, or governing the systems for the management of health data, health information, or health knowledge; and where their role was for/with an organisation that operates in Australia/NZ, related to the Australian/NZ operations, and related to the health sector. Findings were combined and compared using descriptive statistical analysis.

Results

The combined data set was 2051 people; 1597 respondents (77.9%) in Australia and 454 (22.1%) in NZ (demographic summary in Table 1). Both countries' workforces are mostly aged over 45 years (Australia 56.1%; NZ 61.2%). Australia's workforce is predominantly female (78.1% female) whilst NZ's workforce is 59.5% female. Only 61.0% of the NZ workforce was born in NZ, compared to 74.5% of the Australian workforce born in Australia. The NZ workforce had higher representation of permanent residents (15.0%) or temporary residents (student/work/other visa 3.1%), compared to Australia (permanent residents 4.9%; temporary residents 1.1%).

Australia and NZ workforces differed in distribution across occupational groups (Table 2). In Australia, 37.3% were in Health information Management (HIM) and 11.0% in Health Information Technology (HIT), compared to NZ's 19.2% HIM and 26.7% HIT. The average number of years in the workforce varied slightly (Australia=15.0, NZ=11.7), as did the average number of years working in the current role (Australia=7.2, NZ=6.9). Overall, most of the workforce was hospital-based but there was greater spread across other health settings in NZ than Australia.

Discussion and Conclusion

Two countries that have similar health systems showed clear differences in their HIW. The higher proportion of new migrants in the NZ HIW may reflect country-level population policy differences. The higher proportions of HIM in Australia, and of HIT in NZ, may reflect different educational pathways and career structures. Exploring the differences and similarities in the Antipodean HIW is the first step in garnering evidence to underpin the international reforms required to sustain and empower this important workforce.

References

[1] Butler-Henderson K & Gray K 2018, Australian health information workforce census website, http://www.utas.edu.au/health/projects/hiwcensus.

[2] Day K & Grainger R 2018, New Zealand health information workforce census website https://hiwcensusnz.blogs.auckland.ac.nz/.

Characteristic	Responses	All (n=2051)	Australia (n=1597, 77.9%)	New Zealand (n=454, 22.1%)
Current	Australia	1580 (77.0%)	1580 (99.3%)	0
residential	New Zealand	458 (22.3%)	5 (0.3%)	453 (99.8%)
country	Other	13 (0.6%)	12 (0.8%)	<5
Citizenship	Citizen	1862 (90.8%)	1491 (93.4%)	371 (81.7%)
	Permanent resident	147 (7.2%)	79 (4.9%)	68 (15.0%)
	Temporary resident	31 (1.5%)	17 (1.1%)	14 (3.1%)
	Not citizen or resident	11 (0.5%)	10 (0.6%)	<5
Country of birth	Australia New Zealand Africa Asia Europe North & South America Other Oceania	1204 (58.7%) 316 (15.4%) 78 (3.8%) 176 (8.6%) 224 (10.9%) 39 (1.9%) 14 (0.7%)	1190 (74.5%) 39 (2.4%) 54 (3.4%) 130 (8.1%) 149 (9.3%) 25 (1.6%) 10 (0.6%)	14 (3.1%) 277 (61.0%) 24 (5.3%) 46 (10.1%) 75 (16.5%) 14 (3.1%) <5
Age	Average	46.6	46.3	47.7
	Range	20-78	21-78	20-73
	≥45 years	1176 (57.3%)	898 (56.1%)	278 (61.2%)
Gender	Male	528 (26.2%)	345 (21.6%)	183 (40.3%)
	Female	1518 (75.3%)	1248 (78.1%)	270 (59.5%)
	Other	5 (0.2%)	<5	<5
Qualification	None	169 (8.4%)	108 (6.8%)	61 (13.4%)
	Technical	221 (11.0%)	148 (9.3%)	73 (16.1%)
	Undergraduate	869 (43.1%)	742 (46.5%)	127 (28.0%)
	Postgraduate	677 (33.6%)	511 (32.0%)	166 (36.6%)
	Doctorate	115 (5.7%)	88 (5.5%)	27 (5.9%)

Table 1: Demographic characteristics of the health information workforce

Occupational	Clinical coder	260 (15.9%)	227 (16.5%)	33 (12.9%)
category	Costing analyst	24 (1.5%)	20 (1.5%)	<5
	Data analyst	153 (9.4%)	113 (8.2%)	40 (15.7%)
	Health informatician	239 (14.6%)	203 (14.7%)	36 (14.1%)
	Health information manager	564 (34.5%)	515 (37.3%)	49 (19.2%)
	Health IT specialist	179 (11.0%)	111 (8.0%)	68 (26.7%)
	Health librarian	215 (13.2%)	190 (13.8%)	25 (9.8%)
	Total responses	1634	1379 (84.4%)	255 (15.6%)
Average	In country of census	13.8	14.7	10.5
number of	In total	14.3	15.0	11.7
years in	Total responses	1788	1424 (79.6%)	364 (20.4%)
workforce				
Current	Yes in a health information	1381 (77.7%)	1143 (80.3%)	238 (67.0%)
Employment	role		1247 C. H.	20 - 20 - 20 - 20 - 20 - 20 - 20 - 20 -
	Yes in both a health	255 (14.3%)	178 (12.5%)	77 (21.7%)
	information role and another	152 224		
	health role		1012-1016-0017-0012-0012-001	
	Yes in another health role	86 (4.8%)	54 (3.8%)	32 (9.0%)
	Yes in a non-health role	29 (1.6%)	22 (1.5%)	7 (2.0%)
	No	27 (1.5%)	26 (1.8%)	<5
	Total responses	1778	1423 (80.0%)	355 (20.0%)
Employment	Permanent	1353 (83.3%)	1079 (82.1%)	274 (88.4%)
status	Contract	223 (13.7%)	193 (14.7%)	30 (9.7%)
	Casual	27 (1.7%)	23 (1.8%)	<5
	Self-employed	21 (1.3%)	19 (1.4%)	<5
	Total responses	1624	1314 (80.9%)	310 (19.1%)
Organisation	Public	1188 (73.2%)	952 (72.5%)	236 (76.1%)
status	Private	247 (15.2%)	222 (16.9%)	25 (8.1%)
	Public/Private partnership	71 (4.4%)	39 (3.0%)	32 (10.3%)
	Not for Profit	118 (7.3%	101 (7.7%)	17 (5.5%)
	Total responses	1624	1314 (80.9%)	310 (19.1%)
Organisational	Community/other health care	41 (2.5%)	31 (2.4%)	10 (3.3%)
type	service			
	Educational facility	82 (5.1%)	60 (4.6%)	22 (7.3%)
	Federal health organisation	41 (2.5%)	36 (2.7%)	5 (1.7%)
	Health technology	64 (4.0%)	38 (2.9%)	26 (8.7%)
	organisation			
	Hospital	965 (59.9%)	821 (62.6%)	144 (48.0%)
	Primary care/health	61 (3.8%)	31 (2.4%)	30 (10.0%)
	network/Private practice		10 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Local/ State health	189 (11.7%)	173 (13.2%)	16 (5.3%)
	department	20 000 1110 00 00 00 00 00 00 00 00 00 00 00 00	11.52 55	
	Other public/government	81 (5.0%)	47 (3.6%)	34 (11.3%)
	organisation	11.00000000000000000000000000000000000		00 00
	Other private organisation	54 (3.4%)	47 (3.6%)	7 (2.3%)
	Other not for profit	33 (2.0%)	27 (2.1%)	6 (2.0%)
	organisation			
	lotal responses	1611	1311 (81.4%)	300 (18 6%)

 Table 2: Employment characteristics of the health information workforce

 Characteristic
 Responses
 All
 Australia

IT, Information Technology

New Zealand

Exploring the Pressures Associated with Clinical Coding in Australian Hospitals

Vera Dimitropoulos¹, Kerryn Butler-Henderson², Nina Lean³, Jennie Shepheard⁴

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Introduction

The introduction of activity-based funding in Australia has impacted the clinical coding profession. Whilst it has created employment opportunities, clinical coders (CCs) report the increased pressure from managers, hospital executive, Clinical Documentation Improvement (CDI) specialists and other stakeholders to increase throughput and optimise the funding through clinical coding. The aim of this paper is to present the results of a survey and workshop focus group exploring the pressures associated with clinical coding in Australia.

Method

Data to explore the aim of this study was collected through two methods: an online survey (Dimitropoulos et al 2019a) and a workshop focus group (Dimitropoulos et al 2019b). Further descriptions of the methods for each are described in the cited papers. The findings from both the survey and the workshop with regards to pressure will be discussed in this presentation.

Findings

There were 691 responses received to the survey. The majority of CCs (91.3%) have confidence when performing the coding function, with three-quarters (73.7%) confident their direct line manager supports them to ensure their clinical coding function has clinical integrity. However, only half (56.3%) of respondents had confidence that senior management support CCs to ensure their function has clinical integrity. Overall, 32.0% of respondents indicated they feel pressured in their role to maximize funding through the clinical coding process.

218 registrants attended and participated in a workshop, which comprised approx. 8 people per table across 27 focus group tables. Pressure emerged across several domains and topics:

- 1. Professional development (PD): work related pressures result in a perceived lack of time for PD activities.
- 2. Maintaining currency: perceived increased pressure from hospital executive (quantity versus quality) further impacted the ability to remain current and to develop skills.
- 3. Retention: Perceived unachievable key performance indicators (KPIs) and pressure from stakeholders impact on staff retention.
- 4. Auditing: time pressures also emerged in relation to auditing.
- 5. Mentoring: time pressures also emerged with regards to mentoring early career coders.

Conclusion

The theme pressure emerged across both the survey and the workshop focus groups as an important issue for those working in the clinical coding profession. Whilst integrity is a high priority for CCs, nearly half of respondents lacked confidence that hospital executive support them in this view, with a third feeling pressured to maximise funding through the coding process. Pressure emerged as a challenge across several themes explored in the workshop. Peak bodies need to do more to advocate for and provide support for the CC workforce.

References

 Dimitropoulos V, Lean N, Butler-Henderson K, Shepheard J 2019a, Supporting clinical coders: future proofing the integrity of our clinically coded data – Part 1, HIM-Interchange, 9(1): 18-25.
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Analysis Report Mortality of Cardio-Cerebro-Vascular Diseases & Cancers in China

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Abstract

Assessed to Mortality and Morbidity of Cerebral-Cardio-Vascular Diseases & Cancers in China. By means of international or domestic periodicals materials, utilized our country data of population statistics and epidemiology, used surveying (researching) specific cause of death's case fatality rate, analyzed for Mortality, Death's Cause, YLL(Years of Life Lost) ,GBD(Global Burden of Disease) of Cerebro-Cardio-Vascular Diseases & Cancers in 1990 to 2013, achieved the goal of structure our country's Health Horizontal. Key Words: Cerebro-Cardio-Vascular Diseases, Cancers, Mortality, Years of Life Lost(YLL), Global Burden of Disease(GBD).

Effectiveness of Infection Prevention and Control in Reducing Neonatal Sepsis

Isaac Eyram Tegbey¹

¹Ghana Health Information Management Association, Accra, Ghana

Introduction

Late-onset neonatal sepsis occurs when babies acquire blood infection, usually bacterial, after delivery but within the first 28 days of life. Neonatal sepsis can cause long-term issues or even death. From September 2016 to July 2017, Systems for Health supported the Ghana Health Service to train more than 20,500 staff in 106 facilities in five regions (Western, Central, Volta, Northern and Greater Accra) in Infection Prevention and Control (IPC) practices. Weija-Gbawe Municipal Hospital in the Greater Accra Region was among the facilities that received training. Although the primary impetus for the training was Ebola preparedness, the hospital has seen a marked reduction in neonatal sepsis cases. Formerly, IPC at the hospital was not considered a priority. Health workers had a lack of awareness of the importance of IPC practices, and levels of infections were high.

Objective

To reduce neonatal sepsis by 20% through improved IPC standards

Methods

A total of 227 staff was trained on IPC practices in the hospital. As part of the training, staff developed action plans for each unit, and the hospital appointed an IPC focal person and inducted a committee for IPC mandated to oversee the implementation of action plans. The IPC focal person's enthusiasm and interest in IPC contributed to a transformation of IPC practices at his hospital. He helped to completely turn around the quality of IPC in his facility with initiatives like wooden mobile hand washing systems to save money by preventing rust; in-house production of alcohol hand rub; ensuring the supply of wall mountable soap, sanitizer and tissue dispensers; and the introduction of a quality control system that assures the quality of all IPC supplies entering the facility.

IPC is now part of the orientation programme for new staff. Healthy competition has emerged among health care facilities, with results being displayed for all communities to see. IPC focal person aided by the IPC committee provided support, mentoring and coaching to all departments. The IPC committee established and monitored IPC practices including effective hand washing, use of personal protective equipment, processing of used medical devices, and appropriate waste management. The IPC focal person ensured continuous supply and availability of IPC supplies in the hospital. More importantly, intensification of IPC standard adherence has greatly improved health outcomes.

In the hospital, a greater focus on IPC practices has resulted in many improvements in the health of clients.

Results

In 2016 Weija-Gbawe Municipal Hospital recorded an average of 38 neonatal sepsis per month. After implementing IPC measures in November, 2016, a monthly average of 18 neonatal sepsis cases were recorded in the first half of 2017. The average for the second half of 2017 dropped by 72% to 5 per month. The facility since December, 2017 till date (May, 2019), the hospital has had zero neonatal sepsis. Stringent infection prevention and control measures can significantly reduce neonatal sepsis.

Conclusion

Elimination of hospital-acquired neonatal infections is possible with strong management support backed by vibrant IPC focal persons.

Reducing Delay in Care Seeking through the Application of Quality Improvement Methods and Tools

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Problem

Taking concoctions, visiting prayer camps without seeking medical care when sick all resulted in delayed care seeking leading to poor health outcomes. In 2017, an average of 7 days was recorded as the period of day's community members wait before seeking health care. This was due to several factors such as reliance on herbal medication, lack of knowledge on the hazards associated with self-medication and effects of delay in seeking care among others.

Aim

To reduce the days of onset of illness in Ga South Municipal Hospital from the current 7 days as at 31st December, 2017 to 3 days onset by 31st December, 2018 through community stakeholder involvement, intensified community education and restructuring of healthcare delivery system.

Assessment of the Problem and Analysis of its Causes

The Quality Improvement team used a Fish-bone diagram and brainstorming sessions to identify the root causes of community members reporting late to the seek health care. The Pareto analysis showed the delays were mostly from clients residing in the following communities; Gbawe, Weija, and Malam. These communities accounted for 83% of clients that reported late for health care seeking. Pregnant women also report late before delivery. This has resulted in some pregnant women delivering on arrival either in the transport medium or just after alighting.

Changes Being Tested

- Quality Improvement Team regularly engaged community members, schools and churches in health education on the need to seek early health care.
- The team organized community durbars and radio talk show as part of the outreach intervention to the identified communities; Gbawe, Weija, and Mallam.
- Intensified daily OPD health talks on the importance and need to seek early health care.
- Organized weekend outreach programs, community durbars and church services in the three most affected communities
- Conducted radio education talk shows on the need for early care seeking and danger signs and symptoms for reporting.
- The team collaborated with Management of the Hospital, Community Health Officer's, Specialists and General Nurses to introduce screenings in communities and organizations especially Schools and churches. All clients found with complications or ill health were referred to the hospital for management
- Staff was trained in good customer care and quality assurance systems to ensure clients are well catered for.

Effects of Changes

Nine months after the initiation of the improvement project, the team obtained a:

- A 60% Reduction in institutional mortality rate
- Reduction in the average days for onset of illness before reporting to the hospital
- 100% reduction in deliveries before on arrival in facility
- Increased average Cervical Dilation rate
- Increased skilled delivery rate to 100%.

Lessons Learnt

Quality Improvement methodology has empowered the team to go the extra mile to improve on services for pregnant women with less / no additional resources. Involving pregnant women in the provision of care always enhances better outcome to enable them take ownership of their health.



Cervical dilatation at Obstetric and Gynaecology Wardthe case in Ga South Municipal Hospital



PARETO TABLE ON COMMUNITIES CONTRIBUTING TO DELAY IN CARE SEEKING

COMMUNITIES	4 – 7 DAYS (FREOUENCY)	% FREOUENCY	CUMMLATIVE % FREOUENCY
GBAWE	119	37	37
WEIJA	84	26	62
MALLAM	58	18	80
BARRIER	16	5	85
SCC	11	3	88
CHOICE	9	3	91
BROADCASTING	7	2	93
OTHERS	22	7	100
TOTAL	326	100	

Prediction of the Number of Future Inpatients for Healthcare Management

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Purpose

Every healthcare institution is obliged to reorganize healthcare providing structure due to implementation of both the Integrated Community Care System and the Regional Healthcare Vision by governmental policy. In Japan, As baby-boomer generations are going to enter the stage of latter-stage elderly, and they are not only the population to expect to be greatly changed, but also disease structures. In addition, it is necessary for healthcare providers to predict healthcare demand as well as suitable healthcare providing structure to meet needs by the Integrated Community Care System and the Regional Healthcare Vision. The purpose of the study is to clarify healthcare providing structure of a healthcare institution by estimation future hospitalized patients, reflecting necessary beds and specialists for healthcare management.

Method

The numbers of future hospitalized patients were estimated using Diagnosis Procedure Combination data at Yamaguchi Prefectural General Medical Center in 2015 and Japan's regional forecast population in National Institute of Population and Social Security Research. The numbers of patients were estimated by specific clinical category (cancer, acute ischemic heart disease, cerebral infarction, emergency, perinatal, and pediatric healthcare). Clinical category was grouped by the increasing or decreasing trend. In addition, 3R mesh by Geographic Information System was created with regional analyses.

Results

The total number of estimated inpatients would decrease in Yamaguchi prefecture. The numbers of those with cancer and acute ischemic heart disease would increase and decrease after the peaks in 2020. The number of those with cerebral infarction and emergency needs, densely located in Hofu city, would increase. Perinatal and pediatric healthcare would decrease in all areas. Clinical category was able to be classified into three groups; monotonous increasing trend until 2025, monotonous decreasing trend until 2025, and increasing until 2020 and decreasing trends after that.

Discussion

Because there were differences in the numbers of future hospitalized patients by clinical category for healthcare management, it is important to examine future healthcare providing structure based on healthcare demand for each clinical category. Even for diseases with increasing trend by aging, the numbers of estimated inpatients could have different trends. They should be reflected for healthcare management including healthcare beds allocation and specialist recruitment from now on.

Assessment of Mandatory Continuing Education Program Health Information Management Practitioners of the PNP General Hospital

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Objective

The main objective of this study aimed to assess the Mandatory Continuing Education Program of the PNP General Hospital as basis for action plan towards training and development program.

Method

In relation to this research, the descriptive method was utilized because it is the most appropriate with regards to the purpose of the researcher, that is, to gather data in order to answer the specific questions raised as well as to test the hypotheses related to the subject.

This study was conducted at Philippine National Police General Hospital. It is a uniformed hospital that caters police enforcer personnel and civilian that needs health measures from all walks of life. Located in Camp Crame, found in Quezon City.

Data was gathered, using a structured questionnaire. Respondents A as the HIMS practitioners, while respondents B were the other selected health practitioners. A structured questionnaire using T-test to determine the significant difference in the assessment of two groups of respondents was utilized .The second part is the instructions in order for them to know the contents of the questionnaire and for them to know what to do. The third part contains the question proper where they were asked regarding their own assessment of perceptions on effectiveness of mandatory continuing education program in PNPGH.

Findings

Respondents A shows that ICD 10 and Basic Health Records Management have the highest in rank with fifty percent (50%) and shown that HIMS practitioners should attend trainings that was being required by DOH. Further, Respondents B revealed that only eleven percent (11%) has undergone the DOH training needs and requirements.

Skills - Item was very effective and described as highly significant.

Knowledge - As assessed it can be noted that an overall mean of 3.76 with verbal interpretation of "Very Effective" and described as significant.

Attitudes - Figures also reveals that "Attitudes", played an important role in the mandatory continuing education program in catering clients care with overall mean of 3.04 and also interpreted as "Effective".

The researcher recommend to the Chief, PNPGH her project proposal of the in-service PNPGH Mandatory Training and Development Program for the HHIM Practitioners must be included in the Human Resource Policy as per DOH standards.

Summary

In summary, the response of the respondents with regards to Mandatory Continuing Education Program of HHIM Practitioners of PNPGH was interpreted as "Very Effective" and described as "Highly Significant". The approved proposal of HIMS Action Plan for the Training and Development will be presented to higher authorities through Chief, PNP General Hospital and to be discussed during the Strategic Planning for budget approval and for future implementation for CY 2019. Based on the findings of the study, the following were drawn as the conclusion: that respondent A and B mandatory continuing education program were very effective and highly significant, it was revealed that the Skills, Knowledge, and Attitudes have significant relations.

						Ta	ble 16	6							
	Frequency and I HIMP o	d Me boss f PN	ean sible IP r	Dis e so mar	strik oluti nda	outior ons a tory o	n of th and re contin	e R con uing	espo nme i edu	onde nda ucati	ent's tion: ion p	s Re s prog	spons Iram	ses in	
	Res	oonde	ents	A =	14					ſ	Resp	onde	nts B =	56	
	Effectiveness	4	3	2	1	TWA	TWM	VI	4	3	2	1	TWA	TWM	VI
1	In house seminars and trainings	13	1	0	0	55	3.93	VE	45	9	2	0	211	3.77	VE
2	Continuing professional education in health promotion education by distance learning. Open learning.	11	3	0	0	53	3.79	VE	44	12	0	0	212	3.79	VE
3	Financial support for the HIMB practitioners and other selected PNPGH health practitioners to attend the MCEP.	13	1	0	0	55	3.93	VE	44	8	2	0	204	3.64	VE
4	Proper scheduling of trainings / seminars that will be attended by the HHIM practitioners.	12	2	0	0	54	3.86	VE	46	9	1	0	213	3.8	VE
5	Developing a masters of continuing course program.	11	3	0	0	53	3.79	VE	43	11	1	0	207	3.7	VE
50000	Total					270	19.3					S	1,047	18.7	
	Mean						3.86	VE						3.74	VE

Part III. Problems encountered by the respondents that affect the level of compliance of HIM Practitioners of PNP General Hospital mandatory continuing education program. (T-Test for independent sample)

Table 15

Frequency and Mean Distribution of the Respondent's Responses in Mandatory Continuing Education Program with regards to the problems encountered of HIMP of the PNP mandatory continuing education program.

	Res	pond	ents	A =	14						R	espor	idents B		
	Effectiveness	4	3	2	1	TWA	TWM	VI	4	3	2	1	TWA	TWM	VI
1	Inability to pay registration fee for seminars, trainings and conventions.	7	3	2	2	43	3.07	E	23	23	3	7	174	3.11	E
2	Venue of trainings, seminars is too far.	2	6	5	1	37	2.64	E	12	31	9	4	163	2.91	Е
3	Bored in non- structured continuing education program.	2	6	3	3	35	2.5	Е	9	16	24	7	139	2.48	LE
4	Exhausted /stressful in attending.	0	5	3	6	27	1.93	LE	7	14	20	15	125	2.23	LE
5	Lack of interest in attending continuing education programs.	2	1	7	4	29	2.07	LE	8	17	16	15	130	2.32	LE
6	Insecurities with colleagues.	0	2	2	10	20	1.43	IE	4	13	8	31	102	1.82	LE
7	Agency working with, does not give encouragement.	3	3	1	7	30	2.14	LE	11	18	19	8	144	2.57	E
8	Unable to comply needed requirements of seminars.	1	2	4	6	24	1.71	LE	5	15	14	22	115	2.05	LE
9	Late invitations and limited hours for CPE continuing education program.	1	6	4	2	32	2.29	LE	10	20	15	11	141	2.52	E
10	Conflict of duty schedule.	1	4	3	5	27	1.93	LE	23	19	9	5	172	3.07	E
	Total					133	21.7						674	25.1	
	Mean				1		2.17	LE		1				2.51	E

Table 10

Profile of Distribution of the DOH Trainings for HIMB Practitioners of Respondents A

Respondents A	HIM Cert Course	ICD 10	Retention and Disposal of Records	Data Privacy Act	Health Data Analytics	Basic Health Records Management	Clinical Documentation Improvement	Qualitative and Quantitative Analysis of Health Records	Preparation & Analysis of Annual Hospital Statistical Report	Assessment on Medical Certificate of Death	Risk Management
Frequency Distribution (fg)	0	7	7	4	2	7	3	3	1	1	0
Equivalent in Percentage (%)	0%	50%	50%	28.6%	14.3%	50%	21.43%	21.43%	7.14%	7.14%	0%

Table 14

Frequency and Mean Distribution of the Respondent's Responses in Mandatory Continuing Education Program with regards to the Assessment that Collaborates Effectiveness to HHIM in terms of Attitudes

		Resp	onde	ents /	A = 1	4					Res	ponde	nts B = {	56	
	Effectiveness	4	3	2	1	TWA	TWM	VI	4	3	2	1	TWA	TWM	VI
1	Improves giving HHIM practitioners measures.	12	2	0	0	54	3.86	VE	37	17	2	0	203	3.63	VE
2	Promotes effectiveness in the quality service of HHIM practitioners.	12	2	0	0	54	3.86	VE	37	15	4	0	201	3.59	VE
3	Enhances efficient in the quality service of HHIM practitioners service.	11	3	0	0	53	3.79	VE	2	31	0	23	124	2.21	LE
4	Develops technical and interpersonal skills.	13	1	0	0	55	3.93	VE	2	35	0	19	132	2.36	LE
5	Follows directions better and more receptive.	12	2	0	0	54	3.86	VE	2	0	34	20	96	1.71	LE
6	Demonstrates competence in dealing with clients.	10	4	0	0	52	3.71	VE	2	0	28	25	92	TWM 3.63 3.59 2.21 2.36 1.71 1.64 13.5 2.25	LE
	Total					322	23						756	13.5	
	Mean						3.83	VE						2.25	LE

The New HIM Workforce: Training, Agility and Growth

Maria Caban Alizondo¹

¹UCLA Health, Los Angeles, United States

Overview

A 2016 mixed-methods study about the system-wide implementation of UCLA Health's EHR, focused on the IT leadership and staff, and the HIM staff in the IT organization who were responsible for implementation. The study outcomes were used to understand the perceptions of the participants in three key areas, communication, teamwork, leadership, and overall perceptions of project success. Using the results of this study as a jumping off point, we developed a strategic development plan to address training and knowledge gaps, identify strategies to enable an agile workforce, and provide internal growth pathways - all to ensure a workforce that could respond easily to the changing needs of the organization and the healthcare environment.

Across UCLA Health there is now a new normal, a technical system that requires soft skills in order for it to be effective. Users are required to communicate with each other and to be transparent with patients in order to achieve the best outcomes. The outcomes of the study pointed to the need to improve internal, team communications and leverage higher-level training. A strategic plan was developed to address the changes needed of three years that would position UCLAH HIMS as the subject matter experts and the primary source for best practices related to the patient record.

In this session I will review the outcomes of the study as the basis for a strategic plan that was developed to address the three key objectives, training, agility and growth. The fundamental approach of this project is based on relational leadership paradigms and foundational HIM training. Attendees will learn about the challenges of developing an HIM workforce within the technical and applied informatics requirements, as well as the specific circumstances that make UCLA Health HIM unique. Today the HIM workforce is more focused and agile and the number of certified staff has grown by 15%, which is remarkable given the move toward consolidation in academic programs and healthcare organizations. In working closely with our local academic program, our human resource department and by developing internal training programs, we have increased record integrity and release quality, developed staff that are more self-directed and outcomes focused, and supported the growth of the organization by applying agile cross-training and development strategies.

Interdisciplinary Informatics Cafe

Patricia Visosky¹, Joan Crisp¹

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Overview

Douglas College Strategic Plan (2015-2020) promotes student experiences that are inspiring, relevant, applied and practical. In March 2018, in alignment with these guiding principles, Psychiatric Nursing (PNUR) and Health Information Management (HIM) Departments participated in an interdisciplinary project that used a web-based, educational electronic health record program named Electronic Health Record (EHR) Go. In healthcare, EHRs are used in the collection, storing, analyzing and management of patient information (data) and health delivery. This process is a shared responsibility among all health professionals. The focus of this project was to foster a better understanding of interdisciplinary professional roles and responsibilities when using EHRs. Our project was called Informatics Café. In the project, students participated in a simulated experience using EHR GO to promote interdisciplinary education with the goal to improve student readiness for an ever-changing professional practice and health care delivery system.

In November 2019, the IFHIMA International Conference theme is "Empowering HIM Professionals through a Global Voice". This conference highlights the ever evolving technological changes and challenges that are faced throughout the healthcare industry. The purpose of our conference presentation is to showcase how the Informatics Café project fostered a deeper understanding of how PNUR and HIM interconnect in delivering healthcare, and how this impacts quality health services.

As stated by Pam Cawley, Dean of Health Sciences, "Bringing together these professional groups plays an integral role in understanding and shaping a new era of digital health care. This project advanced interactions critical to understanding and providing for future developments in health care."

When planning the Informatics Café, Faculty applied the British Columbia College of Nursing Professionals (BCCNP) Professional Standards and Practice Standards, the Canadian Institute for Health Information (CIHI) standards and the International Nursing Association for Clinical Simulation and Learning Standards to guide the development of this simulated learning experience. The Informatics Café presentation learning outcomes included:

- Application of knowledge, critical thinking and concept review of EHRs
- Application of knowledge and skills in a simulated clinical encounter
- Application of documentation standards among healthcare providers
- The relationship between clinical documentation, data classification and patient and/or health care outcomes
- Application of BCCNP beginning level Clinical Practice Competencies and Documentation Principles with EHRs
- Application of CIHI coding standards pertaining to the process of health data classification
- Demonstration of interdisciplinary roles and responsibilities pertaining to EHRs among healthcare professionals

An informal debriefing was completed after the Informatics Café, as well as a formal Qualtrix survey within two weeks. The students overwhelmingly found this a positive experience.

While health information technology is not new, its application amongst health care professionals is growing. Therefore, the dissemination of this type of project is important to help stimulate interest and participation among disciplines. This project was presented at the Health Sciences Professional Development day in May 2018. It has also instigated a partnership with University of British Columbia, Department of Pharmacology where further interdisciplinary teaching and learning opportunities are being developed.

Table 1: Nursing and HIM Student Stations and Passport Questions

Stations Nursing EHR Activities		Nursing Passport Question	HIM EHR Activities	HIM Passport Question		
1	Admission, Outpatient Care	How important is admissions information?	Pathophysiology review	What criteria were used to determine if hypertension should be coded on this patient?		
2	Careplanning	How does medical management influence nursing assessments?	Investigation, Treatment and Pharmacology review	What is the criteria for coding administration of medications?		
3	Nursing Process	What is focus versus narrative documentation?	Coding an Inpatient Case Quality Improvement	What are the two axes that are considered when coding neoplasms?		
4	Medication Administration	What are the seven essential medication rights?	Coding an Outpatient Case Case Study Review	What was this patient's most responsible diagnosis and how was this determination made?		
5	Discharge Patient Teaching	How does patient teaching influence recovery?	Chart Deficiencies & Clinical Document Improvement	What ethics criteria necessitate the completion of a Consent form?		
6	Nursing Diagnosis	Why do we treat conditions?	Health information guardianship and stewardship	What is CDI and what is your role as the Psychiatric Nurse?		

Table 2: Student Evaluation of Informatics Café

	Survey Questions	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree
1.	This event allowed me to participate in or observe a group discussion with the inter-professional team	59%	35%	6%	•
2.	This event gave me the opportunity to learn about the scope of other health care provider's roles in the provision of care	76%	12%	6%	6%
3.	This event gave me the opportunity to participate in documentation, including the collection, storing, analyzing and management of patient data and information	53%	47%	•	
4.	The simulation experience contributed to my self- confidence in working within a collaborative inter- professional team	41%	41%		18%
5.	The simulation experience contributed to my self- confidence in working within an electronic health record	6%	53%	35%	6%
6.	The simulation experience provided me with the opportunity to practice/demonstrate/observe competencies specific to my profession/role	59%	23%	12%	6%
7.	The classroom preparation (before simulation experience) helped me prepare for the simulation experience	35%	47%	6%	12%
8.	The debriefing session (after the simulation experience) helped me clarify and consolidate the learning from the simulation experience	35%	24%	35%	6%

Managing HIM with Evidence: A Case Study

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Introduction

For nearly 100 years, the health information management (HIM) profession has managed patient records and the attendant data reporting from the patient record. Electronic data management has been an important part of the profession for at least the last two decades.[1] However, a search of the literature via PubMed reveals little in the way of peer-reviewed publications related to operations management for HIM organizations. This case study was conducted in a North Texas integrated healthcare delivery system with 27 hospitals, including 18 acute care hospitals. The system has more than 4,000 licensed beds, with more than 6,200 practicing physicians on staff.

Methods

The case study was conducted as a joint project between a graduate informatics program and the healthcare delivery system. The analysis of the evidence-based HIM operations consisted of interviews and focus groups conducted over a two-day period. The questions included a description of the Key Performance Indicators (KPIs) used, how they are selected and calculated, as well as how the data is collected for each KPI. All participants were also asked about the evolution of the reporting and what they liked least and best about the KPI reporting system.

Results

The HIM organizational structure found in Figure 1 was established in 2012 after a design session including all HIM directors and managers, as well as Human Resources (HR) and Information Technology (IT) representatives. A key objective was to create an approach that would result in efficiency, as well as improved quality.

The use of the dashboards grew and developed over a period of 5 years. See Figure 2 for the current dashboard. Staff initially reported feeling that the dashboard would be used punitively. It has evolved into an opportunity to identify areas for improvement and to celebrate achievements, especially when "stretch" goals are met.

Discussion

Themes identified from the analysis include:

- 1. The culture of evidence-based management starts at the top of the organization.
- 2. Evidence-based HIM management ensures senior management is aware of the impact of HIM on the entire organization.
- 3. Once staff understand the reporting, they embrace it to the point where they create their own individual dashboards for tracking their work.

Using dashboards of this type results in greater transparency and facilitates quality improvement across the organization.

Conclusion

Other HIM organizational units are encouraged to undertake similar efforts in their organizations. There will be challenges, including employee resistance; however, the benefits such as documentation of HIM effectiveness and employee pride in their jobs are significant.


HIMS Dashboard - System Services 20)18		
	Industry	Organization Standard	YTD
Regulatory Compliance	Standard	Steriorita	
Release of Information			
1. Continued Care Request TAT	15 days"	7 days.	12
2. Insurance Request TAT			15
2. Lugal Request TAT			33
4. STAT Request TAT			29
5. Auge request DAT 6. Disability Request TAT			24
2. IICI Duality Score			97.5%
2a. Number of Privacy lineaches by NIMS IIO			011010
7b. Number of Customer Complaints Received			
Physician Documentation Compliance		_	<i></i>
8. Completion rate of History & Physical within 24 hrs.			99.4%
9. Completion rate of H&P Update within 24 bes			92.5%
10. Completion of required elements for HBP update			
10a. H&P Reviewed documented			99.7%
tota visitimi paarmined documinted			98.5%
T1. Completion rate of Doentium Report within 24 las			95.2%
12. Completion rate of Immediate Post-On Penerous Note - Timeliness			90.7%
13. Completion of required elements for immediate Post-Og Program Note			
13a. Pre-operative diagnosis documented			99.5%
13b. Past-operative diagnosis documented			99.3%
\$3c. Name of Surgion and assistant(a) documented			99.4%
13d. Procedure documented			100.0%
The Findings documented			92.6%
131. Specimen documented			98.6%
53g. (Stimuted Blood Losi (EBI) documented			99.4%
 Pertensage in valid outpatient diagnosis, inders print to transmission memory and 1220. Also Number of accounts uniform all, due to help of signaphing decounteration, responsed to 220. 			96.3%
Tab. Dollar Amount of write-off due to lack of subjecting documentation, reason only 1229			
15 Medical Record Delinguency Rate			2.1%
16. Physician Sunperstities			
17. Physician Suppositions Rescinded			
Documentation Compliance			
18. Inputient Port-discharge Analysis TAT			1.58
19. Outpatient Post-discharge Analysis TAT.			1.70
70. Document Mont Compliance: Challity Score	N/A	07%	99.5%
Data integrity	_	_	
21. Venume of Duplication Corrected			22
22. Duplicate Milli Merge IAI			23
23), Digninate precising correcting (14) 23), Northus of Administration Davidian Opinia Chaminal Areasing 7			40
238. Reprider of Administrative Decision Socials Changes Addunts V			14
25. Volume of Duelicates Created			Contract of the local division of the local
25a. Crented by PAIC			
25b. Created by PAS			
25c. Created by Others			
26. Duta Integrity Quality Scare - Simple Opletes	NA	95%	95.2%
Transcription			
27. History and Physicals TAT			0.94
27a. Paychiatric (valuation			1.29
28. Contraction Inducts (25)			1.19
TE Discharge Tommaries TAT			1.15
11. Volume (Linet Produced)			1.20
32. Transcription Quality Score			99.7%
33. Colt Per Line			\$ 0,10
34. Decrease in Traditional Transcription Volume	5N/A	15%	12.1%
Records Management			
35. Medical Record Scanning TAT 0			24
36. Records Management Quality Score o			99.3%

Does the HIM Profession Need a Doctoral Degree?

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Introduction

The health information management (HIM) profession is a profession facing a future of change. The advent of machine learning and artificial intelligence will result in elimination of many of the more technical functions currently performed by HIM professionals. It is time for HIM education to expand to meet future changes.

Current HIM Education Across the World

The first recommendation in the United States HIM Reimagined white paper is to "increase the number of AHIMA members who hold relevant graduate degrees to 20 percent of total membership within 10 years." This is a worthy, lofty goal. Rather than hold doctoral degrees from other disciplines, the health information management (HIM) profession should be bold and establish their own professional doctoral degree. The American Health Information Management Association was established in 1928 and the College of St. Scholastica established the first baccalaureate program in 1935. There are now 69 baccalaureate and 7 master's programs in the U.S. The Health Information Management Association of Australia was established in 1949. Their website currently reports 3 active baccalaureate programs and 3 master's programs. The Canadian Health Information Management Association was founded in 1942. CHIMA has 11 diploma programs and 2 HIM degree programs, along with several specialty programs. Other countries continue to build their educational programs.

Professional Doctorate in Health Information Management

With the wide-spread implementation of electronic health records (EHRs) in the past decade and machine learning poised to play a significant role across the healthcare industry in the future, HIM professionals and educators will need to continue to evolve in new and different ways. There are multiple reasons for a doctoral, terminal HIM degree, including HIM taking its place in healthcare as a doctorally prepared profession. The professional degree, as opposed to the research-based PhD, is appropriate for multiple audiences, including training HIM professionals for executive positions and preparing graduate-level HIM educators within their discipline.

There will be significant challenges including approvals at multiple levels and the need for doctorally prepared faculty. Considerations for the development of this new degree include the specification of a strong curriculum focused on translating research and evidence into practice, verbal and written communication, change management, leadership training, and more. Receiving approval will also require a framework for the professional degree project and written report. The project should be sufficient to require 18-24 months for completion and the written report should meet a standardized template to include an assessment of the impact of the project and a final evaluation of the outcomes.

Conclusion

The HIM profession needs to seize the opportunities created by the changes coming in healthcare and healthcare technology. Preparing a highly educated workforce with a terminal degree could position HIM as international leaders.

Assessing physicians' compliance with medication-related clinical decision support alert in the intensive care unit

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Introduction

Clinical decision support system CDSS, is the centrepiece of the electronic health record (EHR) incentive program to enhance patient care and prevent medication errors. Recent studies suggested that medication related CDS-alerts were commonly inappropriately overridden and rate of adherence is usually low. The rate of medication errors for patients admitted to the intensive care unit ICU is higher than other patients and theses inappropriate override may affect patient care.

Methodology

Retrospective study was taken place as in chart review of adult that admitted to ICUs between January 2017 and December 2017 at tertiary-care institution. Determination of the numbers and types of medication-related to CDS-alerts, in adult ICUs, were assessed physicians' compliance with the alerts through the measuring appropriateness of the level 1 interruptive overrides.

Results

A total of 42,883 CDA-alerts fired in the adult ICUs, between January 2017 and December 2017. These alerts were displayed for a total of (526) patients, aged between (18 and 103) years old with Mean and SD (62+/- 17.13). Most of alerts appears in age of (78) years old, no- alerts were generated for the (22) patients as described in figure 1 the details about alerts appearance according to their category. A differences of severity levels in CDS-alerts were available as a 'level 1 for Major severity alerts (coded RED) shown (n=3200 with 7.5%) and a total of 3200 were considered in the study evaluation for an appropriateness. The majority of level 1 alerts were also in the drug-drug interactions of (n=2012 with 62%), followed by drug dose screening alert of (n=1030, with 32.19%), drug allergy of (n=93 with 2.91%) and drug disease of (n=65 with 2.03%). Whereas, in level 2 was for Moderate severity alerts (coded Orange)' was shown (n=8877 with 20.70%) while, 'level 3 for Minor severity alerts (coded Yellow) shown (n= 30 807 and with71.8%) for each alerts category with the corresponding severity as described in figure 2. A total of 3200 overridden of a major severity alters in level 1 was included for physicians' compliance evaluation. An overall appropriateness rate for overridden alerts were 49.9% and the significance was varied by alert category as (drug allergy: 66.7%, drug-drug interactions: 59.7%, drug disease: 55.4%, drug dose screening: 29%) as shown in table 1. The logistic regression was used to assess the alerts of meaningful on appropriateness and so a significant of a negative relationship was found between meaningful alerts and appropriateness at the level in confidence interval of 95% (CI 0.449, 0.644), as (B= -0.620), and the odds ratio OR were = 0.54, p < 0.01 as shown in table 2.

Conclusion

Almost more the 80% of the CDS-alerts were warned of potential significance in patient harm and others had a little of clinical impact. However; almost 50.1% were inappropriately overridden and a further efforts modification should be focused to improve the CDS-alerts system, and an uninformative alert must turn-off. A future investigation is important to assess that why the physicians having a low adherence rate for utilizing the recommendation of CDS-alerts.



Differences of severity levels in CDS-alerts were available for each alerts category



			Alert Category									
			Drug Allergy	Drug Disease	Drug Dose Screening	Drug-Drug Interaction	Total	P value	X2	Df	Spearman correlation	Sig.
Appropriateness	NO	Count	31	29	731	811	1602	0.00 267.87			0.23 0	
		% within Appropriateness	1.9%	1.8%	45.6%	50.6%	100.0%					
		% within Alert Category	33.3%	44.6%	71.0%	40.3%	50.1%					
		% of Total	1.0%	0.9%	22.8%	25.3%	50.1%					
	YES	Count	62	36	299	1201	1598					
		% within Appropriateness	3.9%	2.3%	18.7%	75.2%	100.0%		267.97	2		0.00
		% within Alert Category	66.7%	55.4%	29.0%	59.7%	49.9%		201.01	3		
		% of Total	1.9%	1.1%	9.3%	37.5%	49.9%					
Tetel		Count	93	65	1030	2012	3200					
		% within Appropriateness	2.9%	2.0%	32.2%	62.9%	100.0%					
10	tai	% within Alert Category	100.0%	100.0%	100.0%	100.0%	100.0%					
		% of Total	2.9%	2.0%	32.2%	62.9%	100.0%					

Analysis and Consideration of the Solutions for Inadequate Checks Concerning Diagnostic Imaging Reports.

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Introduction and Objectives

According to the information from the Japan Council for Quality Health Care, many cases have been reported in which treatment was delayed due to the failure of the physician to check the diagnostic imaging report after checking the images, and therefore failed to notice findings other than those associated with the purpose of the examination. To address this, Oita Red Cross Hospital started a maintenance system for the reporting of diagnostic images about one year ago. Nevertheless, in terms of results, it did not go well. Based on the unsatisfactory results of inadequate checks, I analyzed the problems and considered possible solutions.

Method

At first, in order to analyze the list of inadequate checks, I set up each item as follows: Medical department, Radiation equipment, Reporting date from radiation room, Warning date by emails from HIM office, Reply to emails from the physician, Instructions from the management room. Result: There was an average of 2.6 cases per month that were judged as a failure to check the first report. This figure has increased to 3.6 cases in the last three months. Highest number (Medical department): Orthopedics. Highest number (Modality): CT. The required number of days from imaging to reporting date: Shortest 4 days, Longest 50 days, Average 22.3 days. Reporting date to the date of read report: Shortest 1 day, Longest 8 days, Average 4.3 days. Total: Shortest 5 days, Longest 51 days, Average 26.6 Days.

Conclusions

In the beginning I wanted to respond systematically to the problem, however I came to the conclusion that I could not find anything in the maintenance system for the reporting of diagnostic imaging that would be perfect by itself. I think that the problems of inadequate checks are not only the problem of radiation imaging system but the problem of whole electronic health record (EHR) system. And the EHR system basically has too many warning systems for physicians. Furthermore, there is a limit to human's ability to recognize warnings. Therefore, I think that it is not enough to pursue the system notifications and to improve physician awareness. However, if the patient receives an unfortunate outcome because of an inadequate check, the responsibility as a doctor in charge and the responsibility of the hospital cannot be escaped. Direct human-to-human communication is very effective. But, Specialists like radiologists are limited in number in our hospital. So, interventions and audits by the HIM office will be essential.

Electronic Health Records and Healthcare Quality: Perception of Saudi and Non-Saudi Healthcare Professionals

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Background

Improving healthcare quality is one of the core objectives for implementing electronic health record (EHR) in a healthcare setting. However, EHRs are not extensively used in primary care in Saudi Arabia. The objective of this paper is to examine the influence of nationality on healthcare professionals' perception of EHR role in improving healthcare quality in primary care practices. This was part of a study undertaken to explore the perceptions of healthcare providers in the primary health setting in Riyadh City, Saudi Arabia on the effect of EHRs on the quality of service provision.

Methods

All healthcare professionals (1710) working in primary healthcare centres (PHCCs) in Riyadh, Saudi Arabia were invited via email to complete an online survey, deployed using the Research Electronic Data Capture (REDCap) web application. Consent was obtained at the start of the survey, and no identifying information was captured, ensuring responses were anonymous.

Results

A total of 1127 surveys were completed, representing a response rate of 66%. The majority (72%) of respondents identified themselves as Saudi nationals. In general, 74.8% of the healthcare providers agreed that the use of EHR improves the guality of healthcare services in PHCCs. However, Saudi (n=811) and non-Saudi (n=316) healthcare professionals significantly differed in their perceptions of EHR effect on healthcare quality with the latter group reporting a higher level of agreement that the use of EHRs positively impacted the quality of service provision. Compared to Saudis, more non-Saudi providers agreed that a EHR provides quick and reliable access to scientific research (Non-Saudi: 84.5%, Saudi: 72.6% agreement; p < 0.001), enables following test results (Non-Saudi: 77.5%, Saudi: 74.5%; p < 0.001), provides access to patient data and analysis (Non-Saudi: 80.7%, Saudi: 75.3%; p = 0.002), provides better data (Non-Saudi: 76.3%, Saudi: 73.9%; p = 0.002), and enables easy access to information from past medical records (Non-Saudi: 79.1%, Saudi: 71.9%; p = 0.004). In relation to the obstacles experienced in using EHRs, Saudi nationals had a higher level of agreement to statements such as EHR increases the health professionals' workloads (Non-Saudi: 15.8%, Saudi: 26.5%; p < 0.001), consumes more time than paper-based systems (Non-Saudi: 16.1%, Saudi: 20.1%; p < 0.001), has frequent downtime (Non-Saudi: 11.1%, Saudi: 24.7%; p < 0.001), and is costly (Non- Saudi: 14.9%, Saudi: 28.6%; p < 0.001). In general, 78.2% of non-Saudi participants agreed that EHR improves the quality of health care services in PHCCs compared to 73.5% of Saudis.

Conclusion

Healthcare professionals in PHCCs in Riyadh perceive EHR to positively impact the quality of healthcare services. However, Saudi healthcare professionals tend to have a lower perception of the EHR and its role in healthcare. This may be due to a lack of adequate knowledge, experience or training with EHRs. Education and training could play a significant role in improving healthcare professionals' knowledge and skills in EHRs and improve adoption rates in primary health care practices.

Speaking the Same Language through Standard Terminologies: Leveraging Your Skills to Capitalize on This Translation

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Objectives

- 1. State the purposes of standard terminologies
- 2. Explain how using a terminology one "speaks" the same language
- 3. Describe the goal of a SNOMED Clinical Terms (SNOMED CT) and International Classification of Diseases (ICD) map
- 4. Identify the skills Health Information Management (HIM) professionals can leverage to be a part of the translation

Outline

- I. Purposes of Standard Terminologies
- II. Terminologies Used for Primary and Secondary Data Use
- III. Definition of and Reasons for a Map
- IV. Skills Needed to Expand the HIM Professional's Role Beyond Classifications

Abstract

An emerging global theme is the adoption and implementation of terminologies such as SNOMED Clinical Terms (SNOMED CT) to standardize the data for clinical documentation and decision making. In doing so, interoperability of data between systems and nations is made possible. However, there is also a need for reuse of data from the electronic health record (EHR) for morbidity and mortality reporting in public health, clinical research, enterprise health system management, and reimbursement. These secondary data uses often depend on classifications, for example the International Classification of Diseases (ICD). A map between SNOMED CT and ICD provides a solution for clinical data re-use.

Health information management (HIM) professionals have a long history with classifications and code sets such as ICD. With the focus on adopting standards for representing content in the EHR environment, HIM professionals should keep an eye on terminology adoption in their country.

Playing a key part in this evolving healthcare environment where terminology knowledge is essential requires the HIM professional to:

- 1. understand the purpose of standard terminologies
- 2. know how a reference terminology has the ability to represent clinical documentation
- 3. be proficient in the different types of terminologies
- 4. determine what skills can be leveraged and where additional education may be necessary to move into current as well as emerging roles

Attend this session to build your knowledge base and begin to increase your skills by learning about the standard terminologies being implemented in EHRs, the difference between the types of terminologies, and the benefit of a SNOMED CT to ICD map. Come away with an understanding of the HIM professional's roles in standard terminologies once skills are strengthened.

Health information Systems Interoperability Assessment for Ghana Using the Health Information Systems Interoperability Maturity Toolkit

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Introduction

USAID's MEASURE Evaluation project, in collaboration with the Digital Health and Interoperability Technical Working Group of the Health Data Collaborative, developed the Health Information System (HIS) Interoperability Maturity Toolkit. The toolkit identifies the factors critical to successful implementation of interoperable information systems and guides countries in assessing the readiness of their systems to form an interoperable HIS. The kit contains three pieces: a maturity model, an assessment tool, and a user guide. The HIS interoperability maturity model identifies the main components of HIS interoperability and lays out an organization's growth pathway through these components. The tool has been designed such that Countries can use the tool to systematically measure their HIS interoperability maturity level.

Ghana has been involved in the development of this toolkit by USAID MEASURE Evaluation since 2017 with participants from various sectors of the health sector taking part in a stakeholder meeting organized by MEASURE evaluation in June 2017. With the completion of the tool in December 2018, Ghana was approached by MEASURE evaluate to pilot the tool to assess the HIS interoperable maturity level of Ghana and contribute to further refinement of the tool. The team in Ghana had in mind of using the assessment results, to create a developmental path toward a strong, interoperable and resilient HIS producing high quality data for decision makers.

MEASURE Evaluation worked with the Ghana Health Service Policy Planning Monitoring and evaluation Directorate to identify a small team of in-country key persons to form the assessment oversight team. The team selected the participants for the assessment workshop based on the main domains that the Toolkit was assessing. Which are Leadership and Governance, Human Resource and Technology.

Methodology for the Assessment

The assessment was moderated by two facilitators from MEASURE Evaluation. The facilitators took the participants through how the assessment tool was supposed to be completed. The assessment tool consists of certain questions under each sub-domain that participants go through and ticked the ones that were most appropriate. The participants were made to go through the assessment tool as individuals and score each sub-domain based on their experience and knowledge. The participants were then brought together to agree by consensus the correct answers for each of the questions. Based on the consensus reached the answers were transferred to the maturity toolkit and the appropriate scores were given. The scores given ranged from Level 1 – representing a nascent phase, Level 2- emerging, Level 3- established, Level 4-institutionalized and Level 5-optimized.

Results

The results for the three areas of the assessment are summarised in Figure 1. From the interoperability assessment of Ghana, Ghana is still in the nascent phase of HIS interoperability.

Conclusion

Given the rapid deployment of eHealth applications in Ghana, there is an urgent need to address the nascent HIS interoperability status of the country. There is the need to develop a plan using the Toolkit that should be implemented to address the gaps identified to ensure optimal HIS interoperability in Ghana.

DOMAIN	Subdomain	Current level
	Governance structure for HIS	1
	Interoperability guidance documents	2+
	Compliance with data exchange standards	2
	Data ethics	2
	HIS Interoperability monitoring and evaluation	1
	Business continuity	1
	Financial management	1+
LEADERSHIP AND GOVERNANCE	Financial resource mobilization	2
	Summary of Domain Score	1
HUMAN RESOURCES	Human resource policy	1+
	Human resources capacity	2
	Human resource capacity development	2+
	Summary of Domain Score	1+
	National HIS enterprise architecture	2+
	Technical standards	1
TECHNOLOGY	Data management	3+
	HIS subsystems	2
	Operations and maintenance (for computer technology)	2
	Communication network (LAN and WAN)	2+
	Hardware	1+
	Summary of Domain Score	1

Table 1: The results of the HIS Interoperability Assessment for Ghana by the three main domains

Leveraging on eHealth for Health System Strengthening to improve Health outcomes in Ghana.

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Introduction

The Ouagadougou Declaration on Primary Health Care and Health Systems in Africa focuses on nine major pillars of the health system, namely Leadership and Governance for Health; Health Services Ghana like most developing countries will find it difficult to achieve all the health targets of the Sustainable Development Goals by the year 2030 due to health system challenges.

Health Systems Strengthening Interventions Leadership and Governance

Ghana in the year 2010 developed a National eHealth Strategic Document. The strategy took inspiration from the recommendations of the Annual Ministerial Review of the United Nations Economic and Social Council held in Accra in June 2009. The National eHealth Strategy provides a framework for engaging consumers of health services and ensuring that they contribute effectively towards raising the overall health status of the population. The Data Protection Act and Electronic Transaction Act provide the broad legal environment for the practice of eHealth in Ghana.

Health Work Force

One of the weaknesses seen in implementing eHealth interventions in Africa is the inadequate numbers of skilled human resource within the health sector. To address this challenge, the Health Sector in Ghana has a training school that trains health information officers who are placed in the facilities and districts in Ghana for data management. Service delivery

Facility based- Clinical Care Services

To support clinical service delivery in Ghana, hospital information systems development and deployment has been pursued. Using the model of public private partnerships, private vendors have been engaged to provide solutions for Hospitals. All these Hospital Information System are required to generated monthly summary statistical reports and send it into the national dhis2 platform (DHIMS2). Digital X-rays and automated laboratory analysers have been procured and distributed to many hospitals. In some of these facilities systems have been set up to send the X-rays and laboratory results to a remote site for a specialist to read and send the report back to the facility.

Health Information

Ghana has fully deployed the dhis2 in all the 216 districts in the country. It is used to collect, collate, analyse and report on routine health service data from public, private and faith based facilities in the country. The African Development Bank in 2013 gave Ghana an award in facilitating health managers to data for decision making through our use of the dhis2.

Conclusion

The Health Sector in Ghana has used various eHealth interventions to improve the health system and improve health outcomes. Using eHealth some critical service bottlenecks to improving service delivery have been addressed. There would however be the need to strengthen the legal and policy environment needed to implement more recent advances in eHealth to ensure that the country can fully benefit from the innovations in eHealth that are currently available.

Building a Culture of Data Use - The Ghana Experience

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Introduction

The use of routine health service data to inform decision making within the health sector is hindered in most countries by lack of clear policy framework as well as the legal environment under which this can be done. There is also inadequate capacity to analyze and use this data for decision making. Ghana is no exception. Investments in a particular source of data appear to correlate positively with perception of quality of the data and its subsequent use for strategic decision making. Of all the sources of health data, Routine Health Service data from the Health Information Management System, has the lowest investments being made and it also the one mostly perceived to have poor quality. So although it is easily available it is rarely used.

In Ghana the main obstacles to the use of data from the routine health information system data that were identified were, managers not having access to the national dhis2 platform because they did not take part in the initial training or has forgotten their passwords. Managers had doubts about the quality of the data and there were no incentives for using data for decision making. Some of the managers lack the analytic skills needed to turn data into information that can be used to inform decisions.

Intervention

The interventions that were put in place included providing managers with usernames and passwords and training of managers at all levels from the District to the National on how to access the needed data from the national health information system, which is built upon the dhis2 platform. Simple tools on checking quality of data was deployed in the national health information system with guidelines on how to systematically use the tools to improve data quality. Dashboards with some standard analysis were pre- generated and shared on the National health information platform to assist managers to track performance and take decisions on service improvements. Regional teams were trained on using routine health service data as source of secondary data for operational research that seeks to address service delivery bottle necks.

Results

The use of the dhis2 platform, the national Health information system has increased from 2,000 as the maximum logged into the system at a time to 9,000 logged into the system over the one year of intervention. All the ten regions now provide monthly feedback on data quality and service performance to the districts and facilities. Performance agreements of senior managers is encouraging active use of data to track performance. All the ten Regional Directors of Health Service has signed performance agreements with the Director-General of the Ghana Health Service. Their performance will be assessed using some key indicators derived from the routine health information system. Two out of the ten regions has published papers in peer review journals using their routine service data.

Conclusion

Involving managers in data management as well as positioning data use as part health system improvement and quality of care improvement facilitates the use of data for planning and health service implementation.

Increased on Medical Resources of Penicillin-Resistant Streptococcus Pneumoniae Infections using DPC (DiagnosisProcedureCombination) and JANIS (JapanNosocomialInfectionSurveillance)

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Introduction and Objectives

"Drug resistance AMR countermeasure action plan" has been decided and numerical targets for antibiotic resistance to various antibiotics up to 2020 are set. Also on "March 6, 2018 DPC Survey Results Report" "Usage status of specific antibiotics" was announced. Accordingly, we decided to verify the use situation of antibiotics at our hospital and additional medical resources due to drug-resistant bacterial infection.

Methods

From April 2016 to March 2018 17,357 patients were admitted to and discharged from our hospital. We constructed a consolidated database using DPC data and JANIS data. Case control matching was performed in which six factors, the main disease name ICD, CCI (Charleson coexisting disease index), surgical formula K code, gender, age classification, and respiratory care were matched. We conducted a T test of Wechi on infectious cases and non - infectious cases with the number of hospital days increased as a result of PRSA infection and the volume of medical expenses examined. Statical analysis used SPSS Ver 25.0 and R.

Results

In 18 cases of PRSP infection and 17,339 cases of non-infected, the main disease name ICD type was classified into 12 types matching, and as a result of matching, 15 pairs were extracted. Overall it increased by 167,991 JP yen (5,572 UAE Dh; 1,517 US\$) in hospitalization expenses, and increased by 6.8 days in hospital. Especially for age group 5-64 years old High hospitalization expenses increased by 246,505 JP yen (8,176 UAE Dh; 2,226 US\$) and extension of hospital days for 9.4 days was accepted.

Conclusion

According to the previous literature, it was reported that the hospital medical expenses increased by 102,839 JP yen (3,412 UAE Dh; 929 US\$), and the number of hospital days was extended by 2.79 days, and it was revealed in our hospital data that additional medical expenses similarly occurred. There was also a burden on severity, medical care / nursing necessity degree A item.

Discussion

With this integrated database construction, it became possible to verify additional medical resources accompanying drug - resistant bacterial infections other than PRSA. In the future, by conducting comparative research studies utilizing the network of the National Hospital Organization, it is necessary to clarify the current status of AMR infection, to make an index useful for effective AMR countermeasure activities, and to reduce additional medical expenses. We will continue to conduct the intended research.

Estimates of Burden of Antibacterial Resistance



Figure 0.2. International comparison of antimicrobial resistance proportions in major microorganisms in humans causing problems due to antimicrobial resistance⁴



Factors Affecting Utilization of Ambulatory Health Care Services in Eastern Province in Saudi Arabia

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Background

Healthcare quality improvement has always been a national priority. Privatization of the health care sector is one of the major reforms of the Saudi healthcare system that is expected to increase the number of citizens with health insurance coverage. Research has shown that there are many factors that could affect health care utilization including health insurance, gender, and age.

Objectives

To identify the influence of insurance coverage, gender, and age on the utilization of ambulatory healthcare services.

Methods

This study is a descriptive cross-sectional study where data was collected through retrospective medical records review. Clustered random sampling design was used to target 1000 patient visits (500 insured vs. 500 uninsured patients). Quantitative methods were used for data analysis using SPSS. In addition to insurance coverage, gender, and age, utilization was measured by number of patient visits and corresponding charges associated with services provided.

Results

This study was conducted to identify the influence of insurance coverage, gender, and age on the utilization of ambulatory healthcare services. Result have shown that, the number of patient visits for uninsured was significantly higher (M= 7.69, SD= 6.595) compared to insured (M= 1.04, SD= .195). Also, expanses for uninsured was significantly higher (M=269.25, SD=303.67) compare to insured (M=47.31, SD=71.53). However, there was no significant difference between healthcare utilization with gender or age (p > 0.05).

Conclusion

This study tried to identify the effect of several factors on ambulatory healthcare services utilization. The results of this study could be utilized by ambulatory care centers for provision and planning of health services.

Assessment and Improvement of Medical Quality Using Quality Indicator

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Introduction

In our hospital, we participate in the Japan Hospital Association QI (Quality Indicator) project and measure the quality of medical care. Among the indicators, the fact that the stopping rate within 24 hours of preventive antibiotic administration in specific surgery was low was noticeable, so we decided to conduct cause analysis.

Method

Target of the analysis are Colorectal surgery, Hysterectomy and knee or hip joint replacement surgery. After that, Health Information Manager analyzes that the information. The stopping rate within 24 hours for prophylactic antibiotics was 90% in Colorectal surgery. However, total hysterectomy was 35%, and total joint replacement was 0%, so it was decided to verify non-colonic surgery. The verification content is the time to stop the case that has not stopped within 24 hours. In addition, it was decided to check if the medical records do not describe the reason.

Results

For total joint arthroplasty, there was little variation in the time before stopping, and the average was 29 hours after stopping. However, in total hysterectomy, there was a gap in time to stop. We used Clinical pathway for patient in knee or hip joint replacement surgery. But this Clinical pathway was long term using prophylactic antibiotics than common for old guidelines. In consultation with the ICT, the Clinical pathway was revised so that the administration of the preventive antibiotics would be stopped within 24 hours. In addition, with respect to total hysterectomy, there were cases where the administration period of prophylactic antibiotics was long, and it was confirmed whether the medical records indicated the reason. As a result, it was found that "patients with cesarean section" and "patients showing reasons for long-term administration of antimicrobial agents after surgery", which are criteria for excluding the index denominator, were not excluded. As the person in charge calculates the index, it is a lot of effort to confirm the reason, so add "Antimicrobial agent stop within 24 hours after operation" to the Clinical pathway outcome index and set exclusion criteria for variance. Therefore, we considered that it would be easier to collect data, and we also decided to revise the Clinical pathway.

Discussion

In the measurement of medical quality, it is thought that evaluating the results of the measurement and analyzing the problems leads to the improvement of the medical quality of the hospital. This time, the health information manager performed the analysis. As a result of reporting the analysis, the status of use of other surgical prophylactic antibiotics was also confirmed. It became a policy to change to medication and administration period based on the guidelines. This time, we analyze the causes of the use of preventive antibiotics, and think that we can improve them in cooperation with ICT. Regarding infection control, it seems necessary to confirm the relationship with the transition of SSI in the future.

Healthcare Transformation in Developing Countries

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Challenges

It is estimated that less than 15-20% of the rural population and underprivileged groups have access to health care services in many countries. Spiraling healthcare cost and lack of well-maintained records for obtaining correct data and patient getting, safe, improved quality and secured care are critical issues.

Objective

Healthcare Transformation is to provide swift, safe, improved and cost contained care. To accomplish the Artificial Intelligence (AI), Robotic and Machine Learning (ML) is applied in healthcare transformation at global level including Developing Countries (DC).

Introduction

Having realized the healthcare lags behind other industries; policy and decision makers have adopted to new technologies for healthcare transformation. In order to implement transformation, the honest and commitment from the management is a must.

Healthcare Transformation

AI, Robotic and ML are poised to transform healthcare by Analytics using enormous amount of healthcare rendered data that includes clinical, administrative, billing and operation data, which will be learned by machines: the disease patterns, treatment and outcome and suggest remedies. Role of AI: AI coupled with machine reading can analyse data on different topics and can find out most un- revealed information, can play role not just in diagnoses, treatment in medical or surgical care but also in therapeutics.Al can use sophisticated algorithms to 'learn' features exercise would futile and mystifying. All aims to mimic human cognitive functions and bringing a paradigm shift to healthcare, powered by increasing availability of healthcare data and rapid progress of analytics techniques. Al can be applied to various types of healthcare data(structured and unstructured). Al in some sense can hold more usable data than a human brain, with this can help in developing new drugs faster than capable humans. Barriers in EHR and Healthcare outcomes: Hospitals have envisioned EHR as a nearly all-powerful tool capable of improving quality. However, it still experienced substantial variability, and it was incredibly difficult to extract data form EHR, limiting its ability to evaluate performance or inform decision making due to non-coordination between IT and clinicians. Problems of Developing Countries(DCs): The concept of maintaining good records is lacking in majority of the hospitals except in teaching institutions; If the retained old records are inaccurate, incomplete, not timely recorded, and if irrelevant than the AI coupled with Robotics and ML will produce completely mystified results. One has to be careful and work on this challenge prior to implementing AI, Robotic and ML into practice. Health Catalyst: is a next-generation data, analytics, advanced predictive analytics and value-based care for population, with a suite of machine learning-driven solutions.

Conclusion

Although Transformation of Healthcare is the major responsibility of highest authorities of nation, state, region or hospital, the HIM will have to play a vital role as the AI technology is mostly depending on scanning the huge old preserved records - manual or electronic, need to be ensured they are accurate, complete, relevant and timely documented then only serve the purpose of predicting right results; otherwise it will not only mislead but lead to damaging results.

Healthcare Finance and Value-Based Healthcare in Developing Countries

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Introduction

The developing countries with huge population to serve, high healthcare expenses and great demand for healthcare services with many economic, social, cultural and other inherited problems, provide effective qualitative healthcare services to all the inhabitants alike is huge challenge for any nation. With this goal, value-based-finance for healthcare is another experiment. Health economics should address most of the issues of both technologically advanced and less privileged nations.

Objective

Providing healthcare delivery in two ways; firstly applying health economics value-based finance for developing and maintaining infrastructure and secondly providing finance-value-based healthcare to people.

Healthcare system

Being complex, there are many complexities such as infrastructure, finance, highly trained human resource, dealing with intricate health and modern technologies, sophisticated medical instruments for diagnostic and therapeutic purposes. The medical field is dynamic, with highly qualified trained personnel such as doctors, nurses, paramedical and allied support service staff engages at primary, secondary and tertiary care level work to deal with curative, preventive, rehabilitative, promotive and palliative aspects. Another aspect is the political system, economical status, living environment, culture, race, religion, and inherent habits are contributing factors for healthcare programs. One has to understand all aspects, and then appropriate steps could be initiated to accomplish the set objectives

Healthcare Economic Research

Careful studies of diagnoses, course of treatment for curative cases, and approaches for preventive measures that can optimum their impact on health wellbeing. The technologies and methods that proved good could be applied, and those showed negative results, need modification or avoiding applying those methods. Health economy is at all the levels of healthcare delivery system from higher level to lower.

Health Insurance

As illness of anyone's current and future health is unpredictable, similarly demand for healthcare is also uncertain. Due to this uncertainty, is the birth of insurance mechanisms whereby covered individuals make regular payments to insurance companies; in the event of healthcare demand, to cover the health expenses or reimburse the payment made. In case of third-party payment mechanisms have raised the total consumption of medical resources to unprecedented levels.

Value--based finance healthcare (VBFH)

It means the finance is spent on the basis quality or quantity of service. Pay-for-performance is aimed at improving the quality, efficiency, and overall value of healthcare; payments on the bases of quality of care, it is also called the bundled payment is also known as episode-of- care payment. The Fee-for-service (FFS) is a payment model where services are unbundled and paid for physicians to provide more treatments because payment is dependent on the quantity of care, rather than quality of care.

Conclusion

With the use of VBFH coupled with the EHR comprehensive healthcare delivery is possible to the population. USA and UK are although leading in VBFH, are yet to move fast, while for Developing countries first priority is to minimum care to all; VBFH is a long way to accomplish, however, some are already in the process in implementation, while attempts are being made by other nations.

Health Information Management Promoting CDI - Clinical Validation

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Overview

Clinical Documentation Improvement (CDI) is a comprehensive program that applies clinical knowledge behind the International Classification of Diseases, Tenth revision (ICD-10) coding, which ultimately reflects the unique health condition of a patient for a given healthcare encounter. As denied claims, as well as reimbursements, are dependent on the submitted ICD-10 codes, a well-groomed clinical validation (CV) process that authenticates the story of the patient's illness or injury, and utilization of services, is an absolute necessity. Besides, CV also helps identify documentation errors and gaps before billing, which could ultimately help improve quality outcomes that are not limited to risk assessment, clinical decision- making, clinical research, physician profiling, hospital ranking, and cost-effectiveness. The detail and granularity of ICD-10 and soon to become ICD-11 supported by clinical documentation will provide reliable information for the World Health Organization (WHO) to monitor diseases and develop timely prevention and treatment strategies globally. The mortality and morbidity coding rules applied in ICD-11 further necessitates the additional need for training to perform CV. Who can perform CV queries is dependent on the governing bodies of the respective country. But what is most important is that all the codes and gueries submitted must contain relevant clinical indicators that are widely accepted. When the institutions develop proactive guidelines that help Health Information Management (HIM) professionals to perform an exceptional and compliant job, it will also safeguard institutions to protect against audit denials. By applying both the concept and the process of CV, the HIM professionals can change the electronic health record from a passive recipient of vague information to an accurate reflection of the healthcare encounter. Highly trained HIM professionals and practitioners' expertise in applied medical knowledge, coding, and technology are the global voice of the future.

Health Information Management as a Transformational Leader in Healthcare Transformation

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Overview

Health Information Management (HIM) is not an isolated practice, but, when integrated with other disciplines, the quality of patient care and safety can be enhanced. For the HIM department to be part of the high-reliability organization, staff satisfaction is also equally important. Translation science equipped with the evidence-based practice is the key for taking a department or an organization to the next level. Often, the term management is confused with leadership, and the essence of leadership is lost. When a recommended 20% of management skills and 80% of leadership principles are carefully deployed, as Total Quality Management, we will be able to achieve the goals of the Institute of Medicine Initiative' in transforming the future of healthcare. Change management, however, requires a well-structured theoretical framework as a recipe for successful transformation. Change is a shared culture that everyone should embrace in our ever-changing healthcare system across the globe. A new practice change is a Quality Improvement strategy that requires transformational leadership at all system levels. Undoubtedly, healthcare transformation calls for transformational leadership. Likewise, sustainability of a change project is achieved when all stakeholders work toward a common goal. Therefore, regardless of the magnitude of the change project, a transformational leadership style needs to be adopted by all, regardless of title and job function. Such a customer-driven leadership that focuses on system, process, and outcome will ensure that the change project is conducive to all employees responsible for improving end results.

Transformational leadership starts from within. Continuous self-reflection and personal effectiveness can enable a transformational leader to empower others to make decisions. Positive workplace environment, ergonomics, and person-centered staff development are some nourishments staff require to perform efficiently and innovatively. When such a human touch is employed, a transformational leader can not only bridge the research and practice, but through innovation and empowerment, can keep elevating quality and safety to greater heights.

A Global Perspective: Mortality Data Analysis in HIM Education

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Background

One of the highlights of the 18th IFHIMA International Congress held in Tokyo, Japan in October 2016 was the summit on mortality statistics which included presentations by representatives from 18 countries. The experience demonstrated that health information management professionals can make an important contribution to the improvement of mortality statistics on a global level. The presentation highlighted strengths and weaknesses of mortality data collection across the Globe. Some areas of concern were; the lack of standardization for collecting and reporting mortality data; no formal training on mortality statistics; and the lack of mortality data collection systems.

Project Description

This project is designed for Health Information Management (HIM) education programs. The objectives of the project are:

- To enhance the students' knowledge of the existing mortality statistical reporting systems in their respective country.
- Provide students with the opportunity to conduct meaningful research and strengthen their skills in mortality data collection and analysis.
- Allow students to have a greater appreciation and understanding of their roles and responsibilities when collecting and analyzing mortality data.
- To develop a framework to strengthen the integration of mortality statistics and the supporting reporting structures into the HIM curriculum across to Globe.

Staff Development, Patient Safety and Healthcare Quality: Evidence from King Salman Bin Abdulaziz Hospital, Riyadh

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Background

Healthcare organizations are employing various strategies to improve the quality of care they provide to their patients. The healthcare professionals' knowledge, skills, experience, and attitudes have been linked with the ability to provide high-quality care devoid of adverse events and patient harms. King Salman bin Abdulaziz Hospital in Riyadh, Saudi Arabia is one of the healthcare organisations facing challenges related to patient safety with high rates of diagnostic and medication errors, and healthcare-acquired infections reported in the recent years. The hospital is running a staff development programme, "A Better Provider" to equip its medical staff with adequate knowledge and skills to effectively address these problems. In this paper, we present the preliminary results of the programme's impact on staff's ability to promote patient safety at King Salman bin Abdulaziz Hospital.

Methods

The departmental heads undertook an initial assessment of patient safety culture within the hospital. The evaluation revealed a lack of safety culture among healthcare providers, partly attributed to their lack of required knowledge and skills to meet the demands of high-quality care provision. With the support of the hospital leadership, the Academic Affairs and Training department initiated a staff development programme dubbed "A Better Provider" on July 2018 to educate, train and develop our medical staff to improve their skills, knowledge, and expertise on patient safety. We deployed an online training platform and interactive weekly training sessions where the providers shared their ideas about patient safety. The training ended in October 2018, and its insights have been used to develop a safety culture plan which we are currently implementing through positive coaching and additional training.

Results

Since the inception of the programme, significant strides have been made towards ensuring patient safety at King Salman Hospital. It has empowered our healthcare providers to provide high-quality care with a reduction in the rates of adverse events due to improved knowledge, skills, experience and better expertise about patient safety. The intervention has also unearthed several barriers to provider development such as burnout, poor inter-professional coordination, and collaboration, lack of safety reporting systems and technology challenges. Some of these have been addressed resulting in reduced incidences that could compromise patient safety and quality of health care. However, the overall improved patient safety is attributed to the programme's impact on preparing healthcare providers to address safety issues adequately.

Conclusion

From these preliminary findings, it is clear that provider education and training has transformed our healthcare workforce and imparted them with the necessary knowledge and skills to meet the hospital's current needs. The programme has prepared our medical staff to accept additional roles beyond their scope of practice to ensure the provision of high-quality care within a continuum of care. Long-term workforce development strategies together with the creation of a culture of safety would be required to promote sustainable delivery of high-quality healthcare through improved patient safety.

Empowering and Developing HIM Professionals through Joy in Work

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Overview

The health and wellbeing of HIM professionals are significant, contributing factors to quality and performance outcomes (Burke, Koyuncu, & Fiksenbaum, 2011). Periods of acute, episodic, or chronic poor health or impairment have been reported to negatively alter levels of physical, emotional, and cognitive engagement in practice and job performance (Hilton, Scuffham, Sheridan, Cleary, & Whiteford, 2008; Johns, 2010; Love, Grimby-Ekman, Eklof, Hagberg, & Dellve, 2010). Another contributing factor to diminished job performance is the stress of balancing work and personal life demands (McMillan, Morris, & Atchley, 2011). Reported costs of decreased job productivity, related to impaired health, of nurses are estimated at \$36.6 billion (Kessler et al., 2006), and \$1.2 billion annually for work-related injury (Lack, 2011). Thus, the health and wellbeing of employees significantly influence individual, organizational, and global outcomes. Thus, to improve performance, employee wellbeing, and performance outcomes, HIM leaders need a toolbox of strategies and a conceptual framework to promote joy in work and empower their employees.

Method

The presentation will highlight four steps leaders can take to improve joy in practice (the how), and the critical components for Improving Joy in Work (the what) that may be used to facilitate a joyful and flourishing work environment to impact organizational performance, staff and customer satisfaction, and the financial bottom line. An appreciative inquiry approach, focusing on strengths and positivity, as compared to deficits and negativity, is used as an alternative way of reframing burnout to a vision of a joyful work environment.

Conclusion

Social exchange theory suggests antecedents, such as lack of joy in work, influence the HIM professional's job-related affect, including professional efficacy, organizational commitment, and perceived organizational support. The consequences of this social exchange and related job affect result in the professional's perception of job well-being on a continuum of job enjoyment (JOY) or job strain and influence organizational performance. Thus, evidence- based practices, four key steps, and resources will be shared that HIM leaders may add to their Joy and Empowerment toolbox.

The Future of Work

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Introduction

The world is undergoing a revolutionary, digital transformation, fueled by the era of big data, machine learning, and artificial intelligence. The healthcare industry is not immune to these changes. Almost every week brings news of machine learning changing the way we deliver care, most notably for Radiology and Pathology. Changes are also emerging in payments and other aspects of the healthcare industry. The health informatics (HI) and health information management (HIM) professions are at the forefront of much of this change, developing the algorithms and facilitating the incorporation of technology in the ways we work. The objective of this review is to explore how technology has impacted work in the past, and how it is projected to impact the way everyone across the globe works in the future.

Past Changes

Those of us who are old enough, remember a time when the two largest occupations in health information management were coders and transcriptionists. Transcriptionists typed the reports that were dictated by physicians and other clinicians. In countries where there has been the digitization of medical records, transcriptionists are a dying occupation, with the few who are left in these positions, performing quality oversight of documents transcribed using voice recognition. Other industries such as banking and retail business have changed enormously with the advent of ATM and e-commerce technology.

Forces Driving Change

There are many forces driving change, from technology to societal to economic changes. The technological changes are many, including big data, the Internet of Things (IoT), machine learning, and augmented intelligence. Societal forces include the graying of many industrial societies, the maturation of the digital natives, increased consumer knowledge and expectations, a growing digital divide between those with high- speed internet and access to the latest technology and those without, and noticeable generational differences in approach to the workplace. Economic forces include the increasing concentration of wealth, especially in the capitalistic countries, the "gig" or freelance economy, and measurable increases in national GDP without increases in employment. Taken together, these and the changes still emerging, are likely to change work for everyone.

Projected Impact

With the rapid evolution of technology, the health information professional will need to develop the capabilities to facilitate information technology and management in healthcare; for example, employees will have to think in new and adaptive ways, employing sensemaking and computational thinking to maximize the human/technology combination. Skills in virtual collaboration and cross-cultural competency will also be essential. As automation and digitization increase, so too will the need for the health information professional to move from information operationalists to information strategists.

Preparing for the Future

HI and HIM professionals and their professional associations must embrace the current changes and those coming in the decades ahead. The bottom line is that the workplace of the future will change, and how will we prepare? This presentation will cover the entire spectrum, from past changes to the driving forces and their projected impact on the HI and HIM professionals preparing for the future.

Filling the Gap: A Caribbean Perspective on Health Care Literacy and the Health Information Professional

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Overview

Today's world is dealing with a major crisis of an extraordinary proportion; "The Chronic Non-Communicable Disease pandemic." According to the World Health Organization, Chronic Non-Communicable Diseases kill at least 41 million people each year. (WHO, 2018) Out of that staggering figure, 15 million persons are in the 39-69 age groups. Even more alarming, 85% of these occur in low and middle income countries. (WHO, 2018) The World Health Organization has developed the "Global Action Plan for the Prevention and Control of Non-Communicable Diseases 2013-2020." This plan was developed in a bid to prevent and control Chronic Non-Communicable Disease. As part of the action plan, it was stated that as a principle there must be empowerment of people and communities and the need for the implementation of evidenced based strategies. (WHO, 2013:13) These strategies can only be achieved with the implementation of effective health care literacy programs. It needs to be understood that health care literacy in this context not only refers to reading and understanding medical information but using that information to affect behavioral change.

With the skills gained through education attainment, health information professionals are effectively equip to deliver this much needed and urgent service to improve the Caribbean's public health system. Health information professionals have the ability to educate the patient population on how to obtain quality researched information, educate the patient using specific targeting techniques such as multimedia or gaming, and assist with the translation of any medical instruction given by a member in the health care team.

This presentation would seek to define health care literacy, the disadvantages of not having heaving an effective health care literacy programme and the skills which health information professionals possess which can aid in the delivery of health care literacy programme which will improve patient safety and by extension the Caribbean Public Health System.

Quest for Information Quality: Process-oriented Architecture for Large Scale eHealth Systems

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Overview

As with the majority of developed countries, Australia confronts growing challenges resulting from an aging population, increasing healthcare costs, persistent health inequalities, and increasing incidence of chronic disease [1]. The implementation of Australia's My Health Record (MyHR) system has resulted in resistance by healthcare professionals and unrealised expectations which brings into question the effectiveness of the current system [2,3]. With this knowledge, it is imperative to recognise that the value of patient information lies not merely in the collection of data but in the integration of patient-centred information perhaps limits the potential of the MyHR solution to that of an electronic filing cabinet. This is reflected in public sentiment where consumers are suggesting that MyHR is a "glorified Dropbox" [4]. Currently there is no standard method for managing the broader view of a patient's workflow within the MyHR system [5].

Our analysis of a patient's journey in Australian primary care settings identified that care processes are emergent in nature, predisposed to organic growth rather than intelligent design. For this reason, eHealth systems must be flexible enough to allow architectural innovation on a structural level and malleable enough to support the information requirements of complex care pathways [6]. This requires a shift away from systems design that is predisposed to over-engineering the system with a limited set of data structures, interfaces and reporting systems which impose constraints on clinical work practices. Our work therefore calls for designing process-oriented eHealth architectures that facilitate access to information from discrete care events linked over time. Problem solving in this work is premised on the proposition that an observable causal relationship existed between eHealth architecture and information quality.

Methods

We propose an innovative process-oriented eHealth design (Figure 1) which has the potential to deliver measurable information quality improvements across primary healthcare settings. Adopting a problem- centred approach, our research effort aimed to create and validate a purposeful design artefact. Drawing on Cloud computing and service based architecture concepts, we propose a process-oriented eHealth design as an alternative solution for delivering information quality improvements in Australian primary healthcare settings.

Findings

One of the significant findings emerging from the evaluation was empirical evidence for the influence of architectural design choices on information quality in healthcare. Quantifiable information quality metrics were defined and prioritized in order to evaluate the effectiveness of eHealth systems to resolve information quality issues.

Conclusion

In this respect, it was concluded that information quality attributes, accuracy and timeliness, may lead to improved continuity of care [7,8]. From an accuracy perspective, simulations modeling of the process-oriented eHealth architecture showed a lower risk of introducing accuracy deficiencies to information manufacturing processes with results of 0.54% and 1.02%. Whereas simulations of Australia's National EHR system (MyHR) reported error levels of 1.48% and 4.64%. It is reasonable to consider that there are measurable benefits associated with eHealth systems which focus on process automation and design in order to provide access to high quality information services as

patients navigate care pathways.



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Clinical Documentation Improvement: Past, Present & Future

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Overview

Inadequate clinical documentation is undermining the safety, quality and communication within Australia's public and private hospitals. Poor documentation also fails to reflect the complexity of the patients being treated and therefore robs facilities of their deserved revenue.

This presentation examines unsuccessful historical attempts to improve clinical documentation, then moves to appraise recent innovative developments and new ways of engaging clinicians.

Findings

The outcomes of the presentation are drawn from numerous transformative success partnerships from across Australia. The practical implications and universal themes are relevant to both Australian and international Health Information Managers.

Usefulness of Annual Hospital Statistical Reports of the Philippine Department of Health Hospitals

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Overview

The Philippine Department of Health (DOH) has mandated that all hospitals managed by the DOH shall submit an annual hospital statistical report every first quarter of the succeeding year.

Aim

Correspondingly, this paper aims to analyze the submitted 2018 annual hospital statistical reports of the DOH-managed hospitals, which were extracted from the online hospital statistical report system, and to determine the usefulness of the data for policy making and hospital development planning.

Findings

Based on the key findings of this study, more than half of the 66 DOH-managed Hospitals reported a bed occupancy rate for 2018 exceeds 100 percent. The total inpatient days served reached more than 10 million days for the entire year with about USD 240 Million amount of subsidies were provided for indigent and qualified patients based on required laws.

Outcome

The findings of the study were used to craft the Philippine Hospital Development Plan, national standards and policies, and basis for the passage of laws to increase the capability and bed capacity of government hospitals and to request for funding support from the national government.

Risk Assessment on Health Information Management Department of Selected Philippine Government Hospitals

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Background

Risk management is one of the noncompliant areas of Hospital Health Information Management (HHIM) Manual of Standards among Philippine Department of Health Retained Hospitals (Napulan and Doromal, 2016). It is imperative then that a thorough study should be done to document and assessed the risk events for the development of mitigation strategies.

Objective

To document, identify and analyze the risk events in Hospital Health Information Management (HIM) Department

Methodology

There are 12 government hospitals selected and included in the study. To ensure that quality output would be generated, heads of the department of selected hospitals were trained on the proactive risk management focused on Hospital HIM before the data collection. After two weeks, trained personnel were asked to submit their assessment. Hospital action plans were also developed through consultations with HHIM Department staff, heads of other units and services and executive committee members.

Results

Analysis of submitted risk registers of hospitals revealed that the most common risk identified were physical injury, loss and damage of health records, complaint and dissatisfaction of patients due to longer waiting time and delayed retrieval of health records, delayed reporting of information to regulatory bureau and legal consequences. These risk events were rated moderate to extremely high based on likelihood and consequences scores.

Conclusion and Recommendation

There are various areas that need to improve in the Hospital Health Information Management department. Hospital action plans to address risks should be collated and identify policies needed to improve the situation at the National level.

The Value of the Aspiring Professional

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Overview

The field of health informatics and information management (HIIM) offers a number of interesting career paths for qualified professionals. The health information management (HIM) professional holds a unique mixture of competency in medicine, management, finance, information technology and law principles; because of this, graduates can choose from a variety of work settings across an array of healthcare environments. HIM professionals are typically tasked with resolving challenges that involve the quality, integrity and safety of protected patient information. It is the perfect field for the professional whose interests lie at the intersection of health care, management and information technology.

To succeed in this field you need more than just knowledge of how healthcare works, management principles or information technology expertise, you must also have strong communication skills, leadership abilities, team building capabilities and change management skills to be able to be effective in helping any business meet their organizational objectives. As HIM students prepare for their career in academic programs, they focus on the foundations of HIM, learn cutting edge knowledge, use their creativity for problem solving, and have many experiential learning opportunities inside and outside the classroom, including traveling abroad.

This presentation will challenge the audience to consider the value of skillsets and perspectives offered by the new health information professional. Content will include identification of the common characteristics of aspiring professionals, discussion of potential linkages to generational stereotypes, exploration of how HIM education can support professional growth and competence, and a look at what realities experienced employers, colleagues, and mentors can expect from emerging HIM professionals.

Accelerated Experiential Learning in Revenue Cycle Management: Built for the Future HIM Education

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Overview

Revenue cycle management has been identified as one of two knowledge domains key to the future of HIM education, according to AHIMA's HIM Reimagined initiative (a vision for the future of the HIM profession). To align with that vision and to develop a foundational knowledge base for our students, our Health Information Management program at Indiana University Northwest designed an accelerated experiential learning module in revenue cycle.

The module consists of five daily on-site visits to an acute-care hospital over the course of five weeks. The students have one on one time (student-to-staff) with employees from various units/service area of the revenue cycle process, including registration, clinical documentation improvement (CDI), coding, chart analysis, scanning and indexing, information technology, data integrity, patient portal, birth registrar, release of information, and billing/reimbursement. The students are tasked with investigating the functions of each service area and preparing appropriate questionnaires ahead of their visit to use as a tool to engage the employee in conversation pertaining to their job functions. At the end of each week, the students submit a written assignment with their observations, learning experiences, and reflections on the importance of each service area to the entire revenue cycle process. At the end of the five-week experience, the students submit a written paper with their evaluations of each component of the revenue cycle process in the facility that they visited. They are required to include ideas for performance improvement or modifications in organizational strategy that would contribute to enhanced efficiency in revenue cycle management (RCM).

The learning experience is intended to provide the students with a big picture perspective and to expose them to the complexities and interconnectedness of job roles and functions in the revenue cycle process. The students come away understanding the team approach to RCM and the importance of each service unit's contribution to the process as a whole. HIM department directors at the hosting facilities have received this module with remarkable enthusiasm and have provided positive feedback, as well as requests to continue with this same module year to year. They recognize that students who understand the impact of their work on the organization as a whole become better employees.

HIMAA International Special Interest Group: A Community of Practice Empowering HIMs with a Global Voice

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Overview

Since its identification as a key idea in knowledge creation, acquisition and resource sharing, communities of practice (CoP) have become increasingly popular resulting in a growing number of health care organisations investing in this concept to manage knowledge and improve performance in their organisations. According to Bertone et al. (2013), a community of practice is a group of like-minded individuals who interact regularly to deepen their knowledge on topics of collective interest. It is a type of learning community, which ranges from voluntary informal networks to work-supported formal training meetings, where people come together to share and exchange relevant information (Lave and Wenger, 1991 as cited in Li et al., 2009 and Barnett et al., 2013).

Recent times have seen an increase in the popularity of different CoPs. Woodgate, Zurba, and Tennent (2018) reason that this is because CoPs help breakdown professional barriers by creating an environment for novices and experts to meet and interact on a regular basis in order to create or enhance their professional identities. Hoffman, Desha, and Verrall (2011) also suggested that the informal nature of networks present plenty of opportunities for peer-to-peer information exchange and knowledge-sharing, which enhances connectedness and belonging for all members. Lastly, Li et al. (2009) theorised that there are four critical attributes that contribute to the growing popularity of CoPs: knowledge sharing, knowledge creation, identity building, and networking opportunities across all members.

The Health Information Management Association of Australia (HIMAA) International Special Interest Group (International SIG) is an example of a CoP that connects, supports and empowers members who share the same passion and interest in contributing to the overall enhancement of the health information management (HIM) profession at an international level. The group is a constituent of the HIMAA National Board and functions as an avenue for members to engage and participate in international opportunities that advance HIM matters.

The International SIG works in collaboration with similar organisations within the Eastern Mediterranean and Western Pacific Region. With advances in modern technologies, the International SIG is proactive in engaging members who are based in different geographical locations and has adopted a 'transnational' membership, as members are not limited to HIMs that reside in different parts of Australia, but also those based in countries such as New Zealand, Hong Kong, Qatar and Saudi Arabia.

The International SIG offers all members with a wide range of activities that enable networking, informal mentoring, and the creation and sharing of knowledge. This includes the provision of a platform for regular interaction, as well as sharing of international news, events, and activities through a website. In these quarterly teleconference meetings, novice and expert members are supported and encouraged to present and share their personal and professional skills, experiences and lessons learned with other members.

In summary, the HIMAA International SIG is a community of practice that enhances the professional development of members, not only because it provides opportunities for networking and knowledge sharing, but because it also empowers HIM professionals with a global voice.

The Saga of HIPAA and How HIM Can Impact Compliance with Privacy and Security Laws

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Overview

The Health Insurance Portability and Accountability Act (HIPAA) was passed in 1996. Effective dates for compliance with the Privacy Rule and Security Rule were 2003 and 2005 respectively. Organizations subject to the law, such as healthcare providers and health plans (known as covered entities), as well as their business associates, continue to struggle to meet the requirements.

The US Department of Health and Human Services Office for Civil Rights (OCR) is charged with oversight and enforcement of HIPAA. The maturation of the OCR's audit plans and protocols, and the financial success of its enforcement actions to date should give pause to any organization that is required to comply with HIPAA.

The presentation will provide a brief history of HIPAA, discuss the enforcement actions (audits, fines, penalties) that have occurred to date, and will then discuss how HIM professionals can help their organizations obtain compliance via internal assessment, and by developing, implementing, and maintaining policies and procedures. The suggestions for HIM roles in compliance may be applied regardless of country, oversight body or involved privacy and security law.

HIPAA Major Enforcement Actions Results - 2018					
Date of Agreement Publication	Covered Entity	Amount			
January	Filefax, Inc.	\$100,000			
January	Fresenius Medical Care	\$3,500,000			
June	MD Anderson Ca. Center*	\$4,300,000*			
September	Boston Medical Center, with	\$999,000			
	Brigham and Women's Hospital, and				
	Massachusetts General Hospital				
October	Allergy Assoc. of Hartford	\$125,000			
October	Anthem, Inc.	\$16,000,000			
November	Pagosa Springs	\$111,400			
December	Cottage Health	\$3,000,000			
TOTAL (Settlements/Judgments)		\$28,683,400			
*Judgment, whereas others were settlements					

Nurses' Acceptance to Use Electronic Medical Record Documentation in Private Tertiary Hospital

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Introduction

Clinical documentation is an essential function of EMR. Nursing staff are the largest group of staff in a hospital and are the center of care delivery, thus nurses' acceptance to use EMR playing an important role in the success of implementation. the aim of the proposed study is to measure the acceptance of nurses to use EMR documentation and identify the factors that effect on the acceptance of the nurses toward electronic medical record documentation in clinical practice and understand their perspective on EMR in order to encourage adoption and implementation of EMR in other health facilities in Saudi Arabia.

Objectives

To explore nurses' acceptance level to use EMR documentation, identify the factors that effect on nurses' acceptance use EMR documentation, measure the resistance by nurses to use EMR documentation, and provide recommendation and guidelines for nursing administration for future projects Method: The target population include all nurses working in International Medical Center Hospital, Jeddah, Saudi Arabia using EMR in the clinical practice. A total of 248 questionnaires were disrupted, and 194 were returned, indicating a valid response rate of 78%.

Results

The findings indicate that there is a strong positive relationship between perceived usefulness and perceived ease of use resulting in higher acceptance for nurses to use EMR. The result of the study stated that the nurses are willing to use EMR and have less resistance to use EMR and have successful implementation of EMR.

Conclusion

Perceived usefulness, perceived ease of use, user demographic characteristics, top management and IT support, and system quality are predictive factors that can be used on assessment of nursing staff acceptance toward EMR and can be used as a guideline for organization prior to implementation to address nurses' needs.




Demographic and work characteristic of nurses						
Characteristics	N(N=194)	%				
Gender (N=194)						
Female	162	83.5				
Male	32	16.5				
Age (years) $(N = 194)$						
20-29	78	40.2				
30-39	72	37.1				
40-49	29	14.9				
50-59	13	6.7				
More than 60	2	1.0				
Education level (N=194)						
Diploma	13	6.7				
Bachelor	170	87.6				
Master/PhD	11	5.7				
Years of experience in nursing practice (N=194)						
Less than 5	71	36.6				
6-10	49	25.3				
11-15	34	17.5				
16-20	21	10.8				
21-25	10	5.2				
More than 25	9	4.6				
Years of experience at studied hospital (N=194)						
Less than 1	42	21.6				
1 - 5 years	44	22.7				
5 - 10 years	58	29.9				
More than 10	50	25.8				
Duration of computer usage (years) (N=194)						
Less than 1	12	6.2				
1-2	16	8.2				
3-4	17	8.8				
5-9	59	30.4				
More than 10	90	46.4				
Level of computer skills						
Low	8	4.1				
Average	115	59.3				
Excellent	71	36.6				
Have you ever had a formal computer training?						
Yes	91	46.9				
No	103	53.1				

Main variables	Mean	Std. Deviation	Likert
Nurses' perceptions of perceived usefulness of EMR	4.08	.78	Agree
Nurses' perceptions of perceived ease of use of EMR	3.93	.88	Agree
Nurses' perceptions of system quality of EMR	3.61	.82	Agree
Nurses' perceptions of top management and IT support of EMR	3.77	.84	Agree
Nurses' perceptions about EMR overall	3.85	.73	Agree

Means of main variables and Nurses' perceptions about EMR overall

Strategies and Tools to Achieve Physician Engagement for Clinical Documentation Improvement

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Overview

A core objective of clinical documentation improvement (CDI) is to accurately capture the true complexity of the patients whilst they are in the hospital. This is achieved by working alongside physicians to provide ongoing education ensuring that the care provided is documented rather than just discussed between clinicians. Many of the diagnosis's patient have are communicated verbally between caregivers however this does not always translate to the medical record. This in turn results in many of the patients diagnoses and co-morbid conditions being unable to be coded by the clinical coders leading to inaccurate diagnostic related group (DRG) assignment and incorrect data from which critical decisions may be being made along with incorrect reimbursement. Physician engagement is integral to clinical documentation improvement and currently one of the highest reported challenges of those in CDI. There are many challenges associated with engaging with physicians ranging from how to communicate with physicians and finding the appropriate time to engage with them, to understanding CDI from a physician perspective.

This presentation provides participants with tools and strategies to engage successfully with physicians from both a HIM and CDS perspective. Core consistent messaging, the top 10 strategies to foster positive physician engagement and how improving clinical documentation can impact on patient safety, quality and communication will be presented.

Many of the tools provided have come from the physicians themselves from various programs that have been established across Australia. A similar presentation was delivered at the 2019 ACDIS conference in Orlando Florida, the presentation has been tailored to the IFHIMA audience.

Identifying Predictors of Personal Healthcare Management Among Individuals With Cancer

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Objective

The objective of this study was to describe the user characteristics and predictors of patient healthcare management (PHM) use among American adults who reported having cancer as a chronic disease compared to those who reported no chronic diseases. PHM refers to the individual use of internet-based technology to access personal health information or communicate with healthcare professionals regarding patient health information. PHM is considered active participation with a healthcare entity through the use of technology (or technology-mediated applications) to assist in meeting her or his healthcare-related needs.

Method

The study used data from the National Health Interview Series (NHIS), a national, representative sample of the U.S. population that collects information on healthcare trends and services. Data from 4,386 respondents between 2009-2014 was analyzed using multivariable logistic regression analyses.

Findings

Overall, PHM use was significantly higher for those reporting cancer compared to previously reported healthy respondents (16.3 versus 11.5 percent). Education (ORs 2.77 and 2.65) and income level (ORs 2.11 and 1.60) are significant predictors of PHM use for both groups. Mental and behavioral factors were also significant predictors of PHM use. Individuals with cancer who reported weekly (OR 1.78) or monthly (OR 1.62) anxiety were more likely to use PHM than respondents who reported never having anxiety. The likelihood of using PHM is heavily influenced by education-level, income, and having a usual place for healthcare services, but other factors also influence PHM use among those battling a specific disease. Individuals with cancer have an increased likelihood of PHM use if they also report higher levels of anxiety. However overall the factors influencing PHM use among cancer patients are not materially different from those affecting such use among healthy respondents.

Conclusion

In a nationally representative sample, cancer patients demonstrated higher PHM usage than healthier individuals but predictors in both groups were similar. Thus there are significant socioeconomic disparities in PHM use, including education level, income, race, ethnicity, and age regardless of whether or not cancer is present. Efforts need to focus on ensuring PHM meets user needs to address the disparities in all populations including cancer patient populations.

	C	ancer	
		n	=4,386
Demographics		%n	%PHM
Age	18-40 years	7.5	20.3
	41-60 year	28.3	21.9
0	60+ years	64.2	13.4
Sex	Male	40.7	16.9
Pasa	Female	29.3	15.9
Race	Non-white	13.0	10.8
Eth-i-ite.	Not Himonia	02.5	16.0
Ethnicity	Not Hispanic Hispanic	95.5	0.2
US Born	Ves	91.3	16.9
	No	8.7	9.7
Geography	Midwest	22.5	14.8
	Northeast	17.1	14.2
	South	36.4	15.7
	West	24.0	20.2
Socioeconomic Status			
Education	No College	40.5	6.1
	College	59.5	23.3
Family Income	<50k\$	55.9	8.9
	\$50k +	44.1	25.6
Poverty	Yes	12.3	5.5
# E	No SO	87.7	17.8
# Employees	<30 51 ±	00.7	14.8
	51 +	39.3	18.0
Employed	Employed	34.9	24.9
	Unemployed	65.1	11.7
Insurance	Yes	94.0	10.5
Howing	No Our Home	72.1	17.0
Housing	Do Not Own	26.9	13.8
Food Security	Insecure	6.9	11.5
- ood occarity	Secure	93.1	16.7
Cost Barriers	Yes	15.2	16.2
	No	84.8	16.3
Other Barriers	Yes	13.0	19.5
	No	87.0	15.8
Health-Related			
Health Status	Fair/Poor	26.5	11.2
Used Block of Com	Good/Excellent	73.5	18.2
Usual Place of Care	Yes	2 7	10.0
Alcohol	Non/Former	40.0	9.0
Acolor	Current Light	54.4	20.7
	Current Heavy	5.6	20.1
Smoking	Never	49.0	17.5
-	Former	36.0	16.8
	Current	14.9	11.1
Limitations from Chronic Conditions	Yes	35.0	12.3
	No	65.0	18.5
Depression	Never	55.7	15.6
	Few times/yr	24.8	18.4
	Monthly	5.8	19.4
	Daily	0.7	13.1
Anviety	Never	30.2	12.0
Analety	Few times/vr	30.4	17.5
	Monthly	8.3	22.4
	Weekly	10.1	22.4
	Daily	11.9	15.2
Moderate Physical Activity Level	Daily	15.4	18.7
· · · · · · · · · · · · · · · · · · ·	Weekly	38.5	22.5
	Monthly	2.6	18.8
	Annually	0.5	4.2
	Navar	42.0	0.0
	INCVCI	43.0	9.9

Table I. PHM Use by Respondent Characteristics for Respondents Reporting Cancer.

		Cancer	Healthy [25]
		n=4,386	n=22,929
Demogra	phics	OR (CI)	OR (CI)
Age	18-40 years	1.04 (0.74-1.45)	1.30 (1.09-1.57)**
Sex	Female	1.06 (0.88-1.27)	1.63 (1.49-1.79)
Ethnicity	Not Hispanic	1.32 (0.84-2.15)	1.16 (1.02-1.34)
Geography	West	1.35 (1.05-1.74)	1.49 (1.32-1.69)
Socioeconom	ic Status		
Education	College	2.77 (2.20-3.50)	2.65 (2.33-3.03)
Family Income	\$50k +	2.11 (1.71-2.62)	1.60 (1.43-1.79)
Poverty	No	1.59 (1.05-2.48)	1.31 (1.11-1.55)
#Employees	51 +	1.26 (1.06-1.50)	1.41 (1.29-1.54)
Employed	Employed	1.50 (1.21-1.87)	1.25 (1.11-1.41)
Insurance	Yes	1.18 (0.76-1.88)	2.13 (1.79-2.56)
Housing	Do Not Own	1.24 (0.98-1.56)	1.17 (1.05-1.29)
Other Barriers	Yes	1.23 (0.95-1.58)	1.75 (1.53-2.01)
Health-R	elated		
Health Status	Fair/Poor	1.02 (0.79-1.32)	1.34 (1.01-1.82)
Usual Place of Care	Yes	2.11 (1.23-3.86)	1.82 (1.56-2.08)
Alcohol	Current Light	1.43 (1.16-1.76)	1.37 (1.23-1.53)
	Current Heavy	1.51 (1.02-2.20)	1.51 (1.23-1.84)
Smoking	Never	1.39 (1.03-1.88)	1.38 (1.20-1.59)
Depression	Few times/yr	1.02 (0.81-1.28)	1.14 (1.02-1.27)
	Daily	1.21 (0.75-1.92)	1.50 (1.05-2.11)
Anxiety	Few times/yr	1.15 (0.91-1.45)	1.31 (1.17-1.47)
	Monthly	1.62 (1.16-2.26)	1.69 (1.45-1.97)
	Weekly	1.78 (1.26-2.49)	1.62 (1.37-1.91)
	Daily	1.45 (0.97-2.13)	1.41 (1.14-1.74)
Moderate Physical	Daily	1.59 (1.22-2.07)	1.45 (1.26-1.67)
Activity Level			

 Table II. Comparison of PHM Use by Significant Characteristics between Respondents

 Reporting Cancer and Those Reporting No Chronic Conditions.

* Italics indicate non-significant findings.

** Ages 18-40 had significantly higher odds than both other age categories.

Publishing for Survival: Improving the HIM Profession One Piece at a Time

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Overview

Many professionals report being intimidated by the idea of publishing. This hesitation often results from simply not knowing where to start, or a lack of understanding the basics of the publishing process. The HIM profession is grounded in a body of knowledge that requires professionals to perpetually examine HIM practice to leverage the knowledge that will improve healthcare delivery. This presentation will provide information about the publishing process, how to choose a topic and the appropriate journal for your work, strategies for maintaining momentum through the project, and the benefits of being a published author.

One of the challenges currently is the lack of engagement of HIM professionals in conducting research and publishing evidence that can drive the profession forward. The profession has historically relied on professionals to develop standards and guidelines for professional practice, but current industry needs for practice need to rely more heavily on data analysis and research. While the scope of HIM practice is growing, the research on what is working well is not keeping pace. The need for HIM scholarship is more important now than ever before.

The HIM profession also has a strategic priority to move to the graduate level, which requires greater professional competence with data analysis, research, technology, and change management. This requires more mentorship and research opportunities for HIM professionals to assist with the development and quality offerings of academic programs.

This session will talk about the current state of scholarship and publishing in HIM, provide some initial steps to start the process, and provide participants some useful tools for crafting research questions, developing work plans, conducting analysis, selecting potential publications for work.

Taking CDI to a Whole New Level

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Overview

The integrity of clinical documentation has become more important as healthcare organizations transition from paper medical record systems to the ease of the electronic health record (EHR). The EHR has the potential of positively impacting the quality of healthcare when clinical documentation is of the highest quality. High quality documentation should be the goal of every Clinical Documentation Integrity (CDI) program since it leads to the treatment of the patient as well as coded data. The coded data is used for many purposes such as reporting of quality measures, reimbursement, decrease in denials, epidemiological trending of disease and population health.

Many healthcare organizations attempt to improve clinical documentation through CDI programs, however, they attain varying degrees of success. Three elements of any CDI program are initial implementation, operationalization and ongoing maintenance. Although organizations and clinicians recognize the need for high quality clinical documentation, the practice is not easy to accomplish.

When implementing a new program, organizations will develop a reporting structure, vision, goals, and metrics to measure success. Depending on the reporting structure the program may emphasize an outcome. For example, reporting to finance, the priority focus would be on the financial benefit to the organization.

Programs that have been operational for a while may suffer from apathy as individuals become comfortable with the status quo. Some leaders fail to keep current with industry changes in technology or they fail to look externally for comparison data to continually assess program effectiveness.

This presentation will focus on ongoing maintenance or revamping of a long-term program as organizational needs evolve in response to industry/market changes. A large healthcare integrated delivery system in Texas had a long- term program that was primarily reimbursement driven. However, with a change in reporting structure to a HIM executive, the organization took the opportunity to re-define success and grow the existing program. It was important under the new structure that providers understand the value that the CDI specialist brought to the table, as well as the impact of data, and how data is generated and used. The HIM executive believes educating and training providers on complete, accurate and compliant documentation is the key to success from a CDI team of nurses and coders. Changes made to the program included discussions with providers, with an emphasis on education, training, and case studies while eliminating discussions about reimbursement. Providers embraced this new approach and welcome interaction from CDI staff and include them in rounding and their meetings.

This presentation will also include the work that AHIMA has been doing around clinical documentation integrity and the need for consistent standards in CDI as well as the standardization of education and training programs in this area. Further discussion will include the impact CDI has on coded data as well as how the CDI specialist should understand the complexity of the coding systems and the need for detail in the clinical documentation and how this differs in different healthcare settings.

Effort Toward the Lifelong Learning Program in Japan - Roles of Future Health Information Manager

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Overview

Japan Hospital Association (JHA) / Japan Society of Health Information Management (JHIM) has started the HIM education for 50 years and since then more than 39,000 students have been certified as Health Information Managers (HIMs). The HIM's role covers wide range of fields such as Electric Health Record, Electric Systems, Digitalized International Statistical Classifications, Artificial Intelligence (AI), and diversified information. The significant changes of their environment have diversified the roles and required needs of HIMs. In addition, facing the particular situation in Japan such as rapid aging and very low birthrate and specialization of medical functions, sharing information among larger number of institutions and professionals is required.

Having a number of certified HIMs, JHIM recognized that there would be demand of upskilling program to meet each environment and level and considered that HIMs could work internationally. Development of new training courses for certified HIMs has being discussed. This paper reports the JHIM's effort toward the lifelong learning program and suggests roles of future Health Information Manager.

A Study on the Basic Data for Patient Survey (Morbidity Statistics)

Yukiko Yokobori¹

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Overview

In Japan, the Patient Survey has been conducted since 1953 as a government-designated survey in accordance with the Statistics Law. It is the only survey that can serve healthcare planning, and can collect data based on the classification of diseases which enable international comparison.

Method

To consider the future direction of the patient survey (morbidity statistics), the survey on the data collection methods for morbidity statistics was conducted among 22 countries including major industrialized countries. The survey results serve as a resource to support the policy-making, as well as reference materials indicating the disease structure change and the trends of the healthcare delivery systems.

Conclusion

The paper provides a valuable basis for consideration of the quality of survey and statistics from the aspects of functionality and reliability. The developing countries were also surveyed to grasp their intention and effort toward morbidity statistics. Obtaining answers from seven major industrialized countries and eight developing countries, the paper provides valuable data, and serves as useful materials for Japan and other countries around the world to consider future healthcare planning and morbidity statistics which enable international comparison.

The Current Status of Medical Information Disclosure in Japan

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Introduction

The rate of adoption of electronic medical records (EMR) has reached 34.4% in hospitals in Japan. Information and communication technologies (ICT) have spread into all hospitals. Hospitals have to maintain huge volumes of data; not only medical records but systems log data from ICT devices and medical devices (e.g. medical modalities). The Personal Information Protection Act (PIPA) in Japan requires the wide disclosure of patient information on demand. The purpose of this study is to elucidate the current status of medical information disclosure in Japan.

Method

250 websites prescribing medical information disclosure were collected using a search engine. The content of 161 items from 250 websites contained guidance on the disclosure process from hospitals to patients. The content of 161 items was analyzed to determine whether hospitals provide application forms, disclosure fees, intermediary medication, and data log disclosure.

Result

The data analyzed consisted of content from 68 public hospitals and 93 private hospitals. 42 hospitals (in total 26.1%; public 27.9%; private 24.7%) provide application forms for medical information disclosure on their websites. 96 hospitals provide information on disclosure fees (in total 59.6%; public 55.9%; private 62.4%). 12 of those hospitals (12.5%) require disclosure application fees (JPY 300-5,400) (in total 12.5%; public 10.5%; private 13.8%). 46 hospitals require disclosure service fees (JPY 100-10,000) (total 47.9%; public 15.8%; private 69.0%). 92 hospitals provide information on photocopy fees per sheet and 90 hospitals require photocopy fees (in total 97.8%; public JPY0-32, median JPY10; private JPY10-100, median JPY20). 142 hospitals provide information on intermediary applications (in total 88.1%; public 89.7%; private 87.1%). 137 hospitals allow patients' families to apply as intermediaries for patients (in total 96.5%; public 95.1%; private 97.5%). 33 hospitals allow lawyers to apply as intermediaries for patients (in total 23.2%; public 21.3%; private 24.7%). Just one may include system logs for disclosure documents (0.6%).

Discussion

Regarding the improvement of accessibility to disclosure, it was found that it is necessary to provide more detailed information (e.g. application forms and intermediary applications). In particular, more hospitals, whether public or private, denied intermediary applications from lawyers. Some private hospitals require disclosure fees that are too high (e.g. disclosure service fees of JPY10,000 and photocopy fees of JPY100), while public hospitals require low disclosure fees. The Japanese government notified each prefectural government regarding the avoidance of inappropriate fees and the maintenance of the rights of patients to apply for disclosure. The development of a medical information disclosure support system using ICT should be recommended. In conclusion, the current status of medical information disclosure service fees and/or photocopy fees that patients may have difficulty in applying for disclosure. Keeping the PIPA in mind, the status of medical information disclosure.

Stress Level Relationship to Risk Factors of End Level of Diploma III Medical Record, Semarang

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Background

Stress is the inability to overcome the threats faced by the mental, physical, emotional, and spiritual human beings, which at one time can affect the physical health of the human being. Stress can also occur in people who experience severe stress, for example in the final year students who are working on their thesis. Final year students are usually charged to the thesis as a condition for obtaining a diploma degree. Scientific Writing Completion is a testament to the academic abilities of students in research related to the problems discussed. Besides that there are several other factors that can affect the student such as student health, diet / nutritional intake and environmental conditions, The problem to adapt to the most common causes of stress occur on third grade students. Depression, Anxiety and Stress Levels can become a negative effect to person. The aim of this study was to understand the stress levels on the Third grade medical record and health information students from Polytechnic Ministry of Health Semarang.

Method

This study used a descriptive design with cross-sectional approach. Samples in this study were 75 students on 2018/2019 using total sampling technique. Data was accumulated by using Questionnaire and DASS tools that have been modified for stress levels.

Result

Final year 2018/2019 students experience Moderate Depression levels of 4 people (5%), anxiety extremely 5 people (7%) and severe stress 4 people (5%). From analysis of hypothesis, there is a relationship between sex with anxiety, the condition of ever fainting, experiencing seizures and recurrent abdominal pain and is associated with factors in the entrance of the university. There is a relationship between student. Depression on the medical history of students including health problems, taking medication, recurring pain conditions, there is a relationship between student stress toward the history of hospitalization, anemia disease, scientific writing, difficult stress encountered and felt a scary guide.

Conclusion

To find out the relationship between stress levels and other factors that affect final level students such as Health History, Scientific Writing Completion Process, the condition of students when they first enter college can be seen levels of depression, anxiety and stress. Special attention is needed for students to be more calm in completing learning for final level scientific writing.

The Effect of Coding Quality Measurement for In-Patients Coding of Coder in Hospital, Jakarta, Indonesia

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Background

As regulation Number 36 / 2013 from The President Republic of Indonesia about Health Profession. To determine the code of Illness and Procedures, it has often found inaccuracies codes provided by the coder. In Indonesia, the School of Medical Records began in 1990 in Jakarta with the first graduate on 1993. Has 7 (seven) competencies with Diploma 3 curriculum (according to Minister of Health Decree No. 377 of 2007. One of the Competencies is Classification and Codes of diseases and procedures as well as matters relating to Health problems. This competency is considered capable of being a coder who is working in health care facilities. In DKI Jakarta there are 2 (two) educational institutions Medical record and Health information Method

This sample have 147 coder as profession of Medical Record and Health Information who worked and had worked as inpatients coder in hospital in DKI Jakarta. Cronbach's α Reliability and Validity with Value of 0.898. This type of research is descriptive with qualitative and quantitative approaches. Correlation and analytic bivariate and Different Test analysis.

Result

The results of research that There is a relationship significantly between characteristic respondent e.g. education, As a Coder, Bed Capacity, Universal health Coverage related with competency of coder e.g. Cause of Coding Error, Reason of Coding Error, The contribution of Document to Coding Error and Other Causes of Coding Error. There is relationship significantly competency of coder with factor indicator quality management e.g. continuing improvement, Team based problem solving, Measurement of Result, Close relationship with customer and management commitment.

Conclusion

Educational factors by hospital coders in DKI Jakarta have an impact on the contribution of document to coding error. In working as a coder, the 4 factor competencies are as follows: Cause of coding error, Reason of Coding Error, the Contribution of Document to Coding Error, and Other Causes of Coding Error are very related in their job responsibilities. While the primary responsibilities of the HIM professional-providing quality data to support the delivery of quality healthcare and balancing the right to privacy with providing access to health data for legitimate users-remain constant, unique and expanding opportunities in the areas of information technology (IT), database management, and data analysis have opened. Education of coding in hospitals is closely related to Process management and management commitments. This requires training in increasing knowledge of coding updates and sufficient experience coder has the authority to set code, so management commitment is needed to set the code according to the rule. Needed review of curriculum to APTIRMIKI (Indonesian of Higher Education for Health Information Management Association) about future academic programs that must develop, revise and evaluate curriculum. Indonesian Certified coding professionals are utilised to assign and validate codes and assist in the development of policies that affect or depend on coding accuracy.

Security System Testing on Electronic Integrated Antenatal Care (e-iANC)

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Background

Electronic Integrated Antenatal Care (e-iANC) was built as a web-based application to assist midwives in recording ANC data including Patient Registration; Anamnesis; Physical Examination; Laboratory Test, Screening of Risk Pregnancy; Communication, Information and Education; Treatment and follow-up; Patient Disposition.

Method

To ensure e-iANC becomes a safe system, security system testing was needed. Our goals were to test the security system by using the Open Web Application Security Project (OWASP). It was conducted in computer laboratory at Universitas Esa Unggul Jakarta in August 2017. The OWASP detect include Injection, Broken Authentication and Session Management, Cross-Site Scripting (XSS), Insecure Direct Object References, Security Misconfiguration, Sensitive Data Exposure, Missing Level Access Control, Cross Site Request Forgery (CSRF), Using Known Vulnerable Components, Unvalidated Redirects and Forwards.

Result

The results indicated the risk level of e-iANC was the low category in the aspect of Cross-Domain JavaScript Source File Inclusion, Private IP Disclosure, XSS Protection Not Enabled Web Browser.

Designing the Prototype of Multiple Sclerosis Registry for Iran with a Minimum Data Set Approach

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Introduction

The Registry system of diseases is an organized one which has been introduced to gather clinical uniform data and evaluate distinct identified population results for any situation or expose a specified disease. Multiplicity and scattering data of Multiple Sclerosis disease as well as increasing the number and volume of medical records referrals are considerable important problems for neuroscientists. Multiple Sclerosis is an autoimmune disease with chronic inflammation and disordering in central nerve system. The existence of new software for registering patients' information would help to improve the qualification of diseases.

Procedure

The research is based on Registry system design which has conducted in 2017. At first, by investigating different papers, considerable systems on Multiple Sclerosis in the world as well as the collection of related minimum data were specified. Afterwards, according to verification of national specialists, by performing three phases of Delphi, the set of minimum data was created. Then, by the use of Visio software, the chart of collection existence relation of minimum data was designed. By providing data dictionary, data integration was specified by the elimination of duplicates creating relation between tables. System design was carried out by the use of aspmbc.net programming language, and then it was implemented and test for accomplishment in intended hospitals.

Findings

In this research, 12 Multiple Sclerosis Registries (e.g., Registries of Sweden, Norway, Denmark) were found. The set of verified minimum data is generally composed of patient personal information, social and economic base, kinds of Multiple Sclerosis diseases, illness family history, other diseases history, patient diagnostic criteria history, differential diagnostic, patient medication history, illness episodes, clinical evaluation, Signs and symptoms, neurological examination, Para clinical information, patient treatment and tests. Intended system is including entity relation diagram and data dictionary which is implemented and tested in Hazrat Rasool hospital affiliated to Iran University of medical sciences and Nemazi hospital which affiliated to Shiraz University of Medical Sciences.. Conclusion: According to this research findings as well as necessity to existence of information registration system (Registry) for Multiple Sclerosis to resolve informational requirement of specialists and managers, utilization of this registry designed system can be effective on Multiple Sclerosis healthcare qualification improvement.

Usability Evaluation of Computerized Physician Order Entry: A Heuristic Evaluation

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Introduction

Information technology, despite its effectiveness in improving the quality and efficiency of health systems, can also lead to medical errors. Therefore, system evaluation is necessary to reduce the medical error. One of the health information system which use in health care setting is computerized physician order entry (CPOE) .The usability evaluation of CPOE as an important information system in the health system is very important. The purpose of present study was evaluating the usability of computerized physician order entry system with heuristic principles.

Method

This is a descriptive cross-sectional study that evaluates the computerized physician order entry system of Nemazi Hospital in Shiraz University of Medical Science in 2018 by using the heuristic evaluation method .Result: there were 65 usability problems. The most problem was "Aesthetic and minimalist design" (n=13, 22%) and "Consistency and standards" (n=10, 17%). The least problems was Recognition rather than recall and error presentation (n =2, 3%). The severity range of all problems categorized as major and two "help and documentation" and" security" categorized as catastrophic.

Conclusion

Our findings showed that although the information systems such as CPOE are often new, they are supposed to be designed based on the standards and the needs of users.; Paying attention to these problem could be Prevent many problems for users and cause more satisfactions for users.

Design and Implementation of Clinical Information System for History and Progress Note in the ICU

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Introduction

Intensive Care Unit (ICU) is one of the most important and complex wards in any hospital. It has been estimated that over 1,200 data are produced on a daily basis, taking care of each patient in the ICU, for which an effective strategy to manage the data is required. The design and implementation of clinical information systems in ICUs reduces the workload and affects the quality of data. Also, the use of clinical information systems is an effective solution to eliminate the problems caused by documentation. Therefore, the present study was conducted with the aim to design and implement a clinical information system for history and progress notes in an ICU unit at Shiraz Nemazi hospital by determining its impact on documentation defects.

Method

This study is a pre and post interventional type and semi-experimental research. This study is also targeted to the Applied Study Group in 6 stages between 1395 to 1396. During the first stage, four truth- finding techniques were used to determine the components of this system, and use cases were extracted according to the user's target technique. In the second stage, the frequency of documentation defects was determined prior to implementation of the system. In the third stage, the relevant system was designed and implemented. In the fourth stage, the frequency of documentation failures were compared before and after implementation of the system, and finally, the system's usability was evaluated using a standard USE questionnaire. Descriptive and inferential statistics were used to analyze the data using SPSS 21 and Medcalc software.

Result

The system consists of 4 parts: Patient Information, Progress Note, Singing, Complete, and the Progress Note section consists of 11 parts. This system is linked to the Computerized Physician Order Entry that are currently being implemented at Nemazi Hospital, and the patient's demographic information comes from the CPOE(Computerize Physician Order Entry). It is also associated with the Hospital Information System and Picture Archive Communication System. Specialists confirmed 141 items of information for this system. Also, registration of information in the form of history and progress note before the implementation of the system had a serious defects, so that only 15.73 percent of the information was recorded by doctors, but after implementing the system, this number reached 69.29 percent (p < 0 / 0001). Also, in assessing the usability of physicians, they significantly favored the system and considered it to be effective (p < 0/05).

Conclusion

In general, according to our results, implementation of the clinical information system of the history and progress note in the ICU had a significant impact on the quality of information. Also it can be effective in training residents, contributing to the completion of records, and preventing loss of information in the ICU. Therefore, It is recommended to implement this system in all critical care units in hospitals.

A Review on Emerging Roles of HIM Professionals in an Evolving eHealth Environment in India

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Overview

The healthcare service sector in India is faced with lack of skilled and technically competent healthcare workforce. This shortage of skilled healthcare workers is estimated to be 7.4 million and affected every healthcare domain. Various reports estimate that around 0.7 million supply /demand gap of the Health Information Management (HIM) professionals in the country. Historically the HIM profession is a neglected professional domain in India. However, in the last couple of years, the health care industry both at public and private sector has realized the need of strengthening HIM related functions and activities across hospitals at different levels in the context of evolving eHealth environment, large scale integration of digital platforms in health care delivery services.

Aim

The aim of this study is to critically review the current health care scenario in India and the relevance of technically competent HIM professional and their changing roles in a digitally transforming healthcare environment. The emerging HIM professional roles and competency requirements are evaluated mainly in the context of eHealth environment build-up through the two major health care initiatives of Government i) Ayushman Bharat - National Health Protection (NHP) Mission launched in 2018 as part of Universal Health Coverage and ii) National Health Policy 2017. The ambitious project of providing health coverage to 500 million people across the country through NHP demands a robust eHealth platform across healthcare delivery process and a large pool of technically skilled Healthcare Information Technologist (HIT). Variety of HIM roles like Clinical Documentation Improvement, Medical Coding for Health Insurance, Revenue cycle management, etc. which are currently not as part of the mainstream HIM professional activities in India would become the need for the future. HIM professional roles will change over the period based on the intensity and pace at which integration of digital health platforms happens at all levels of the healthcare delivery system for strengthening NHP mission. On the other hand, the National Health Policy 2017 envisages the linkage of public and private sector through the creation of a digital health technology ecosystem. The National Health Stake under formulation, also emphasize on inter-operable technologies, digital solutions and robust technology for the creation of National Health Electronic Registers, Personal Health Records, Predicative Analytics, Digital Health Platforms, etc. These emerging scenarios demands a huge number of HIM professionals to take up technology competent roles in the healthcare sector rather than the traditional HIM jobs in India.

Discussion

The discussion would critically look into the roles of HIM professionals and their readiness to adapt to these changes in the evolving eHealth Environment in India. Even though the study focus is primarily on Indian context, it would be an insight to HIM professionals working across countries which are in the transformation to an eHealth environment.

The Importance of HIM Integration in Interprofessional Education: A Perioperative Scholar Program Initiative

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Overview

Interprofessional education (IPE) is necessary for the safety and wellbeing of our patient population. The World Health Organization (WHO) defines Interprofessional Education as 2 or more professions learning about, from, and with each other (WHO, 2012). At a small urban healthcare university, a program was initiated to create students who would graduate as scholars who possess a strong understanding in the areas of perioperative practice. Nursing and radiography students learned alongside HIM students in both didactic and simulation experiences in mock perioperative settings. These students from various healthcare programs were presented lectures by HIM faculty who showed them the importance of HIM in the area of surgery. Students learned about HIM and ways in which communication can breakdown during the care of patients undergoing surgical procedures such as: the impact of duplicate medical records numbers and potential impairment in patient matching with the health information exchange (HIE). Students were also introduced to the Office of National Coordinator of Health Information Technology (ONC) Safer Guides with a concentration on the guide specific to patient identification. Simulations were set up to create incidences which showed the mock patients with wrong wristbands along with incomplete and inaccurate charts. HIM faculty were present to explain to students the dynamics of HIM and the necessity of HIM professionals within healthcare. Students reported being surprised as they walked through scenarios which showed what can occur when communication breaks down amongst professionals and departments. The feedback was profound as many of the non-HIM students had many assumptions regarding the field of HIM. Non-HIM students did not realize the importance of HIM in keeping patients safe. Upon graduation the students had a greater understanding, awareness, and appreciation of the science of HIM and the strong role it plays in the communication and safety of our patients along their journeys. The experience was so powerful that one graduated reported how she addressed a case where a patient had a duplicate medical record as a result of her training as an **IPE** Scholar

Lean Healthcare in Developing Countries: Evidence from One Honduran Primary Care Clinic

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Background

The United States is not alone it its healthcare reform efforts. Healthcare organizations around the globe know significant change is on the horizon, and in anticipation of that, some organizations have begun adopting delivery systems that address these inefficiencies and wastes.

One system that has gained considerable attention in recent years is commonly referred to as Lean Healthcare. Originating from the manufacturing industry, this approach to healthcare focuses on increasing value for the patient and eliminating non-value or waste. However, implementing Lean Healthcare is not without its challenges. A major challenge to implementing Lean is essentially cultural. More specifically, the norms and values associated with Lean and those deeply entrenched in the field of medicine may conflict, and therefore reconciling them is necessary to successfully implement Lean.

Method

This case study shares how the largest primary care clinic in Honduras implemented Lean Healthcare concepts to successfully reduce the throughput time for patients, increase patient and clinician satisfaction, and enhance the quality of care.

Discussion

The main characteristics of this case study are discussed. These include (1) the motivational factor for implementation, (2) implementation time, (3) team, (4) lean implementation continuity/sustainability, (5) tools and methods implemented, (6) problems/improvement opportunities, (7) barriers faced during the implementation process, (8) critical factors that affected the implementation, and (9) the results obtained.

Health Information Managers in Japan: Role and Outlook

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Introduction

According to an official survey by the Ministry of Health, Labour and Welfare, in 2017, electronic health records were used in 46.7% hospitals with 20 or more beds and 85.4% hospitals with 400 or more beds. Efforts to digitalize hospitals and streamline the secondary use of medical data will enhance the quality of medical care and optimize costs. However, commentators argue that electronic records in Japan are not facilitating the secondary use of medical data. Many problems in this area will probably be solved by future innovation in information and communication technology (ICT). However, ensuring a system to actively promote the secondary use of medical data is important. An issue in building such a system is the role of Japan's health information managers (HIMs). The central concern is how HIMs can find their role and value amid an increasingly digitalized healthcare environment.

Method

This article introduces two case studies illustrating how the introduction of electronic records has expanded the role of HIMs, and discusses the outlook for HIMs in Japan. Kitasato University Hospital (1,033 beds) introduced an electronic medical record system in 2012. This led to a greater role of the hospital's HIMs; in addition to their existing duty to ensure that medical information is accurate, the HIMs started engaging incrementally in facilitating the secondary use of medical data to support the hospital's efforts to improve the medical care quality. The two case studies concern the HIMs' initiatives.

Result

The first initiative intended to enhance inpatient care. The HIMs analyzed medical data, identified areas the hospital should improve in order to standardize inpatient care, and shared the findings with the relevant departments. Over a 16-month period, the HIMs held 102 meetings with the personnel from the departments to discuss measures to enhance quality. Various professionals, including doctors, pharmacists, and nurses, attended each meeting. Consequently, the rate of inpatients for whom a standard treatment plan was adopted increased by 11.0% (from 43.7% in December 2015 to 54.7% in March 2017). The second initiative involved sharing information on medical safety management. Regarding medical information, the HIMs examined adverse incidents and their impact, collated the information with examples of incidents that tend go unreported, and provided regular updates on the documenting of informed consent.

Discussion

Both initiatives required ICT literacy and competence, the analytical skills necessary to evaluate the quality and administration of medical care, and the people skills necessary to coordinate and mediate between different medical professionals. Accordingly, the HIMs worked to hone their skills both inside and outside the hospital. The skills that the HIMs should aim to develop include an awareness of what goes on in clinical sites, grasping the big picture, and tenacity to get to the root of the problem. The HIMs can become an exemplary model for HIMs in Japan by further enhancing their role and value, and engaging in various issues while building rapport with different medical professionals. Such a model for HIMs will be indispensable in a hospital's efforts to enhance its efficiency and medical care quality.

Making Research a Priority for Health Information Managers

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Aim

To share the early experiences of the Research Advisory Committee (RAC) of the Health Information Managers Association of Australia (HIMAA). Sharing the experience of establishing and ongoing management of this committee may provide insight to other countries considering starting a similar committee. The changing landscape of Health Information Management in line with healthcare advances makes this an exciting time to focus on research.

Background/ Context

For the first time since its inception, HIMAA made research a priority area in its Strategic Plan 2014– 2016. HIMAA plans to support "an increase in the volume and type of research conducted related to health information management". A Research Working Group (RWG) was established in October 2014 to provide advice to HIMAA in relation to progressing the health information management research priority area outlined in the strategic plan. The RWG developed an issues paper that provided advice to the HIMAA National Board in what would be required to meet the research strategic goal, including increasing the quality and volume of health information management related research. The primary suggestion of the RWG was the formation of a permanent Research Advisory Committee (RAC) to develop and implement a work plan to further the strategic goals of HIMAA in research.

Establishment of Committee

The Inaugural Research Advisory Committee (RAC) was established in February 2016. Meetings were conducted via teleconference due to the geographical spread of members across Australia. The RAC also meets once per year in a face-to face meeting in Sydney. The committee includes members with academic or industry experience, and students.

- 1. Conducting three mentored research studies, where practitioners work in a group with an experienced researcher to undertake an industry relevant research project.
- 2. Presentations of findings from the above mentored research projects, at the national conference and in journal publications.
- 3. Three research workshops at the national conference.
- 4. Identification of the research trends in health information management in Australia and Establishment of the HIMAA Research Priority Areas.
- 5. Formation of a research grant funding scheme to provide seed funding for practitioners and early career researchers to undertaken research.

The inclusion of student members encourages HIM students to consider research possibilities. The RAC provides support to all HIMs to uplift the profession by contributing to publications relevant to the field.

Future Plans

In 2017, the research mentorship program was started, under the guidance of the experienced researchers in RAC. In 2019, expression of interest is called for the third research mentoring project. The primary objective of this scheme is for the health information management (HIM) professionals without prior research experience, to work under the mentorship of an experienced researcher to gain skills in conducting literature review, writing research proposals and preparing the findings for publication/presentation. A fourth research workshop is proposed to be held at the HIMAA conference. The RAC will also be making available on their website resources to support practitioners to incorporate research into their roles.

Choosing a Comprehensive Procedure Coding System for Orthopedic Cases

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Purpose

Some Iranian hospitals use two different systems for the coding procedure. Modified CPT-4codes for cost calculations and procedure codes of ICD.9.CM for data retrieval for research, education and administrative purposes. The purpose of this study was to compare comprehensiveness of these two coding systems for covering details in cases hospitalized orthopedics ward.

Method

A cross-sectional descriptive study was used. Discharge procedure data were extracted from 265 orthopedics patients records in March and April 2018 in Tabriz Shohada Hospital. The random sampling method was used and the sample size was determined by Krejcie and Morgan method. The data collection tool was a checklist that included procedures details.

Findings

Research findings have shown that in encoded cases with modified CPT-4, encoding and retrieval of root operations were 100%, precise body parts were 90.9% and surgical approaches were 63.4 %.

Conclusion

According to the finding of the study, Modified CPT-4 codes are more comprehensive than ICD.9.CM procedure codes for encoding and retrieval of data in orthopedic procedure cases, and can replace ICD.9.CM procedure codes to retrieve data for research, educational and administrative purposes.

Designing Itemized Health Record Data Collection through Hatta Method

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Background

Empowering HIM Professionals through a global voice should be addressed through making a better health record system to practitioners and health facilities. Especially on how to increase the usage of health record through finding the right itemized health record variables and be filled and used effectively by health care practitioners and yet according to patient audit criteria standard. This concept of ideas is covered in Hatta Method who also acts as an early warning, early detection and early treatment or abbreviated as the 3 E system. Based on those ideas, a new design on health record form will be resulted. The collecting of patient data will be easier and data quality will be obtained in an easy manner.

Introduction

Hatta Method is trying to reduce the expensive medical record forms being purchased in health care facility (HCF) and yet often, those purchased forms cannot be used properly by health care practitioners (HCP). The problems, mainly due to lack of itemized health record variables in the forms (or on electronic health record screen), that needed by HCP. As a result many gaps or unfilled items on health record forms or another supplement data/form should be added. Which create unnecessary things if the design suits the HCP. Hatta Method teach the health information management practitioners on how to find the right itemized data by preparing 3 special questionnaires and check the itemized data on specified diagnose against patient care audit criteria to the available forms being used in HCF.

Objectives

A study was conducted (i) to obtain a representative quality of the current health record form (ii) to develop a new informative health record as a decision making tool to certify the quality of care based of 3 E system.

Methodology

The study was done to two types of HCF, First, to 216 antenatal clinics and secondly to two orthotic prosthetic facilities in Indonesia. A cross sectional design study were performed to two different settings. Antenatal clinics used antenatal criteria while orthotic prosthetic clinic used parts of WHO's International Classification of Functioning, Disability & Health criteria. Each questionnaire of different HCF settings will be analyzed. The itemized health record variables data of each HCF will be extracted by Factor Analysis process (SPSS). This brings a unique design and will be used easily by HCP since it integrates the 3 E system and typography approach as well.

Result

Hatta Method produces a good health record design based on itemized variables to any types of health record (manual or EHR). It can be implemented to any type of health care settings. Such as to antenatal clinic or even to orthotic prosthetic clinic as an example. It will show that by combining special questionnaire as Hatta Method tools, it will guide and bring new perspective to the health information management practitioners on how to design health record forms in a better way for data collection purposes.

Knowledge and Understanding of Husada Hospital Staff Jakarta on the National Standard of Hospital Accreditation

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Background

Accreditation is required for all hospitals in Indonesia in the process of obtaining government recognition for the existence of hospitals according to their resources. The aim of hospital accreditation is to improve service quality and patient safety according to the standards set by the Government. The development of science and technology requires hospitals in Indonesia to adjust the accreditation activities from the 2012 version to the National Standard for Accreditation of Hospitals (SNARS) Edition 1 which is enforced since January 2018. With the enactment of the SNARS Edition 1, each hospital is required to prepare for SNARS accreditation. One of the hospital's efforts to face the SNARS Edition 1 accreditation is to increase the knowledge and understanding of human resources (HR) by achieving 95% as the main support for the success of accreditation.

Method

Descriptive research with quantitative methods. The target of population in this study was hospital staff consisting of health workers and management. The sample in the study used saturated sampling where all hospital staff and management involved in accreditation were 55 respondents. Methods of analyzing data using several stages, namely collecting data through open questions and interviews, processing data, presenting data and drawing conclusions.

Results

Analysis of 55 respondents with questionnaires and interviews obtained three domains with significant results. The lowest level of knowledge was 50.9% (n = 28) regulation, 45.5% (n = 25) patient safety standards, 41.8% (n = 23) new standards of SNARS. The results of level of understanding have similarities in value with the level of knowledge, the difference in value is only for the new standard SNARS 43.6% (n = 24).

Conclusion

The level of knowledge and understanding of Husada Hospital staff related to SNARS still has gaps. The researcher concluded that the 95% achievement target is not optimal yet. The recommendation of researchers is to increase the knowledge and understanding of hospital staff, including the introduction of SNARS Edition 1 socialization activities carried out in a gradual and structured manner. By obtaining the results of this study, research can be continued on the relation between level of knowledge and understanding of SNARS Edition 1. Research can also be continued on the readiness of hospital staff with the success of accreditation.

Improvement of Classification Accuracy in the Japanese Casemix System DPC (Diagnosis Procedure Combination)

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Introduction

The Japanese national health insurance financing system has long been based upon a fee-forservice (FFS) reimbursement using a national price schedule from 1961. In Nov.1998*, The Japanese government introduced a case-mix system, the J-DRG/PPS trial for 10 national hospitals. *from Nov.1998 to Mar.2004. In 2003 the next generation system, known as the DPC/PDPS (Diagnosis Procedures Combination/Per Diem Payment System) was introduced for acute care hospitals (80 University hospitals and 2 National centers). The number of hospitals participating in the DPC project were 82 hospitals (66,497 beds) in Apr. 2003, increasing to 1,730 hospitals (approximately 490,000 beds). In Jan. 2019, There are 7,300 hospitals with acute care 809,523 beds. So, they provide more than 60% of acute care beds in Japan.

What is the DPC/PDPS

The DPC grouping logic is based on the ICD-10 (International Classification of Diseases 10th Revision, Japanese Version for 2013), the Japanese procedure code (K-code) and the choice of a complication (CC), adjuvant, severity and other variables. And DPC has 18 Major Diagnostic Categories (MDC). Firstly, DPC classification requires to choose a diagnosis with related ICD code, therefore accuracy of ICD-10 coding is an extremely important element. DPC and ICD version currently used, 1998-2000: J-DRG/PPS with ICD-9. 2001-2003: J-DRG/PPS with ICD-10. 2003-2017: DPC/PDPS with ICD-10(2003J). 2018-: with ICD10(2013J). *DPC is revised every 2 years. DPC Hospitals have to submit their clinical information and medical claim data to the Ministry of Health, Labor and Welfare (MHLW). Their data is analyzed and evaluated by MHLW. Coding accuracy. So, professionals of ICD-10 coding and managing DPC data were needed as the demand of the accuracy improvement increased. Since J-DRG was introduced, some problems have occurred. One of the problems is that ICD-10 has not adopted medical claims under the national health insurance system. In Apr. 2010, DPC hospitals needed to establish a committee for coding accuracy and when their unspecified codes exceeded 40%, there was a penalty. In Apr. 2012, that number was reduced from 40% to 20%. And now, from Apr. 2018, reduced to 10%. DPC hospitals was forced to improve their coding accuracy. So, MHLW decided the development of the coding text as measures to coding accuracy improvement.

What is the Coding Text book?

1) In 2012, the DPC committee of MHLW gave the DPC research team an order to develop manual for accuracy improvement. 2) The research team started development with over 40 HIMs of various parts of Japan as soon as instructions were given. 3) In 2014, the coding manual was shown as a coding text book by MHLW. 4) In 2016 and 2018, the coding text book was revised to Ver.2 and 3.

Conclusion

1) A duty of establishment of the committee which a HIM belong and a setup of the coding standard of dot 9 codes (40%>>20%) were achieving effect. 2) By Coding text and the other, a knowledge about ICD10 coding is spread and coding skill is improved. 3) The role of a HIM became more important.

Clinicians' and Other Factors Influencing Quality of Data on Death Notification Form in Tanzania.

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Introduction

Quality data on cause of death certificates is considered as potential resource and evidence- based decision making and tool for health research and studies. Many research and assessment made on the quality of data on the cause of death certificates revealed poor quality of data on the cause of death certificates. Despite of many studies conducted worldwide on quality of information on causes of death, little is known on the clinicians' factors contributing to data quality in death notification forms. In Tanzania several studies have been conducted but not specific on clinicians' factors influencing the quality of data on death notification forms.

Study Objective

This study aimed at assessing clinicians' and other factors influencing data quality on the Death Notification Forms at Muhimbili National Hospital, Dar es Salaam in order to improve quality of medical certificate of cause of death.

Method

This was a descriptive cross-sectional study conducted at Muhimbili National Hospital, Dar es Salaam. The study involved clinicians working at MNH wards, certifying and filling-in DNF for the deceased person. Participants were selected by using simple random sampling. A structured questionnaire was used to measure the clinicians' level of confidence in filling-in the death notifications. Data were collected and analysed by SPSS version 20.0. Ethical clearance was obtained from MUHAS Research and Publication Committee and permission to conduct research granted by MNH.

Result

A vast majority over 90% of clinicians agreed that not all clinicians have good knowledge on how to fill death notification form, However, over 80% disagree that they rarely filled in death notification form because no one demand for it, also they did not fill in all section because of workload. Over 70% of clinicians agreed that the institution provides death notification forms on time and that the institution uses mortality statistics for planning purposes. However, over 80% of clinicians disagreed on the rest of the institutional factors towards clinicians filling-in death notification forms. Majority over 90% of clinicians agreed that it was necessary for the community members to know (to be availed with) the cause of death of their relatives. However, 90% of the clinicians disagreed that the Community members were aware about the detailed information on the death notification form and were able to tell when the DNF is incomplete.

Conclusion and Recommendation

The study shows that, not all clinicians at Muhimbili National hospital have good knowledge on how correctly death notification forms should be filled, also majority have negative attitude towards fillingin DNF. This suggests knowledge-practice gap which should be addressed as well as attitude and behaviour change strategies.

Community factors towards clinicians filling in DNF (n = 131)

Statement	Strongly degree (Score 3) a (%)	Disagree (Scare 2) a (59)	Neutral (Soure 3) u (75)	Agree (Score 4) n (%s)	Strengly Agree (Score 5) a (%)	Mode scores
Majority of the community members are aware about the death notification form	18 (33.7)	15 (42.85		19 (37.0)	9/6.91	,
The community members know the uses of death actification form	13 (9.9)	72 (55.9)	3 (2.3)	34 (26.19)	9 (6.9)	1
The community members are sware about the importance of death notification	11 (8.4)	66 (50.4)	0	403.6	10 (7.6)	,
The community members always do descant for death notification forms	\$ (6.1)	33 (25.2)	0	77 (SLD)	13 (9.9)	
It is necessary for the community members to know (to be availed with) the cause of death of their relative	6(4.6)	5.6.10		69 (51.7)	51.08.9	
The Community members are awave about the detailed information on the death notification forms	10 (20.0)	1.015		9.65	10.5	
The community members are able to tell when the DNF in incomplete	47 (35.9)	72 (05.8)	50.0	5 (0.1)	2(1.5)	1
The Community members are aware of the policy the guidet them to make sure they are issued with the death antification form	35 (26.7)	R2 (62.8)	1(9.8)	10 (7.6)	3 (2.3)	2
The community members are not educative enough to know their rights with regards to death matification forms	4(0,1)	19 (14.5)	0	81 (61.8)	27 (20.6)	4
Majority of the community members do pick up the filled indexth notification, forms from the hospital	6(4.6)	11.(8.4)	0	82 (62.6)	32 (24.4)	

Attitudes of Clinician towards filling in DNF (n=131)

Statement	Strongly disagree (Score 1) n (%)	Disagree (Score 2) n (%)	Neutral (Score 3) n (%)	Agree (Score 4) m (%)	Strongly agree (Score 5) n (%)	Mode
More time is spent in filling death notification form	29 (19.8)	48 (36.6)	5(3.8)	38 (29)	10 (10.7)	2
Nearly all the death notification forms are partially filled	20(15.3)	44 (33.6)	5 (3.8)	44 (33.6)	18 (13.7)	2
Filing of Death notification form is part of formal training	52 (39.7)	47 (35.9)	0	13 (9.9)	19(14.5)	1
It is job on training & job experience used on how to fill in death notification form	11 (8.4)	8(61)	0	85 (64.9)	27 (20.6)	4
Death Notification forms are always available in the wards	9(6.9)	11 (8.4)	0	61 (46.6)	50 (38.2)	4
Filing in the death notification form is part of my job	11 (8.4)	7(5.3)	0	49 (37.4)	64 (48.9)	5
I don't fill in all sections on death notification form because of workload too much work	69 (52.7)	47 (35.9)	0	12 (9,2)	36.3	1
It is important to attend separate training on how to fill cause of death information on the death notification form	\$(6.1)	10 (7.6)	0	59 (45.0)	54 (41.2)	4
I rarely fill in cause of death notification form because no one demands for it	68 (51.9)	50 (38.2)	0	9 (5.9)	4(3.1)	
The terms used on the death notification form are not understandable		6441.25		2020	1010	
Not all physicians have good knowledge on how to fill death notification form	42 (24.4)	24 (41.2)		29(22.1)	3(23)	
11	5(3.8)	\$ (6.1)	0	65 (49.6)	53 (40.5)	4

Institutional factor towards Clinicians' filling in of DNF (n = 131)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statement	(Score 1) n (%)	(here I) a (h)	(Score 15 n (%)	(Score 4) n Did	(Score S) n (N)	Mode stores
The Institution provides guidelines & SOP's on how to fill in death notification form	29(22.1)	79 (60.5)	0	15(115)	6 (6.1)	2
Quality assessment is conducted by the institution to check the completeness & accuracy of data on death notification form						
	21(16.0)	75 (57.3)	0	27 (20.6)	8(6.5)	2
The Austitution has an expert who reviews mortality registration	10 (7.6)	90 (68.7)	6	25 (19.1)	6 (4.4)	2
The institution disseminates data of mortality statistics of hospital for the Clinicians to be aware of the status of mortality statistics						
The institution provides death notification forms on time whenever needed	3(23)	15/9.9)	0	82 (62 %)	35(252)	
The institution has a team of Clinicians who are entitled to complete the cause of death section on the form	32 (24.4)	89 (67 9)	0	#(6.1)	2(15)	
The Institution conducts refresher courses on how to correctly fill in the death notification form	45 (34.4)	76 (58.0)	0	6 (4.6)	4 (3.1)	2
The institution has a well-functioning mortality registration	25(19.1)	72 (55.0)	0	29 (22.1)	5 (3.8)	2
The institution uses mortality statistics for planning purposes	14 (10.7)	17 (13.0)	7 (5.3)	74(56.5)	19(14.5)	4
Filling in of death notification form is part of induction program at the institution for the newly employed dinkians/resident doctors						
	29 (22.1)	73 (55.7)	0	17 (13.0)	12 (9.2)	2

Discharge Period Prediction of Chronic Kidney Disease Patients Using Incipient Data of Hospital Admission

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Background

Chronic kidney disease patients in our hospital often exceeded the national average, and the Japanese medical payment system was at a disadvantage for us. In this study, we investigated a discharge prediction model of patients with chronic kidney disease using Diagnosis Procedure Combination (DPC) data.

Methods

The subjects were chronic renal failure (DPC six digit classification is 110280) 183 cases. At medical institutions in Japan, the Diagnostic Procedure Combination / Per-Diem Payment System (DPC / PDPS) has been introduced, and three stages of days are set according to the hospitalization days. The prediction model was an order logistic regression model calculating the discharge probability of four periods (I, II, III and period overrun) defined by DPC / PDPS. The explanatory variables candidate were age, sex, comorbidity, patient status etc. that were able to be collected at admission and that made order logistic single regression models. The comorbidities that had 10 or more cases that matched up to the three digit of the 10th edition of the International Classification of Diseases were selected as candidates. The Spearman correlation coefficients between all the candidates were not significant with any other candidate. Order logistic regression models were constructed for all combinations of explanatory variables , and the Akaike's Information Criterion (AIC) was compared.

Result

In the constructed probability calculation model, we identified combination among dietary intake, age, I63·I69: cerebral infarction (including sequelae), N08: diabetic nephropathy, and I50: heart failure. The hospitalization period can be predicted by inputting the evaluation value for five items, which are patient conditions at the time of admission. As a result of using this model, the probability that the hospitalization period with the highest discharge probability and the hospitalization period when actually discharged is two or more periods is as low as 3.3%, indicating the usefulness of this model.

Conclusion

The analysis using five parameters at admission of the constructed optimal model could predict the hospital stay of chronic kidney disease. The prediction of the time to improvement of general condition at admission will be useful for coordination with extended care facility and effective bed management.

ICD-11 Pilot in Countries of the WHO Eastern Mediterranean Region

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Overview

ICD-11 has been piloted for morbidity and mortality coding in countries of the Eastern Mediterranean region. The abstract describes the findings of the pilots in Egypt, Jordan, UNRWA, Kuwait and Tunisia.

An Audit Evaluation of EMR Implementation in Uganda

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Background

A health record audit was conducted at one licensed level-IV, private health facility in Wakiso District, Uganda. Prior to the audit, the Ugandan Ministry of Health independently assessed the facility using a 16- domain Self-Regulatory Quality Improvement tool [1] in which the facility received an 89% score on the health records domain.

Method

We conducted an audit on health records and the consistency and quality use of the Clinic Master (International) [2] Electronic Medical Record (EMR) system five years after its initial adoption. Informal feedback was gathered from health care workers to evaluate organization and innovation-specific factors of effective use of EMRs.

Findings

The duplicate patient record rate was 17% based on probabilistic matching (Link Plus V2). Manual review of uncertain matches needed to be conservative due to missing or unreliable matching variables. Specifically, the Ugandan National Identification and Registration Authority had yet to issue unique national identification numbers to most patients, returning patients rarely brought their registration card containing the facility unique patient ID and full date of birth was collected for only 9% of patients. Service utilization and outcomes data from outpatients, antenatal care, deliveries, child immunization and sexually transmitted and blood-borne infection (laboratory) registers were reported monthly to the Wakiso District Health office via m-health reporting. EMR source records and reporting tools were compared over three months with no discrepancies between the source documents and submitted reports. Health care workers could not use advanced guerying and analysis tools to reduce time to report. Clinicians assigned diagnosis codes at point of care. The completion rates were high but codes were assigned with low specificity. The EMR contained over 65,000 diagnosis codes consisting of ICD-10 codes as well as vendor and facility created codes that captured local language and cultural variations (e.g., D272 - Threatened Abortion). Selecting ICD codes with high specificity was considered time consuming and difficult as the EMR provided a single wildcard search engine without browsing functionality such as drop-down search filtering by disease hierarchy. Audit of financial records identified pervasive employee theft. Electronic logs of laboratory CBC equipment were compared to EMR-based accessed services and financial transactions indicating more services were rendered than reported. Audit trail revealed patterns of unauthorized deletions and adjustments of prices and units of drugs and services by clinicians. Gaps in management and oversight due to turnover of four administrators within the previous two years resulted in administrative tasks being shifted to clinical directors who shared their passwords with clinical relief staff.

Conclusion

Recommendations of best practices in low resource settings were made and the health center took specific steps to address barriers to effective EMR utilization (e.g., biometric patient identification). The facility took steps to prevent misuse including technological measures to prevent fraud and incentive-based systems that monitor performance; spot-checks, cross-checks and trace and verification procedures, organizational restructuring to segregate and strengthen administration, and building employee intrinsic motivation and capacity.

References

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Visioning and Curriculum Design of University of Regina's New Master's Concentration in Health Informatics and Information Management

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Introduction

In Canada, advanced educational opportunities are of great significance within the Health Information Management (HIM) profession. Industry needs for broadening skills beyond the traditional model of HIM practice and advanced education entry requirements to senior leadership positions has contributed to a demand vacuum for graduate health informatics and information management education [1]. At present, there are no master's degree-level programs in HIM available in Canada. To address the call for accessible graduate education that fits the Canadian health context, starting September 2020, the University of Regina will offer a new concentration in Health Informatics and Information Management to be offered under an existing online Master of Health Administration program.

Method

An assessment of industry and HIM professional needs informed the initial proposal for the program. Instructors were provided access to instructional designers to create interactive asynchronous online courses accessible to busy working professionals.

Result

The curriculum consists of total of 10 courses. Several courses within the curriculum build capacity for leadership as expected of executive professional degree programs. Other courses develop specialized knowledge to step into new roles and functions that require some technical training in informatics, data analytics and information governance.

The program was designed to provide high-quality, accessible education responsive to current and future industry needs and opportunities. The new concentration intends to attract promising students from within the profession, and to be inclusive of disciplines and professions from complimentary fields. By embracing inclusivity, the program hopes to foster interdisciplinary and systems thinking useful for a wide scope of practice and diverse roles of HIM

Discussion

The concentration cultivates HIM leadership and offers the level of specialization needed to thrive in today's digital health ecosystem. The program is built around traditional subject matter expertise while integrating newer areas of specialization that align with advancements in technology and new models of health care delivery and management. Considerations for developing scalable online HIM programming and working collaboratively across academic discipline units will be explored.

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Enterprise Documentation and Coding Strategies to Improve Population Health

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Overview

The speaker will set the stage by providing the external factors which assisted in propelling UC San Diego's strategy to advance population health by addressing and improving its ability to meet IHI's triple aim: Cost, Quality, Patient Experience and then addressing two additional dimensions: improving the provider experience and equity by examining the social determinants of health. The speaker will explain the external forces and pressures that not only led UCSD but also the entire healthcare industry to transform its conventional business and healthcare practices, from volume to value based care. The critical dependencies require a longitudinal record, advanced data analytics, and the ability to capture relevant conditions to adequately risk adjust UC San Diego's responsible lives. Along with sophisticated care networks, wellness visits, telemedicine visits, the organization simultaneously redesigned its entire coding and documentation enterprise to create a holistic, singular approach to improve HCC risk adjustment coding, enterprise charge capture, quality and medical necessity edits while incorporating the professional coding workflow. Dependencies included the re-training of coding resources and the provision of a sophisticated technology platform and an application solution to enable in one session, the coder to interact with auto-suggested codes from the provider's final documentation, along with appropriate edits (NCCI, NCDs and LCDs) to enable a clean, compliant claim, and break down barriers to enable technical coding and charge capture to satisfy coding and billing requirements. Another pathway was created to enable and facilitate accurate provider documentation and Hierarchal Condition Coding (HCC) capture with a safety net to reduce re-work and assure optimal Risk Adjustment Factor (RAF) scores.

The presentation will:

- 1. Demonstrate strategies to reduce cycle time for coding and charge capture professional and technical coding, and the opportunity to decrease duplication of effort
- 2. Address documentation challenges: timely, adequacy, and availability
- 3. Provide sophisticated tools to support workflow, compliance, coding and financial performance, decrease physician disruption, and improve charge capture
- 4. Opportunities to improve Risk adjustment coding quality proactive solutions to close gaps
- 5. Decrease denials for medical necessity and coding
- 6. Incorporate coding and medical necessity edits into the coder workflow to positively impact the clean claim rate
- 7. Address challenges with overseeing and managing provider coding/charge capture
- 8. Counteract the increased costs and volume of patients seen with a decrease in resources
- 9. Proactively respond to payer requests for retrospective risk adjustment reviews and concerns with the RAF score
- 10. Engage providers in improving their documentation to accurately reflect the health of the population treated
- 11. Align incentives and assure population health goals are attained and maintained

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Population Health at UC San Diego Health





Input Accuracy Activities by the Establishment of the Reporting System of Present on Admission (POA)

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Objectives

Present on Admission(from now on, POA) is an indicator of whether the disease existed even before or during hospitalization and health information manager(from now on, HIM) enters POA for final diagnosis of all inpatients. Enter as "POA(Y)", if the diagnosis existed at the time of hospitalization; " non-POA (N)", if the diagnosis did not exist at the time of hospitalization; " POA(U)", if there is not sufficient record to determine whether the condition existed at the time of hospitalization; and " POA(W)", if the physician cannot clinically determine whether the condition existed at the time of hospitalization. POA is used as an incentive indicator of new case payment system(new Diagnostic Related Groups) in South Korea. And an important indicator of patient safety in hospitalization. Our hospital participated in the pilot project for the new case payment system in August 2018 with 13 other hospitals. In particular, incentives are provided for 'POA claim accuracy of the new case payment system and for implementation of the computer system with POA input, improvement activity to increase POA claim accuracy, process establishment for insufficient POA evidence records of the medical quality assessment. This activity was carried out for the purpose of establishing a computer system for inputting POA, and for more accurate input.

Method

1. Management of incomplete records

- Preparing a process for managing incomplete records by the operation of the diagnostic coding committee
- Registration insufficient record of onset of consultation records and impression of inpatient admission records
- 2. Establishment of POA input computer system
- 3. Establishment of computer matching system for POA claim accuracy
 - Computer system construction of the POA input
 - Indicators presented by Health Care Cost and Utilization Project (From now on, H-CUP) in the United States computational matching with 'POA(Y)'
 - Errors matching 'N' are induced.
 - Development of detailed work guidelines for POA for HIM
 - Shared work standards through team meetings with actual patient cases by HIM

• Sending a personal email to the training materials of the physicians' POA selection guidelines We are going to compare POA claim accuracy evaluation scores in the new case payment system among 14 hospitals implemented by Health Insurance Review & Assessment Service (HIRA) organization during 6 months. (between August 2018 and January 2019) Results: As a result of these various activities, the rate of POA claim accuracy assessment score

was 98.87 percent. (average : 94.92 percent, Announcement of evaluation result : May 2019)

Conclusion

Consequently, we could high score among 14 hospitals that participated as a pilot project in August, 2018. And it will also compare the evaluation scores of POA claim accuracy of existing new case payment system 69 hospitals in September 2019. Also, noteworthy is the "non-POA (N)" tends to raise the severity and cost of care, not all of them. In this regard, I think it is important for HIM to adjust the opposite benefits of patient safety and medical costs, and enter final diagnosis coding and POA accurately.
Standardization and Management of Interface Terminology for Electronic Medical Records: Experiences of a Four-hospital Consortium

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Background and Aims

Interface terminology is one of the solutions balancing standardization and individuality by constructing controlled terminology for electronic health records. In contrast to the building process, the management process of interface terminology has not been clearly reported. The purpose of the present study is to document the standardization and management process of interface terminology in four hospitals affiliated with Seoul National University.

Method

This study described the standardization and management process of interface terminology regarding chief complaints, diagnoses, and procedures (including surgery) in a four-hospital consortium. The process was proposed, discussed, modified, and finalized by the Terminology Standardization Committee (TSC), consisting of personnel from the four hospitals who attended numerous meetings and online discussions.

Result

A request regarding interface terminology is classified into one of four categories: 1) registration of a new term, 2) revision, 3) deleting an old term and registering a new term, and 4) deletion. A request is processed in the following order: 1) collecting testimonies from related departments and 2) voting by the TSC. At least 5 out of the 7 possible members of the voting pool need to approve of it. Mapping to reference terminology was done by three independent medical information managers. All processes performed online, and voting and mapping results were collected automatically.

Conclusion

The decision on interface terminology established by the TSC concerning the standardization and management process was clear. In addition, the process made users receptive to the decision of TSC.





Symbiotic Relationship – A Collaborative Relationship Between the HIM and CDS for CDI

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Overview

A strong and cohesive relationship between hospital Clinical Documentation Specialists (CDS) and Health Information Managers (HIMs) can significantly enhance the success of a Clinical Documentation Improvement (CDI) program. The collaboration commences at the planning phase for the establishment of a CDI program along with ensuring the CDS training is inclusive of the HIM, Coders and CDS trainee. Further during hospital wide clinician education attended by coders and HIMs when possible provides an opportunity to lift the profile of HIMs and coding team. CDI programs established at 13 private hospitals in Australia have benefited considerably from this relationship, where currently the CDS works unaccompanied within each facility. Until such time as further CDS are recruited, the further development of the program relies on this strong symbiotic relationship. The relationship is effective due to each role having a clearly a defined scope within their position description, with both exercising a unique set of interrelated skillsets. The HIM is an expert in coding, classification principles and casemix management, whilst the CDS has the clinical expertise and physician engagement experience. Each position must work to their strengths whilst understanding and respecting their work boundaries.

The HIM plays a pivotal role in the ongoing education and development of the CDS in the following areas:

- Updates to relevant national and state coding advice, including edition changes of the ICD/ACHI/ACS
- Selection and allocation of the principal diagnosis in accordance with ACS0001
- Complications and comorbidities that drive complexity in different Diagnostic Related Groups (DRG) versions
- Specific documentation requirements for these conditions in accordance with the ACS
- Health fund contract rules and documentation requirements relating to hospital readmissions to prevent revenue leakage
- Documentation requirements to improve classification and data integrity of Hospital Acquired Complications (HACs).
- Common conditions poorly documented or deficient in detail, either generally, by certain doctors or across certain specialties
- Common conditions that are repeatedly queried to target education
- Structure and content of queries in accordance with the HIMAA Ethical Standards in Clinical Coding and ACS0010. Without this education, queries generated by the CDS may not be structured in the required manner to enable the coder to assign a code for the condition the query intended to confirm.

Collaboration is further enhanced through regular joint meetings and combined education opportunities, be it clinical education or coding. Feedback from the HIM and coding teams in private facilities where a strong relationship exists confirms that the coding function is performed far more easily and efficiently, based on evidence in the medical record that resulted from their feedback and education of the CDS. This ultimately improves job satisfaction, employee engagement and stems further drive in CDI. A disconnect between the two roles and in turn poor outcomes of a CDI program can result if the CDS assumes control of any of the HIM core functions, neglecting their value and input. When these professional boundaries become blurred, the result in disengaged HIM and coding staff.

Incident Reporting for Improving Quality and Patient Safety at Johns Hopkins Aramco Healthcare

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Background

Incident-reporting systems (IRSs) help improve both the safety and quality of healthcare delivery system by obtaining information about incidents affecting patient safety which can be converted into individual and organizational learning and improvement opportunities. This study aims to evaluate the effectiveness of IRS in incident reporting at JHAH since the implementation of Datix.

Method

This is a prospective, qualitative and quantitative study. Datix and SAP reports are used to evaluate incident reporting before and after implementing the software. Qualitative methods using a questionnaire that was developed to assess the attitude of JHAH's staff towards reporting incidents in general and the use of Datix.

Result

Incident reporting has increased significantly in 2017 and 2018 by 84% and 92% respectively using Datix compared with the previously implemented software. JHAH has 3812 active employees with nearly 60% of them using Datix. The study received 377 survey responses. Mixed attitudes were held about the workplace safety culture and the value of the system.

Conclusion

The system implementation was successful. Problems identified that may affect reporting include more increased awareness regarding the importance of incident reporting and more training on Datix.

A Retrospective Study of Sepsis at Johns Hopkins Aramco Healthcare

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Background

Sepsis has a mortality rate of 28-50% making it the leading cause of critical illness and death in noncardiac intensive units in the United States and worldwide. The cost of sepsis treatment has risen 62% in five years from \$14.6 billion in 2008 to \$23.7 billion in 2013. The best approach to managing sepsis is early recognition and aggressive medical management.

Method

This is a retrospective cohort study analyzing medical records for sepsis cases admitted to Johns Hopkins Aramco Healthcare JHAH between [May 2015] and [May 2017].

Result

This study included 299 admissions for adult patients identified by sepsis diagnosis on admission or after hospitalization. The mean age was $69(\pm 16)$ years and mean BMI was $28(\pm 6)$ kg/m2. The average hospitalization days was 23 days, however, the average length of stay in the ICU was 10 days, 7 days for survivors and 12 days for non-survivors. 58% of the patients developed severe sepsis and 50% developed septic shock with a total mortality rate of 46%.

Conclusion

While severe sepsis and septic shock remain a major cause of death in critically ill patients admitted into intensive care units, an increase in the incidents of sepsis is anticipated in older male patients who suffer from preexisting chronic conditions.

Assessment of Patient-Reported Outcomes in Urology: Cross-Sectional Study

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Background

Patient-reported outcome measures (PROMs) are considered new standards for evaluating patient health and quality of life. Yet, the use of PROMs in Urology is limited and the use in Saudi Arabia is unknown.

Objectives

The purpose of this project is to evaluate patient-reported outcomes among patients with urology disease, which were the most common symptom in the Urology clinic, KFUH, Saudi Arabia, and assess patients' perception toward using this tool in the clinic.

Method

The study was a descriptive cross-sectional study, where patients' health outcomes measured by using the validated PROMIS-10 (Patient-Reported Outcomes Measurement System) questionnaire that consists of 10 questions about patient physical health, mental health, pain, and fatigue. In addition, patient perception toward using PROMIS-10 questionnaire was measured using 5 questions, and finally, patient demographic information was being collected. For analysis, the overall score of PROMIS-10 was be compared across patient characteristics (age, gender, weight, etc.) using univariate and multivariate analysis.

Result

This study gives an insight into patient-reported health outcomes among patients with urology disease. It gives a baseline about the importance of measuring patient-reported outcomes before the patient visit as well as patient perception toward using this tool. PROMs are considered a new concept in Saudi Arabia, and it's intended to describe the general health of the patients and evaluate perceptions about this tool among patients in the Urology clinic as an example. If this tool turns out to be beneficial, we could expand the implementation to other diseases and clinical departments. The reason we chose this specific condition (i.e. urinary stones) is because few studies are published internationally about using PROMS in Urology, and it's an unknown topic in Saudi Arabia. Also, the condition of urinary stones involves many treatment options and understanding the patient background beforehand could improve patient- physician communication and make patient healthcare management more effective.

Demographic varia	ables PROs Physical Healt	h P-value	PROs Mental Health	P-value	
C l	(mean ± SD)	0.014	(mean ± SD)	a cost	
Gender		0.6147	10.04 1 2.000	0.806‡	
Male	15.47 ± 2.78	_	16.04 ± 2.866	-	
Female	15.13 ± 2.47		15.90 ± 2.82		
Age		0.275^	15 10 10 10	0.294^	
• 16 – 29 ye	ars 15.61 ± 3.27	_	15.46 ± 3.12		
 30 – 39 ye 	ars 16.22 ± 2.04	_	17.50 ± 2.35		
 40 – 49 ye 	ars 14.82 ± 3.25	_	15.30 ± 3.50		
 50 – 59 ye 	ars 16.00 ± 2.58		16.13 ± 2.49		
 ≥60 years 	14.83 ± 2.36		15.83 ± 2.49		
Weight (in Kg)	15.40 ± 2.71	0.511^	16.01 ± 2.84	0.440^	
Monthly Income		0.054^		0.030^	
• <5000	14.90 ± 3.08		15.65 ± 3.04		
• 5000 - 100	000 15.06 ± 2.61		15.34 ± 2.68		
• >10000	16.32 ± 2.05		17.05 ± 2.47		
First Hospital Visit		0.124‡		0.294‡	
• No	15.68 ± 2.47	_	16.16 ± 2.64		
• Yes	14.53 ± 3.25		15.57 ± 3.41		
Emergency Visit in the last 2 weeks		0.085‡		0.024‡	
• No	15.69 ± 2.40		16.35 ±2.45		
• Yes	14.00 ± 3.66		14.38 ± 3.95		
Hospital admission in the last month		0.027‡		0.622‡	
 No 	15.46 ± 2.62		15.96 ± 2.87	1	
• Yes	14.90 ± 3.50		16.45 ± 2.65	1	
Difficulties in diet		0.416‡		0.724	
 No 	15.95 ± 2.46		16.50 ± 2.64		
• Yes	14.53 ± 2.89		15.24 ± 3.01	1	
Difficulties in takin	g medication	0.809‡		0.521‡	
• No	15.64 ± 2.79		16.30 ± 2.94		
• Yes	14.91 ± 2.51		15.42 ± 2.57		
Comorbidity		0.051‡		0.120‡	
• Yes	15.36 ± 2.75		15.96 ± 2.87		
• No	16.50 ± 0.57		17.50 ± 1.29	1	
		1	Theat	ANOVA	
			I-test Ŧ	ANOVA	

Patient Reported Outcomes for Physical and Mental Health



The Significance of Fostering Cross-National Sharing of Health Information Management Strategies for Infectious Disease Management

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Overview

Over the years, cross-national sharing of ideas, strategies, technology across geographic divides has benefited several countries in several aspects of life. This cross-national sharing approach was born out of the need to support countries still developing in a particular field so as to collectively address a global challenge. For instance, in the field of medicine, vaccines, most of which were discovered by several scientists in developed countries have been recognized as a major factor that led to the reduction of newborn, infant and child death rates globally, but more significantly in developing countries where these mortality rates have been more severe.

Even though cross-national sharing has advanced in several fields such as medicine, yet progress is dangerously slow in the health information management (HIM) field especially in the context of infectious disease HIM in developing countries. This reality has dire consequences for both the deprived developing country as well as other developed countries known to possess advanced HIM strategies. For instance, during the 2013 – 2016 Ebola virus disease (EVD) pandemic the non-availability and increased demand for data to understand the dynamics of the virus as well as provide health care for infected patients contributed to the slow and uncoordinated response experienced during the early months and years of the pandemic. The weak health information systems (HIS) infrastructure, depleted health care personnel, the poor implementation of existing HIM protocols contributed to the difficulty faced to withstand the magnitude of the pandemic in Liberia, Guinea and Sierra, leading to the deaths of over 11,000 people. Developed countries such as the United States and the United Kingdom were equally not spared from the EVD pandemic, but their advances in HIM may have contributed to the swift and applauding response which prevented several deaths.

This reality demonstrates the impetus of fostering a cross-national sharing of HIM strategies to developing countries to prevent and reduce the magnitude of any future EVD pandemic. Global actors, HIM experts in developed countries, policymakers and key stakeholders in developing countries, need to come together to discuss how advances in HIM strategies can be extended and shared to developing countries so as to avert future global events such as EVD. These stakeholders can achieve this, by conducting HIM assessments to identify contextual challenges, then proffer evidence-based and context-specific HIM strategies and apply cross-national ideas, strategies, technology to help support local approaches to improve developing countries HIM strategies. Appropriate technology and skill transfer should be encouraged as well as simulations to help determine the resilience and effectiveness of the improved HIM strategies in the event of global events such as infectious disease pandemics. Tested and successful HIM strategy models should be shared and replicated amongst other developing countries.

Eventually, not only will cross-national sharing of HIM strategies to developing countries improve their HIM processes, but it will also bring them at par with their developed country contemporaries; thereby ensuring global health security as well as ensuring the preservation of human lives in the event of global infectious disease pandemics.

The Satisfaction And Utilization of 937 Telephone Health Services in Saudi Arabia: Cross-Sectional Survey Study.

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Background

The Ministry of Health (MoH) aims to improve the quality of care and improve the access to healthcare services, as it is clearly mentioned in one of the key goals of the kingdom vision 2030. Thus, in 2012, MoH introduced a telephone health service number 937. Until now, and based on the literature review, there is no evidence shows the population awareness and level of use of this service.

Objectives

- 1. To measure the level of awareness, utilization and satisfaction of 937-telephone health service in Saudi Arabia.
- 2. To examine the association of demographic characteristics and the level of awareness, utilization and satisfaction.

Method

Quantitative cross-sectional approach was applied using online questionnaire distributed to the Saudi Arabia's general public. This questionnaire was adopted from the literature, modified and validated within the study context.

Result

A total of 1303 questionnaires were completed. The majority of respondents were female (79.4%) and from the eastern region (67.8%). Only 258 respondents reported that they are using this telephone service, while 601 respondents reported that they were aware of the service. For those who were using this service, (48.5%) were very satisfied with the service and (39.5%) were quite satisfied. Age, city, nationality, level of education and respondents having children were significantly associated with awareness and utilization, while only gender was associated with the satisfaction.

Conclusion

After 7 years of launching the service, the level of awareness and utilization still low, although those who are using this service appear to be very satisfied. So, raising the awareness of 937 service and its benefits through proper advertisements would positively improves the healthcare delivery in Saudi Arabia.

Utilization of EHR in HIM Education: Use of Virtual Lab to Enhance Workplace Competencies

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Overview

Across the world, data collected from Electronic Health Record (EHR) systems that work efficiently has been a core component of improved patient outcomes. Since January 2016, Health Information Management Program (HIMP) and information technology department at the Ministry of Health conceived the idea of a Virtual Lab to act as a training tool. This Virtual Lab facilitates training of Oman's future HIM workforce. A locally developed EHR system known as Alshifa is in use across Ministry and non-Ministry of Health institutions in Oman. Alshifa forms the base training system in the Virtual Lab and holds real but anonymized health data emanating from actual patient encounters. By looking at oversights made in the capturing of patient data and auditing this data, HIMP seeks to provide training aimed at improving the quality of data collected across the entire information life cycle. We describe the setup of this Virtual Lab to provide a safe learning environment where students are instructed on local and international best practices in managing health information through contact with experienced instructors.

Australian Emergency Care Classification (AECC) Version 1.0

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Overview

Independent Hospital Pricing Authority (IHPA) is an independent government agency established by the Australian federal government. IHPA undertakes reviews and updates of existing classifications and is also responsible for introducing new classifications for those service categories without an existing classification. This is an important role as having nationally adopted classifications for services provided in public hospitals will allow Australian governments to provide funding to public hospitals based on the activity based funding (ABF) mechanism. The Australian Emergency Care Classification (AECC) has been developed for ABF in Australian public hospital emergency departments. IHPA has developed an emergency department short list (ED Short List) based on aggregation of ICD-10-AM codes, which forms the basis of the diagnosis information used by the AECC. The classification makes greater use of diagnosis over its predecessor, which improves the utility for clinicians and research. The AECC was developed using a combination of statistical analysis and clinical input. The statistical analysis was of activity and cost data from a sample of emergency departments across Australia.

The AECC has a three-level structure:

- Level 1 splits episodes into those where visit type/ episode end status values are used as the main classifying variables and those where diagnosis is used. Where visit type/ episode end status values are used, three end classes are created—'Not attended by a healthcare professional', 'Dead on arrival' and 'Planned return visit'. Other emergency care episodes proceed to the next level, categorised by diagnosis.
- At Level 2, episodes are clustered into major clinical conditions managed in emergency care settings. The groups of diagnoses are called 'emergency care diagnosis groups' (ECDGs). They are based on the ED Short List codes..
- At Level 3, ECDGs are partitioned into end classes of different levels of complexity, reflecting cost. Complexity splits are based on a score assigned to each episode, which is calculated using the patient's age group, episode end status, triage category, and transport (arrival mode) mode.

The AECC has 181 end classes, which includes end classes not classified by diagnosis (pre-ECDG) and end classes used for missing or invalid data (error classes).

The AECC uses variables that are currently reported through national minimum data sets. It has also been designed so that other measures able to estimate complexity can be incorporated as they are introduced to national collections. Including outliers, the AECC achieves a predictive (cross-validated) R-squared value of 0.301. The predictive R-squared value increases to 0.350 when outliers and episodes where the emergency department diagnosis is missing or not mapped to a short list code are excluded. This means that when applied to new data, the classification is likely to account for 35% of variation in cost at the episode level. This will improve as cost data for emergency care improves. Also, the classification will account for a much higher proportion of variation in costs when measured at the emergency department level (in contrast to the individual episode level).

Table 1: Number of splits per ECDG, AECC V1.0

No. of splits	No. of ECDGs	No. of end classes
AECC end classes		
No split	6	6
1 split (2 end classes)	26	52
2 splits (3 end classes)	32	96
3 splits (4 end classes)	5	20
Pre-ECDG	-	3
Error classes		4
TOTAL	69	181

The Necessity of Mobile Technologies in Medical Education

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Introduction

Mobile technologies have a potential impact on improving learning in medical education. In order to lecturers need to be aware of the basic and theoretical concepts of these technologies in educational settings. Providing a framework for the use of mobile phones in medical education will enhance students' academic knowledge and provide the appropriate situations for learning.

Objectives

The goal is to help medical lecturers to use these concepts and technologies at all levels of medical education to improve the education of medical and healthcare personnel, and ultimately contribute to improved patient healthcare.

Method

This study begins by reviewing some of the technological changes that have occurred in recent years and then examines the theoretical basis (both social and educational) for understanding mobile technology usage. This study ends with a brief look to the future.

Result

In this study, applicable terms, concepts and content, scientific and practical advisories, relevant and significant needs, and related educational resources are mentioned.

Conclusion

This study was conducted to create a framework and guideline for medical education. Moreover has shown the progress through a hierarchy of institutional, lecturer and learner needs, identifying issues, problems and solutions for the effective use of mobile technology in medical education.

The Use of Virtual Reality in Healthcare

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Background

Virtual Reality (VR) has been increasingly becoming a newly evolving field of technology and has used for health and education. It has provided an immersive environment that enables users to have modified experiences of reality and improved healthcare quality.

Objectives

The aim of this systematic review is to provide an overview of all the studies that used VR intervention in healthcare and analyze their main use of VR.

Method

This study was a systematic review. a comprehensive search of articles was conducted to identify publications addressing the use of Virtual reality in healthcare in journals published between January 1, 2012 - and March 31, 2019. Databases including IEEE, Web of Science, Science Direct and PubMed were used in this study.

Result

A total of forty articles met the inclusion and explored use of VR on healthcare, most of the studies, showed the use and application of virtual reality on treatment (such as psychological diseases, pain management, brain damage, rehabilitation, disability, obesity, neurologic dysfunction), training and skill development for healthcare provider.

Conclusion

This systematic review found that the use of VR applications has a positive impact on healthcare outcomes. Application users were more satisfied with using VR applications to manage their healthcare in comparison to users of conventional care.

Clinical Documentation Improvement - Offering Positive Impact to Organizational Success

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Overview

This presentation would seek to define the function of Clinical Documentation Improvement and outline how these efforts can positively impact an organizations financial success, as well as define quality of care provided. Clinical Documentation Improvement efforts impact direct reimbursement for the care provided, quality scores and value based purchasing, observed to expected mortality and complications. Clarifications obtained through CDI efforts will impact reporting of patient safety indicators, mortality scores and readmission rates. We will provide examples of how these efforts work to improve organizational success within the United States by establishing accurate code and DRG capture, accurate capture of data and focused quality improvement efforts for organizations.

International Mortality and Morbidity Coder Certification Project

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Overview

The International mortality and morbidity coder certification project began to be developed in 2004 by WHO-FIC(Family of International Classification) Education Committee(now the Education and Implementation Committee, EIC), in collaboration with International Federation of Health Record Organizations (now IFHIMA).

Purpose

The purpose of the project was to produce internationally comparable high quality mortality data, to promote the importance of mortality data, and to improve the professional status of coders.

Discussion

Since the first international certificate exam for mortality coder/trainer in 2007, seven exams in five countries were conducted by which 73 coders and 25 coder/trainers were certified including six recertified coders in 2018. In 2015, WHO-FIC EIC and IFHIMA agreed to collaborate more closely and awarding the certificate to the successful candidates by the president of IFHIMA. From 2010 to 2012 international morbidity coder exams were conducted in 6 countries with 293 applicants. The purpose of the morbidity coding exam was to assess coders' ICD-10 knowledge and skills in using ICD-10 classification and to identify the points that needed attention in the training program.

Conclusion

Even though the international exam for certificate the mortality coders and the international morbidity coding exam had not been conducted since 2016 and 2012 respectively, EIC decided to maintain the project as one of its tasks. It agreed to the development of an exam to certify morbidity coders as a long-term objective, to continue to make the exam to be available for individuals to assess their own abilities, but not tied to any certification, to continue the promotion of the exam, to explore development of an on-line exam for use with the web-based training tool, to continue collecting exam questions from many countries so that the project could be continued with ICD-11 in the future. To produce internationally comparable mortality data, WHO requests using the latest version of ICD for mortality coding regardless what version the country is using for morbidity coding. To produce high quality and globally comparable mortality data WHO-FIC EIC and IFHIMA will continue to certify mortality coders by the international coding exam. This project can influence greatly the quality of coded data globally and the interest and participation by IFHIMA member countries is needed for it to be successful.

Role of HIM in Value Based Care

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Introduction

The world is moving towards the WHO goal of "Health for All". Health ministries are engaging to provide basic health care through government and private health care facilities, continuously reengineering the healthcare delivery system. Providing access to health care by collaborating with private healthcare facilities, engaging insurances for managed care practices and promoting healthier lifestyles. With the globally growing ageing population and the rise of chronic diseases, the current focus is to contain costs while improving patient outcomes.

Discussion

Value Based Care and its advantages - Value Based Care (VBC) is a model in which providers both hospitals and physicians, are paid based on patient health outcomes as against the traditional fee for service. The "value" in VBC is derived by measuring health outcomes against the cost of delivering those outcomes. In essence, it is quality over quantity. This results in improving the quality of healthcare, reducing the cost, and ultimately leading to a healthier society.

Adoption to Value Based Care - The proliferation of value-based healthcare is shifting the way physicians and hospitals provide care. This model stresses on team-oriented approach to patient care, sharing of patient data for care coordination and measuring outcomes easily. Other important areas to focus are: patient safety - to reduce the adverse events, adopting evidence based care protocols and clinical pathways, and improving the clinical documentation in order to have a true reflection acuity of care rendered and clinical outcomes.

Role of the Physicians - Under the VBC payment, physicians continue to treat according to clinical guidelines. However, clinical documentation plays a pivotal role in supporting clinical justification for the services rendered and meet utilization review requirements which were not a major focus in the past.

HIM Role in Value Based Care - The traditional role of HIM to manage the medical records accurately, timely and securely extends to managing the quality of clinical documentation as the downstream impact of data errors extends further into patient care, quality, and outcomes. CDI specialist, a part of the HIM team, work closely with physicians to observe workflow, processes, their documentation pattern, and audit the documentation. They suggest, how physicians could capture additional diagnoses that would better show true patient acuity. Clinical coders meticulously review the documentation to correlate it with the medical necessity of the services rendered, query the physicians for accurate coding. Moreover, data analytics continues to grow in the HIM world. Good data helps in a holistic view of patient care journeys, helps to monitor trends, implementing integrated workflows and technologies, facilitating seamless care experiences and aligns towards VBC. HIM managers should be equipped with strong leadership and communication skills, particularly in changemanagement, to ensure a smooth transition to VBC.

Conclusion

The success of the VBC is two pronged- providing best possible holistic care by utilizing international best practices by a well-experienced clinical team and, a strong HIM leadership supported by CDI, coding and data analytics teams which utilizes metrics to minimize the health care cost while optimizing quality.

A Mobile Diabetes Gamification Approach for T1 Diabetic Patient

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Background and Objectives

Saudi Arabia is considered to have one of the highest rates of diabetes worldwide. It is ranked as the seventh country worldwide and the second in the Middle East. One of the approaches that is recently used in the healthcare sector is the gamification. Gamification is an approach of applying the game elements term in non-gaming context. As 84.4% of Saudi population use the internet and high rate of population suffer from diabetes, engaging the gamification concept with diabetes will enhance the self-management. However, the concept of gamification is relatively new in Saudi Arabia, and there is no applications and studies that support the use of gamification approach. Therefore, the objective of this study is to design a mobile application using the gamification approach for Type 1 (T1) diabetic children.

Methods

A descriptive quantitative research approach was used to fulfill the study objectives. The study investigated the characteristics and needs of T1 diabetic children through a cross-sectional design. Furthermore, a questionnaire was developed and distributed among 68 of children's guardians to obtain the information needed to design the application.

Result

An application was designed for the sake of managing T1 diabetic children's condition. Thus, the application was designed based on reviewing the commercial applications features, scientific papers of gamification in diabetes, and the information collected from the questionnaire. The designed application theme is taking care of a character. The application features are; reminders, notifications, and three mini games (different types of physical activities which are running, swimming and football) for challenging friends. In addition, the rewarding principle is points, levels and leaderboards.

Conclusion

The results of the reviewed studies agreed that the gamification approach has an effective impact in improving the self-management of T1 diabetic children. Since the designed application of this study depends on the gamification approach, it will hopefully encourage the diabetic children to best manage their condition by themselves. The application is expected to enhance the frequency of glucose readings, practicing physical activities and healthy eating habits. Nevertheless, further work needs to be conducted to implement the designed application and conduct clinical trial to determine the application effectiveness.

Discovering the Potential of Australia's First Lifelong Person-Centric Health Data Set

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Description

The My Health Record (MHR) is the first national person-centred digital health record in Australia. The Australian Institute of Health and Welfare (AIHW) will become the data custodian for the secondary use of MHR system data once amendments to the My Health Record Act 2012 commence. The Framework to guide the secondary use of MHR system data released in May 2018 outlines how data in the MHR system may be used for research and public health purposes while preserving the privacy of individuals and security of the system. Using MHR system data for secondary purposes will open a range of possibilities to fill data gaps and allow the health sector to better understand how Australia's health system is used, as well as gaining valuable insights into health outcomes for patients. To enable us to undertake this role, AIHW is examining the quality of the data in the MHR system to ensure fit for purpose data is available and researchers are well supported in their assessments of data requests. As of 31 January 2019, the participation rate for MHR is 90.1 per cent, with a national opt-out rate of 9.9 per cent. There are over 15,560 health care provider organisations registered, including general practitioners, pharmacies, pathology and diagnostic imaging services. The MHR system is composed of many types of clinical documents.

In order to realise the potential of the MHR system data, AIHW has developed a data assessment plan which applies standardised, validated methodologies to establish a common understanding of the strengths and limitations of MHR system data. This plan has been structured intro three stages – discovery, development and implementation. As part of the discovery stage, a MHR clinical document data dictionary has been developed to accurately describe and define the data collection. Additionally, an environmental scan has been undertaken to provide the necessary specificity and ensure an evidence-based approach to understand the potential use-cases and research questions to be explored.

Reliable research demands data of known quality. This can be challenging for use of electronic health record data where data quality issues are often complex. An approach that considers the different data quality dimensions can provide a comprehensive understanding of whether MHR system data is 'fit' for specific secondary uses, is valid and generalisable¹. The AIHW's Data Quality Management Framework, identifies five domains when considering quality including, timeliness, accessibility, interpretability, relevance, accuracy and coherence. It will be important to develop a full understanding of the interrelationships and data characteristics as they relate to data quality.

The MHR system is an enduring data asset that can help guide health monitoring and performance reporting, policy development, health services planning and research. There are expectations that this new data asset will answer questions that cannot be explored using existing data sources.

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Auditing the Past, Improve the Present and Plan the Future

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Overview

In early 2016 Pavilion Health (PH) was engaged to assess the validity of data underpinning the health activity data by an Australian health service. This was achieved by undertaking data quality, targeted audit, and process/systems reviews. Twenty recommendations were endorsed by the Executive of the health service to improve the quality of the coded data including implementing a governing coding advisory committee, providing targeted education to coders and clinicians, and establishing an Education and Training Assessment (EATA) process. A workshop was held with key stakeholders to consider the main levers to improving data quality.

Method

Auditing - 300 records were selected each month based on their probability to not represent true clinical activity. The sampling algorithm "learns" from actual audit results. Average DRG change rate of targeted sample 1 in 3 records. Audit insights from the results:

- On site education seminars conducted for one day per month for all clinical coders
- Pavilion Health auditors developed nine (9) educational seminars e.g. Introduction ABF/ ABM /DRG's / AR-DRG (then) V7.0, Respiratory, Renal etc.
- Clinicians were invited to update coders on medical science issues that affect clinical coding A monthly Coding Advisory Committee was established to discuss all clinical coding issues including workforce.

Education Measurement - A clinical coding assessment was developed to assess coders' level of competency and develop an individual education program for each participant. The EATA tool included:

- 35 scenarios covering majority of specialities, ranging from moderate to challenging complexity levels
- Comprehensive assessment took one full working day taken from expected throughput for one day in the life a reasonably experienced clinical coder
- EATA marked coding accuracy / DRG variance rates calculated per clinical coder per scenario and total
- Clinical coders were categorised into competency bands from the results IF WE HAD OUR TIME AGAIN
- Conduct comprehensive assessment at the commencement of the project for baseline measurement of overall clinical coding skill
- Develop very short scenarios for clinical speciality to include only codes from that speciality and EATA's be conducted after each corresponding speciality education session

Conclusion

- Fully comprehensive, peer reviewed clinical coding assessment
- Auditing findings and insights provided valuable educational opportunities delivered for the specialities with the greatest degree of clinical coding inaccuracy and DRG variance

Future

- Clinical coding undertaken by each coder in terms of their current skill banding "right episode allocated to right coder".
- Speciality coding education for clinical coders and trainees with a lower banded skill mix to improve clinical coding accuracy
- Introduce and develop further clinical concepts

- Improve correct DRG allocationProvide a sound basis for clinical coder career pathway progression

Building Your Own Workforce

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Overview

This paper has been written to give an over view of recruiting, training and career paths for Clinical Coders (CCs) and Health Information Managers (HIMs) in rural and regional areas of Australia. To date I have had multiple advertisements for vacant positions in my Local Health District with either no respondents or unsuitable applicants. I am now looking at other ways to keep the current workforce engaged and building the workforce for future needs which include the retirement of older staff members. These vacancies and the difficulty with recruiting CCs and HIMs are in line with The Coding Workforce Shortfall report from Australian Institute of Health and Welfare (AIHW) November 2010 and the findings in the Health Information Workforce Summit: CEO Strategy update October-November 2015.

To ensure the success of the following strategies they must be facilitated by a centralised management team and support from the Executive of your district. The plan I put forward for consideration for CCs and HIMs workforce are divided into four (4) sections:

- 1. Recruitment strategies;
- 2. Build our own workforce;
- 3. Clinical Coder / Health Information Manager Career Pathways and;
- 4. Future Health Information Careers.

Comparing Peri-Operative Outcomes and Costs of Bariatric Surgery in the Netherlands

Bart van Wagensveld, Martijn van Wagensveld

Objective

To develop a feasible model for monitoring shortterm outcome of clinical care trajectories for hospitals in the Netherlands using data obtained from hospital information systems for identifying hospital variation.

Study Design

Retrospective analysis of collected data from hospital information systems combined with clinical indicator definitions to define and compare short-term outcomes for three gastrointestinal pathways using the concept of Textbook Outcome.

Setting

62 Dutch hospitals.

Participants

45 848 unique gastrointestinal patients discharged in 2015.

Main outcome measure

A broad range of clinical outcomes including length of stay, reintervention, readmission and doctorpatient counselling.

Result

Patients undergoing endoscopic retrograde cholangiopancreatography (ERCP) for gallstone disease (n=4369), colonoscopy for inflammatory bowel disease (IBD; n=19 330) and colonoscopy for colorectal cancer screening (n=22 149) were submitted to five suitable clinical indicators per treatment. The percentage of all patients who met all five criteria was 54%±9% (SD) for ERCP treatment. For IBD this was 47%±7% of the patients, and for colon cancer screening this number was 85%±14%.

Conclusion

This study shows that reusing data obtained from hospital information systems combined with clinical indicator definitions can be used to express short term outcomes using the concept of Textbook Outcome without any excess registration. This information can provide meaningful insight into the clinical care trajectory on the level of individual patient care. Furthermore, this concept can be applied to many clinical trajectories within gastroenterology and beyond for monitoring and improving the clinical pathway and outcome for patients.

Revising HIM Curriculum to Remain Relevant in an Evolving Healthcare Landscape

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Overview

The health information management profession cannot remain relevant to the healthcare industry if it does not evolve to meet the industry's needs and expectations. Changes in technology, legal requirements, public policy demands, and healthcare business models are occurring at a rapid pace. The HIM profession and the education of future HIM professionals must adapt not only in response to but in anticipation of these changes, which show no signs of slowing. AHIMA conducted market research which made it clear that the current HIM academic and workforce framework needed shaking up, and in response, AHIMA developed the HIM Reimagined initiative.

Method and Findings

Because AHIMA's Council on Excellence in Education (CEE) was created to enhance the HIM profession and plan for the future through education, it was charged with the responsibility for developing new curricula competencies to meet the goals of HIM Reimagined. The CEE then established a curricula workgroup. The workgroup developed new, broad-based curricular competencies to allow for flexibility and account for regional differences related to the employer needs of HIM programs. Each competency has a Bloom's taxonomy level assigned to it to provide a minimum assessment level. Curricular guidance documents were developed by a Curricular Guidance subgroup to assist educators in creating assessments to satisfy each of the competency requirements. At each stage of curricula development, feedback was sought from AHIMA's membership and the education community.

Conclusion

AHIMA continues to provide quarterly updates on the status of the HIM Reimagined Initiatives and curricula development. The presentation will highlight the results of the AHIMA market study, detail the activities of the CEE Curricula Workgroup, the Curricular Guidance subgroup, and Indiana University Northwest's HIM Program plan for implementation of the new competencies. Attendees will come away with a tool for tracking competencies that may be required by their own HIM curricula oversight bodies.



020. Next you will see 2 short lists of HIM skills and competencies that some have identified as necessary to align with their future healthcare information management needs. For each skill, please indicate the education level you feel would best prepare a hiring candidate with that particular skill.

AR-DRGs: What's New in Version 10.0

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Overview

The Independent Hospital Pricing Authority (IHPA) is responsible for the development of the Australian Refined Diagnosis Related Groups (AR-DRGs) classification. AR-DRGs group together treatments and services provided for admitted acute care to enable hospitals to be funded for these services using Activity Based Funding (ABF) arrangements. AR-DRG Version (V) 10.0 is the first version developed in-house by IHPA. The AR-DRG classification is underpinned by the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM), the Australian Classification of Health Interventions (ACHI) and the Australian Coding Standards (ACS); collectively known as ICD-10- AM/ACHI/ACS.

All public and private hospitals in Australia use ICD-10-M/ACHI/ACS and AR-DRGs to classify admitted acute care and the classifications are updated every two years to ensure they are fit for purpose and remain clinically current. Following assignment of ICD-10-AM and ACHI codes episodes of care are assigned to a DRG in the AR-DRG classification. AR-DRGs group episodes of care with similar diagnoses and intervention codes.

The AR-DRG classification consists of approximately 800 end classes, with each admitted acute episode of care being classified based on diagnoses, interventions and other routinely collected data such as age, sex, mode of separation, length of stay, newborn admission weight and hours of mechanical ventilation. While the AR-DRG classification is instrumental to ABF it is also used for many other purposes including performance management, benchmarking, epidemiology and research. It is anticipated that AR-DRG V10.0 will be released in mid-2019 and used to price admitted acute episodes of care in Australia from 1 July 2020.

This workshop will cover the basic concepts of how the AR-DRG classification works, key refinements undertaken for V10.0 and will provide insight as to how the classification interacts with other classifications and digests clinical information to inform the final AR-DRG end classes.

Healthcare Finance and Value-Based Healthcare in Developing Countries

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Introduction

The developing countries with huge population to serve, high healthcare expenses and great demand for healthcare services with many economic, social, cultural and other inherited problems, provide effective qualitative healthcare services to all the inhabitants alike is huge challenge for any nation. With this goal, value-based-finance for healthcare is another experiment. Health economics should address most of the issues of both technologically advanced and less privileged nations.

Objective

Providing healthcare delivery in two ways; firstly applying health economics value-based finance for developing and maintaining infrastructure and secondly providing finance-value-based healthcare to people.

Healthcare system

Being complex, there are many complexities such as infrastructure, finance, highly trained human resource, dealing with intricate health and modern technologies, sophisticated medical instruments for diagnostic and therapeutic purposes. The medical field is dynamic, with highly qualified trained personnel such as doctors, nurses, paramedical and allied support service staff engages at primary, secondary and tertiary care level work to deal with curative, preventive, rehabilitative, promotive and palliative aspects. Another aspect is the political system, economical status, living environment, culture, race, religion, and inherent habits are contributing factors for healthcare programs. One has to understand all aspects, and then appropriate steps could be initiated to accomplish the set objectives

Healthcare Economic Research

Careful studies of diagnoses, course of treatment for curative cases, and approaches for preventive measures that can optimum their impact on health wellbeing. The technologies and methods that proved good could be applied, and those showed negative results, need modification or avoiding applying those methods. Health economy is at all the levels of healthcare delivery system from higher level to lower.

Health Insurance

As illness of anyone's current and future health is unpredictable, similarly demand for healthcare is also uncertain. Due to this uncertainty, is the birth of insurance mechanisms whereby covered individuals make regular payments to insurance companies; in the event of healthcare demand, to cover the health expenses or reimburse the payment made. In case of third-party payment mechanisms have raised the total consumption of medical resources to unprecedented levels.

Value--based finance healthcare (VBFH)

It means the finance is spent on the basis quality or quantity of service. Pay-for-performance is aimed at improving the quality, efficiency, and overall value of healthcare; payments on the bases of quality of care, it is also called the bundled payment is also known as episode-of- care payment. The Fee-for-service (FFS) is a payment model where services are unbundled and paid for physicians to provide more treatments because payment is dependent on the quantity of care, rather than quality of care.

Conclusion

With the use of VBFH coupled with the EHR comprehensive healthcare delivery is possible to the population. USA and UK are although leading in VBFH, are yet to move fast, while for Developing countries first priority is to minimum care to all; VBFH is a long way to accomplish, however, some are already in the process in implementation, while attempts are being made by other nations.

The Impact of Electronic Health Records on the Duration of Patients' Visits: Time and Motion Study

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Introduction

There has been an effort to improve the quality of care at Primary Healthcare Centers (PHCs). The adoption of electronic health records (EHRs) is a way to improve PHCs due to the way that EHRs impact quality of care, reduce duplicate tests, and help to better coordinate care. Despite its benefits, the EHR implementation can result in workflow changes if the system is not studied and designed properly. Workflow changes can have some unintended consequences including reducing productivity, increasing wait times, and less patients- physicians interaction. The amount of time that patients spend in waiting area before consultation is often a strong predictor of patient satisfaction, willingness to come back for a return visit, and overall experience.

Objective

The majority of prior studies about the impact of EHR on time focused on single aspects of patient visits or user (physicians or nurses) activities. The impact on patients' time during the different aspects of the visit is rarely investigated. The goal of this study is to evaluate the impact of EHR systems on the amount of time spent by patients on different tasks during a patient visit to PHCs.

Methods

A time and motion observational study was conducted at four PHC centers, half using an EHR system and the other half using a paper-based system. Each group had one center in a metropolitan area and the other in a rural area. A longitudinal observation was conducted after one year and again after two years of EHR implementation.

Results

The results of this study showed no significant difference in the amount of time spent by patients on different tasks between the EHR and paper based groups. There was a significant difference in the amount of time spent on tasks based on location. The longitudinal assessment of the EHR based PHC centers showed significant differences in some tasks which cloud be attributed to the introduction of new functionalities.

ABSTRACTS: WORKSHOPS

Developing a health information workforce capacity framework

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Introduction

With the heightened emphasis on data and technology to meet the demands of an evolving national and global health system, there has been an increased focus on the health information workforce (HIW). The HIW has been define by Butler-Henderson and Gray (2018) as roles where the "primary function is related to developing, maintaining, or governing the systems for the management of health data, health information, or health knowledge". Whilst the emerging empirical literature about this workforce is providing a clearer picture, there is growing need for a framework for building workforce capacity to improve health services performance.

Workshop Aim

The aim of the workshop is to explore our proposed framework and enable participants to share their insights into what is needed in the HIW to improve health services performance. Our questions are:

- 1. In the era of digital health, what is the most widely acceptable and recognisable way to identify a health professional who is a specialist in health information?
- 2. How does the existing HIW need to innovate what it knows and what it does, in the era of digital health?
- 3. How can we measure the impact that a health information professional (or the absence of one) has on the performance of a health service or system?

Workshop Activities

Firstly, we will share with participants our proposed framework, including the underpinning theory and empirical research. Then, using a Knowledge Café approach, participants will break into natural groups (as opposed to a focus or nominal group approach) relating to one part of the framework. The use of a natural group structure is to enable participants to have a voice in the refinement of the framework as they share their insights. Participants will have an opportunity to change groups should they wish to engage in a different part of the framework. The discussion at each table will be facilitated by one of the authors, who will capture the discussion on paper.

Workshop Outcome

Following the workshop, the information shared by participants will be included in a larger body of work refining the framework, with the intention to publish the framework. Therefore, informed consent will be sought from participants at the start of the workshop to utilise the information shared in the group discussions. This workshop creates an opportunity for health information professionals from across the globe to contribute to a potentially transformational framework for our workforce.

Reference

Butler-Henderson K & Gray K (2018) Australian health information workforce census, http://www.utas.edu.au/health/projects/hiwcensus.

Clinical Documentation Improvement: How To Get There

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Overview

Inadequate clinical documentation is undermining the safety, quality and communication within Australia's public and private hospitals. Poor documentation also fails to reflect the complexity of the patients being treated and therefore robs facilities of their deserved revenue.

This workshop aims to equip Australian and global Health Information Managers with the foundations to implement a Clinical Documentation Improvement (CDI) program.

The workshop explores why Australian clinical documentation is in its current state, the size of the problem and the implications for Health Information Managers.

Holistic solutions relevant to both Australian and international Health Information Managers are provided that are built on experience from numerous transformative success partnerships from right across Australia.

Advancing Privacy in Developing Nations: It's a Journey

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Introduction

Managing the privacy and confidentiality of health information has become increasing complex and an even high priority given the growth of digital data. Many countries or regions such as the US, Canada, Australia and the European Union (EU) have mature principles and practices. However, most countries in the world are just establishing or maturing their privacy regulations or principles. This workshop will overview the principles used by select countries, lessons learned, and explore suggestions that less mature nations or regions can apply. Countries just developing privacy and confidentiality principles have an opportunity to not repeat some of the mistakes or pains that other countries have experienced.

Objectives

- Learn about privacy regulations and policies around the world and how these have originated and matured
- Learn how to begin formulating privacy needs that address basic principles, challenging area in healthcare, and lessons earned
- Receive guidance on how to get started in developing privacy practices and regulations

Methods

The presenters conducted an online survey of IFHIMA member nations to determine relevant content related to the various states of privacy practice and any perceived needs related to privacy. The results of the survey guided the authors in developing lecture content, workshop activities, and points of discussion.

Results

Survey results revealed that nearly half of the surveyed members ranged from not having any privacy laws in place to having legislation in place but not being fully implemented. Additionally, significant barriers to health information privacy were shown to be a lack of education regarding healthcare privacy (50%), a lack of resources to address it (22%), and the lack of laws surrounding healthcare privacy (18%).

Discussion

The survey results guided the workshop authors in developing the objectives of the workshop, lecture topics and three activities. The objectives for the participants will be to learn about privacy regulations and policies from around the world, to learn how to begin formulating privacy needs that address basic principles and challenging areas on healthcare, and to receive guidance on how to get started in developing privacy practices and regulations. Activities and discussion will surround privacy and trust in healthcare, balancing public health against individual privacy, issues related to stigma surrounding specific diagnoses or tests, establishing privacy practices with cultural alignments, and getting started in operationalizing existing privacy laws or advocating for new privacy laws.

Conclusion

Privacy is an important global topic that impacts the practice of health information around the world. IFHIMA will release their new whitepaper "Privacy of Health Information, an IFHIMA Global Perspective" at the IFHIMA 19th Congress in Dubai. This workshop is specifically focused on the practices, needs and challenges of privacy management in the developing nations. Workshop goals are to provide information and tools that developing nations can implement via policy and procedure creation, advocacy initiatives, and public policy or lawmaking.