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ICD-10 Implementation: What Impact did it have on Medical Facilities Across the Country?

Tammy Collins
University of Tennessee Health Science Center
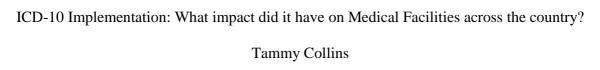
ICD-10 Implementation: What impact did it have on Medical Facilities across the country?

Tammy Collins

Director Health system Outpatient Coding, UNM Hospitals

College of Health Professions

Health Informatics and Information Management

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Abstract

The Department of Health and Human Services mandated that all Health Insurance Portability and Accountability Act (HIPAA) covered entities implement The International Classification of Diseases tenth edition (ICD-10) on October 1, 2015. The United States was the last industrialized country to move to the new coding system. A survey of HIM professionals was conducted across the United States to determine what efforts they experienced during the implementation of ICD-10; outline a timeline of implementation efforts for the transition of ICD-9 to ICD-10; uncover the major expenses organizations incurred through the implantation process; define training initiatives; and disclose the financial impact the transition caused. The response rate for this survey was low; however, the data collected yielded evidence that many organizations experienced similar implementation efforts regardless of the size or type of facility.

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Chapter 1

Introduction

The World Health Organization also known as WHO was created in April of 1948 and was an idea set in place by the United Nations to establish a global health organization. WHO developed The International Classification of Diseases (ICD) and ICD "is the standard diagnostic tool used for epidemiology, health management and clinical purposes. This includes the analysis of the general health situation of population groups" (World Health Organization, n.d., p. 1). ICD shows the incidence and prevalence of diseases and other health problems. It is used by Physicians, Nurses, Researchers, Health Information Management Departments, Policy Makers and Insurance Companies (World Health Organization, n.d.). ICD-10 is the tenth revision and replaces the outdated ninth version which was first implemented in the United States in 1979. The modifications represented in the tenth version show significant improvement over the ninth version. "Specific improvements include: the addition of information relevant to ambulatory and managed care encounters; expanded injury codes; the creation of combination diagnosis/symptom codes to reduce the number of codes needed to fully describe a condition; the addition of sixth and seventh characters; incorporation of common 4th and 5th digit sub classifications; laterality; and greater specificity in code assignment. The new structure will allow further expansion than was possible with ICD-9-CM" (Centers for Disease Control and Prevention, 2016, p. 1).

Background

The implementation of ICD-10 has been forthcoming for many years. WHO began working on ICD-10 in 1983. The completed version of the classification system took nearly a decade to finish and many countries began to adapt the new system as early as 1994 (Brouch,

2000). See figure 1 for full discloser of actual and proposed ICD-10 implementation dates. In the United States, it was first announced in 2009 that a transition to ICD-10 needed to occur. The goal was to implement the new classification system by October 1, 2013. "On January 16, 2009, the Department of Health and Human Services (DHHS) issued a final rule requiring all HIPAA covered entities, including health plans, healthcare clearinghouses, and healthcare providers, to transition to the new ICD-10-CM diagnosis coding system and ICD-10 Procedure Coding System (ICD-10-PCS) by October 1, 2013" ("ICD-10 Background," 2013, p. 1). This transition was delayed one year to October 1, 2014 and again one more year to October 1, 2015. ICD-10 was implemented in the United States on October 1, 2015.

The United States was the last industrialized country to move to the new classification system. Australia, Scotland, and Northern Ireland all implemented ICD-10 in 1998. England and Wales went live a year later in 1999 and Canada implemented a staggered transition beginning in 2001 through 2005.

Purpose of Study

The purpose of this study is to identify the initiatives Health Information Management (HIM) Professionals sustained during the implementation of ICD-10. By analyzing data from a survey of HIM Professionals, this study aims to provide a timeline of implementation efforts, disclose ICD-10 related expenses, define training efforts and show the financial impact of ICD-10 implementation. This study is not intended to show or prove that moving to ICD-10 has had a negative impact on organizations, but rather to provide a clear picture of the time and effort put forth in changing ICD's after thirty-six years.

Significance of the Study

This study seeks to add to evidence the steps involved in transitioning the international classification disease systems ninth edition to the tenth addition, furthermore disclosing the financial impact this change brought to medical facilities. This study will be valuable to HIM professionals by informing them of the efforts put forth by their colleagues during implementation and aide in future preparation of large scale projects. Specifically, this information can be used to help develop timelines, budgets and workforce needs.

Research Questions

This study seeks to show the initiatives HIM Professionals experienced during the implementation of ICD-10 and the financial impact it had on their organization across the United States.

The two specific research questions are:

- What initiatives did HIM Professionals experience during the seven years leading up to ICD-10 implementation?

- What financial implications did Organizations experience throughout the entire ICD-10 implementation process?

The analysis of the survey data will focus on implementation timelines, expenses incurred that are directly related to the project and the total financial impact organizations experienced throughout the implementation of the project. Survey data will be analyzed by computing response rates, frequencies of variables, and cross tabulations.

Description of Key Terms

ICD-10 – International Classification of Disease tenth edition

HIPPA - Health Insurance Portability and Accountability Act

AHIMA – American Health Information Management Association; National organization of

Health Information Management Professionals

HIM – Health Information Management

WHO - The World Health Organization

Chapter 2

Review of Literature

A general search of relevant literature was performed using PubMed, Google, and the American Health Information Management Association's Body of Knowledge. Relevant literature was difficult to find, so efforts for information extended into other countries that have gone through ICD-10 implementation.

Search guidelines were followed, using keywords such as ICD-10 Implementation, ICD-10 Lessons Learned, ICD-10 and Canada, and ICD-10 and Australia. The literature review sought to include articles that are relevant to ICD-10 implementation efforts in industrialized countries that are now using ICD-10 and written in English.

Findings

The articles reviewed were studies that AHIMA did on ICD-10 implementation in Canada and Australia. Both studies had similar responses to the steps that others should consider before moving forward with ICD-10 implementation even though their experiences were different.

Education – Both studies indicated the need for education. Coders will need ample education on the new code sets. They will need training in understanding anatomy and physiology as the new code sets are more detailed in nature and require a fundamental knowledge of the body. "Education is required for the following reasons: the new code structure of ICD-10 compared to ICD-9; ICD-10 requires a more detailed knowledge and understanding of anatomy, physiology, and interventions; and there are new coding standards and assumptions that are inherent in the new system" (Johnson, 2004, p. 9). "Between 1995 and 1999 the National Coding Center (NCCH) prepared education material and ran 81 courses during

130 days for 2,423 participants in all states of Australia and New Zealand. The workshops comprised "train the trainer" sessions, face-to-face workshops with clinical coders, and workshops for all users of the classification" (Innes, Peasley, & Roberts, 2000, p. 56).

System Preparedness and Upgrades – The other topic that both studies weighed heavy on was the need to ensure that all systems were evaluated for ICD-10 readiness and if not, either work with the vendors to get the systems ready and or explore the need to upgrade or change existing systems so they are compatible. System testing was mentioned as being very important as well as looking at system enhancements that could possibly aide in coder productivity. "The selection for a new abstracting system (3M) that would interface (via Meditrain expertise) with existing hospital-wide integrated system (Meditech) was made" (Johnson, 2004, p. 3). "Most recently, the NCCH completed a project to convert the classification of ICD-10-AM to a relational database. As well as providing a foundation for NCCH maintenance of the classification, the database will enable the organization to develop further electronic coding products as well as make the classification available in electronic format to users and software developers" (Innes et al., 2000, p. 55).

Other items mentioned in the literature review were to make sure that a Project Leader is identified early in the process. This individual will be responsible for developing a project timeline, coordinating communication efforts to the organization as well as ensure that the project stays on task; it was noted that preparation efforts should begin early to ensure a smooth go live. Lastly, remember to learn from others who have experienced this same implementation task.

Chapter 3

Methodology

This study is designed to disclose the implementation efforts HIM Professionals experienced during the implementation of ICD-10; outline a timeline of implementation efforts for the transition of ICD-9 to ICD-10; uncover the major expenses organizations incurred through the implantation process; define training initiatives; and disclose the financial impact the transition caused.

Research Design

A survey questionnaire (Figure 2) was developed to collect information to examine what impact the implementation of ICD-10 had on medical organizations and to develop a timeline of preparation efforts. The final data collection tool contained the following variables:

1. What is your Medical Facility Primary Type?

    A. Academic Medical Center

    B. Acute Care Hospitals

    C. Other

2. What is the size of your Medical Facility?

    A. < = 199 Beds

    B. Between 200 – 349 Beds

    C. Between 350 – 499 Beds

    D. > = 500 Beds

3. The decision to move to the International Classification of Diseases, Tenth Edition (ICD-10) was first announced in 2009. In what year did your organization begin preparing for this implementation?

    A. Between 2009 -2011

    B. 2012

    C. 2013

    D. On or after 2014

4. What financial impact did the implementation of ICD-10 have on your organization?

    A. < $200,000

    B. Between $201,000 and $499,000

    C. Between $500,000 and $749,000

    D. > $750,000

5. What type of costs did you incur that directly relate to the ICD-10 implementation, i.e. training costs, consultant fees, system upgrades? Please disclose as much information as you can.

6. What type of training initiatives did you put into place? Please choose all that apply and disclose your training initiatives for each.

    A. Providers

    B. Coders

    C. Any other staff

Variables and Rationale

Medical Facility Primary Type and Size of Healthcare facility: Survey questions are multiple choice.

Rationale: Demographic in nature. The purpose is to understand what type of medical facilities were involved in the study and will allow for cross tabulations to determine if type or size had any impact on costs or timelines.

The decision to move to the International Classification of Diseases, Tenth Edition (ICD-10) was first announced in 2009. When did your organization begin preparing for this implementation? Survey question is multiple choice.

Rationale: Establish a timeline for ICD-10 implementation.

What financial impact did the implementation of ICD-10 have on your organization? Survey question is multiple choice.

Rationale: The main purpose of this study is to disclose the financial impact ICD-10 implementation had on hospitals.

What type of costs did you incur that directly relate to the ICD-10 implementation, i.e. training costs, consultant fees, system upgrades? Please disclose as much information as you can. Survey question is open ended.

Rationale: To acknowledge the types of costs associated with the ICD-10 implementation.

What type of training initiatives did you put into place? Can you outline your training initiatives to include: Providers, Coders, Any other staff? Survey question is multiple choice and optional open ended.

Rationale: Many organizations were not prepared for ICD-10. This question serves to uncover any training initiatives the hospital put in place to prepare.

Approval

A draft of the survey questionnaire was submitted to Sajeesh Kumar KR, PhD, Associate Professor in the Health Informatics & Information Management Department. Approval was given.

Study participants

Study participants targeted were HIM Professionals associated with a Medical Facility during the implementation of ICD-10. A brief questionnaire was sent out to solicit participation in the study using Action OI. Action OI is a tool used for reporting benchmark measures to help improve hospital performance. Through the use of the Action OI program, possible study participants can be identified.

Data Collection

Study participants will be given an unstructured questionnaire, through electronic data collection, i.e. online survey, to complete in its entirety. The questionnaire consists of five multiple choice questions and one open ended question. Any questionnaires not filled out completely will be discarded to ensure consistency and reliability of the study.

Data Collection Procedure

A cover letter (Figure 3) along with a word document containing the survey questions was distributed on May 4, 2016 through Action OI. A second reminder email was distributed on May 11, 2016 with a deadline of May 18, 2016 and a third email was distributed on May 18, 2016 with an extended deadline of May 27, 2016. On May 18, 2016 UHC ICD-10 Impact listserv was identified as another source for gaining participation in the study. May 19, 2016 the survey was sent to UHC's legal department for review. Survey was never approved and therefore the survey was not sent through the UHC listserv. Other survey participants were solicited via email with an extended deadline date of June 14, 2016.

Data Analysis

   After the deadline, all data was manually exported into excel. Frequency of tables were tested using excel and tables 1-6 were created. Cross tabulations were also tested using excel and are displayed in tables 7-11.

   The expected timeline for conducting this study is five weeks. One week will be given to the initial query sent out through Action O-I. Two weeks were slated to each participant to fill out the questionnaire and return it. Two weeks were needed to review and validate each of the participant's results and to complete the research findings.

Chapter 4

Results

Response rate of population

A total of 157 surveys were sent out for participation. 5 responses were received via Action OI and 7 responses were received from email participants for a total response rate of 7.6%. Action OI was unsuccessful in gaining survey participation. The first request for participation yielded two responses. The second request yielded one response and the third request yielded two responses. The email that went out to HIM colleagues was very successful and yielded seven responses.

Frequency of Tables

A summary of the counts and percentages to the responses are listed in tables 1-6. The first two tables provide demographic data of the respondents. Table three shows evidence to the timeline of when organizations began preparing for ICD-10. Tables four and five give evidence to the expenses of ICD-10 implementation as well as the total financial impact. Table six details the targeted population for training efforts.

Table 1- Medical Facility Type

Facility Type	Number of Respondents	Percent of Total Respondents
Academic Medical Center	7	58%
Acute Care Hospitals	3	25%
Other	2	17%
Total	12	100%

Table 2 – Medical Facility Size

Number of Beds	Number of Respondents	Percent of Total Respondents
</= 199 Beds	1	8%
Between 200-349 Beds	1	8%
Between 350-499 Beds	2	17%
>/= 500 Beds	8	67%
Total	12	100%

Table 3 – Year Preparations began for ICD-10 Implementation

Year	Number of Respondents	Percent of Total Respondents
Between 2009-2011	4	33%
2012	3	25%
2013	4	33%
On or after 2014	1	8%
Total	12	100%

Table 4 – Financial Impact of ICD-10

Financial Impact	Number of Respondents	Percent of Total Respondents
< $200,000	2	17%
Between $201,000 and $499,000	3	25%
Between $500,000 and $749,000	2	17%
> $750,000	5	42%
Total	12	100%

Table 5 – Expenses Incurred

Expense	Number of Respondents	Percent of Total Respondents
Training	12	100%
Consultant Fees	6	50%
System Upgrades	8	67%
External Coding Assistance	3	25%
Total	12	

Table 6 – Training Initiatives

Population	Number of Respondents	Percent of Total Respondents
Providers	8	67%
Coders	12	100%
Other Staff	8	67%
Total	12	

Cross Tabulations of Selected Pairs of Variables

A summary of selected pairs of variables are displayed in Tables seven through eleven. Table seven compares the size of the organization to the type of organization. Table eight compares the financial impact of the organization to the types of expenses incurred during implementation. Table nine looks at the size of the facility and the year implementation efforts began. Table ten displays the type of facility and training initiatives. Table eleven looks at the size of the facility vs the total financial impact of the project.

Table 7 – Cross Tabulation of Size of facility and Medical Facility Type

| | | | Medical Facility Type | | | |
			Academic Medical Center	Acute Care Hospital	Other	Total
Size of Facility	</= 199 Beds	Count	0	0	1	1
		% within facility type	0%	0%	50%	8%
	Between 200-349 Beds	Count	0	1	0	1
		% within facility type	0%	33%	0%	8%
	Between 350-499 Beds	Count	1	1	0	2
		% within facility type	14%	33%	0%	17%
	>/= 500 Beds	Count	6	1	1	8
		% within facility type	86%	33%	50%	67%
	Total	Count	7	3	2	12
		% within facility type	100%	100%	100%	100%

Table 8 – Cross Tabulation of Financial Impact and ICD-10 Expenses

| | | | Expenses | | | | |
			Training	Consultant Fees	System Upgrades	External Coding Assistance	Total
Financial Impact	< $200,000	Count	2	1	1	0	4
		% within facility type	17%	17%	13%	0%	14%
	Between $201,000 and $499,000	Count	3	1	3	0	7
		% within facility type	25%	17%	38%	0%	24%
	Between $500,000 and $749,000	Count	2	1	1	0	4
		% within facility type	17%	17%	13%	0%	14%
	> $750,000	Count	5	3	3	3	14
		% within facility type	42%	50%	38%	100%	48%

Total	Count	12	6	8	3	29
	% within facility type	100%	100%	100%	100%	100%

Table 9 – Cross Tabulations of Size of Facility and the Year Organizations began preparing for

ICD-10

			Year Preparations began				
			Between 2009-2011	2012	2013	On or After 2014	Total
Size of Facility	</= 199 Beds	Count	0	1	0	0	1
		% within facility type	0%	33%	0%	0%	8%
	Between 200-349 Beds	Count	0	0	1	0	1
		% within facility type	0%	0%	25%	0%	8%
	Between 350-499 Beds	Count	1	0	0	1	2
		% within facility type	25%	0%	0%	100%	17%
	>/= 500 Beds	Count	3	2	3	0	8
		% within facility type	75%	67%	75%	0%	67%
Total		Count	4	3	4	1	12
		% within facility type	100%	100%	100%	100%	100%

Table 10 – Cross Tabulations of Medical Facility Type and Training Initiatives

			Training Initiatives			
			Providers	Coders	Other Staff	Total
Type of Facility	Academic Medical Center	Count	6	7	5	18
		% within facility type	75%	58%	63%	64%
	Acute Care Hospitals	Count	2	3	2	7
		% within facility type	25%	25%	25%	25%

Other	Count		2	1	3
	% within facility type	0%	17%	13%	11%
Total	Count	8	12	8	28
	% within facility type	100%	100%	100%	100%

Table 11 – Cross Tabulations of Size of Facility and Financial Impact

		Financial Impact				
		< $200,000	$201,000- $499,00	$500,000- $749,000	> $750,000	Total
	</= 199 Beds	Count	0	1	0	0	1
		% within facility type	0%	33%	0%	0%	8%
	Between 200-349 Beds	Count	0	1	0	0	1
		% within facility type	0%	33%	0%	0%	8%
Size of Facility	Between 350-499 Beds	Count	1	0	1	0	2
		% within facility type	50%	0%	50%	0%	17%
	>/= 500 Beds	Count	1	1	1	5	8
		% within facility type	50%	33%	50%	100%	67%
Total		Count	2	3	2	5	12
		% within facility type	100%	100%	100%	100%	100%

Chapter 5

Analysis and Discussion

Fifty-eight percent (58%) of the participants came from an Academic Medical Center; Twenty-five percent (25%) came from the acute care setting; and Seventeen percent (17%) came from other types of healthcare organizations. There were twelve participants in all (Table 1).

Sixty-seven percent (67%) of the participants represented hospitals with more than 500 beds. Thirty-three percent (33%) of the participants represented hospitals with less than 499 beds (Table 2).

Thirty-three percent (33%) of participants disclosed that they began training initiatives for ICD-10 implementation between 2009 and 2011. Twenty-five percent (25%) began in 2012; while Thirty-three percent (33%) began in 2013. One participant or eight percent (8%) didn't begin preparations for ICD-10 implementation until 2014 or later (Table 3).

Forty-two percent (42%) of participants stated that the total financial impact of ICD-10 on their organization was greater than $750,000. Twenty-Five percent (25%) saw a financial hit between $201,000 and $499,000 while Seventeen percent (17%) of participants reported between $500,000 and $749,000 and less than $200,000 (Table 4).

Questions seven and eight were multiple-response questions in which the participants were to disclose all information that applied. One hundred percent (100%) of participants reported that training cost were one of their ICD-10 expenses. Sixty-seven (67%) incurred system upgrade costs. Fifty percent (50%) of participants incurred Consultant fees and only twenty-five percent (25%) reported out external coding assistance costs (Table 5). One hundred percent (100%) of participants reported that their training initiatives included Coders, while

sixty-seven percent (67%) of participants also trained providers and other staff during implementation efforts (Table 6).

Tables seven through eleven display the relationship between various pairs of variables from the survey. Table 7 shows a cross tabulation between medical facility type and size. Eighty-six percent (86%) of participants from an Academic Medical Center report having greater than 500 beds, whereas only fourteen percent (14%) report size as between 350 and 499 beds. Thirty-three percent (33%) of Acute Care hospitals represent size between 200 and 349 beds, between 350-499 beds and greater than 500 beds equally. Two participants report their medical facility type as being other than Academic Medical Center or an Acute Care Hospital. Fifty percent (50%) represent size as less than or equal to 199 beds and fifty percent (50%) represent bed size as greater than 500. Through this cross tabulation table, the majority of participants come from an Academic Medical Center with greater than 500 beds.

Table 8 shows the relationship between the total financial impact of ICD-10 implementation and the expenses incurred. Those who reported costs greater than $750,000 saw expenses in all four reportable categories.

Table 9 cross references facility size and the year the organization began implementation efforts. What this table indicates is that there is no direct correlation between facility size and when implementation efforts began.

Table 10 cross references the facility type with training initiatives. All Medical facility types thought it important to provide training to their coding staff, while only Academic Medical Centers and Acute Care hospitals provided training to Providers. Education for all staff was mentioned in the literature review as being one of the most important efforts for a successful ICD-10 implementation.

Table 11 looks at the relationship between the size of the organization and the total financial impact. Facilities with greater than 500 beds saw the highest financial impact while all other facility sizes saw a mix across the financial categories. Only facilities with greater than 500 beds incurred expenses greater than $750,000.

Limitations

There are a few limitations to this study that should be considered.

- There was limited literature available on this topic. The lack of data did not allow for a comparison of survey data with other studies.

- Another limitation identified was not finding enough HIM Professionals to participate in the study to make it meaningful.

- To help generate more responses, individual HIM professionals participated in this study and therefore the data may contain more than one response per facility.

- The survey response rate was low and therefore cannot be generalized across the United States.

Chapter 6

Conclusion and Recommendations

Summary of findings

The overall summary of findings is not surprising. Facilities seemed to take heed to the advice given from other countries that had gone through the ICD-10 implementation process. All participants reported out training initiatives with the main focus being on Coder education, while the majority of the participants (67%) also reported out training initiatives for Providers and other staff. Literature review indicated to start preparing early for the transition and all but one participant indicated that they started preparing for ICD-10 implementation on or before 2013; which is as least two years prior to go live. Sixty-seven percent (67%) of participants indicated that they incurred system upgrade costs to ensure a successful transition to the new coding system, as was suggested as well in the literature review.

Conclusions

As mentioned earlier, the two research questions for this study are:

- What initiatives did HIM Professionals experience during the seven years leading up to ICD-10 implementation?

- What financial implications did Organizations experience throughout the entire ICD-10 implementation process?

The survey provided enough data to answer both questions. The data indicated that training efforts as well as the system upgrades were two of the top initiatives HIM professionals experienced during the implementation process; both of which were also indicated by other studies as being important initiatives for a successful go live. The

financial impact of the project was also disclosed indicating that large academic medical centers incurred the highest financial impact during the implementation process.

ICD-10 was inevitable and it needed to happen, probably much sooner than it did. Other countries across the world started using ICD-10 as early as 1994. The United States was the last Industrialized Country to move to ICD-10. After careful review it is apparent that ICD-10 implementation has been a long time coming. ICD-10 is expected to help clinically with more distinct diagnosing and reporting. Overall, it appears that the benefits healthcare organizations will gain from the implementation of ICD-10 outweigh the challenges. Some of the lessons learned with this study are that training and education are important and all participants realized this and were willing to spend the money needed to provide adequate education. Participants also realized the importance of having their systems ready for such an important transition and were also willing to incur expenses to ensure system readiness.

Recommendations

It is important to understand the scope of any initiative, large or small to ensure adequate time is given for preparation. Assigning a Project Leader will help streamline the project and allow for consistent communication. It is also important to do adequate research to determine if there is any advice that can help streamline the project. There is no reason to make the same mistakes others have made if you can avoid it.

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Appendix

Figure 1 – AHIMA ICD-10 Implementation dates

actual and proposed implementation dates of ICD-10

Country	Mortality	Morbidity	Country	Mortality	Morbidity
Australia	1998	July 1998	Lithuania	1997	1998
Austria	1998	**	Macedonia	1996	**
Belgium	1998	**	Malta	1995	**
Brazil	1996	1998	Netherlands	1996	1998–2000
Canada	1998	1999	New Zealand	1998	1998
China	2000+	2000+	Norway	1996	1998
Colombia	1996	**	Poland	1997	**
Costa Rica	1996	**	Portugal	before 2000	**
Czech Republic	1994	**	Qatar	1995	**
Denmark	1994	1994	Romania	1994	**
Estonia	1997	1997	Slovakia	1994	**
Finland	1996	1996	Suriname	1996	**
France	1998	1997	Sweden	1997	1997
Germany	1998	2000	Thailand	1994	1994
Iceland	1996	1997	United Kingdom		
Ireland	1998	**	-England and Wales	1999	1995
Jamaica	1995	**	-Scotland	1998	1996
Japan	1995	1996	-Northern Ireland	1998	1996
Kuwait	1995	1996	United States	1999	**
Italy	1998	**	Venezuela	1996	1997
Latvia	1996	1998			

**=unknown   Source: "Implementation of ICD-10 by WHO Member States," World Health Organization.

Figure 2 - Survey

1. What is your Medical Facility Primary Type?

- ○ Academic Medical Center
- ○ Other

2. What is the size of your Medical Facility?

- ○ A. < = 199 Beds
- ○ B. Between 200 – 349 Beds
- ○ C. Between 350 – 499 Beds
- ○ D. > = 500 Beds

3. The decision to move to the International Classification of Diseases, Tenth Edition (ICD-10) was first announced in 2009. In what year did your organization begin preparing for this implementation?

- ○ A. Between 2009 -2011

- ○ B. 2012
- ○ C. 2013
- ○ D. On or after 2014

4. What financial impact did the implementation of ICD-10 have on your organization?

- ○ A. < $200,000
- ○ B. Between $201,000 and $499,000
- ○ C. Between $500,000 and $749,000
- ○ D. > $750,000

5. What type of costs did you incur that directly relate to the ICD-10 implementation, i.e. training costs, consultant fees, system upgrades? Please disclose as much information as you can.
6. What type of training initiatives did you put into place? Please choose all that apply and disclose your training initiatives for each.
   a. Providers
   b. Coders
   c. Any other staff

Figure 3 – Cover Letter

Hi my name is Tammy Collins, and I am a Masters' degree candidate in the Health Informatics and Information (HIIM) program at the University of Tennessee Health Science Center (UTHSC). I am completing my thesis and need your help.

My thesis topic is on ICD-10 Implementation. This study aims to determine what efforts HIM Professionals experienced during the implementation of ICD-10; outline a timeline of implementation efforts for the transition of ICD-9 to ICD-10; uncover the major expenses organizations incurred through the implantation process; define training initiatives; and disclose the financial impact the transition caused. This study is not intended to show or prove that moving to ICD-10 has had a negative impact on organizations, but rather to provide a clear picture of the time and effort put forth in changing ICD's after thirty-six years.

All information provided will be kept confidential and only generalized statements concerning the information received will be disclosed. If you would be so kind as to complete and return the survey back to me by June 14, 2016, I would be very appreciative. The survey should not take longer than 10 minutes to fill out.

Please feel free to email me if you have any questions tcollins@salud.unm.edu