

# Perceptions of Information Privacy in Outsourcing among Healthcare Executives: An Empirical Analysis

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**ABSTRACT:** *This study provides an in-depth discussion of the various issues, incidents, and next/best-practice models regarding privacy in the outsourcing of services requiring the usage of Protected Health Information (PHI). In addition, a survey of 33 hospital executives within the United States at the Vice-President level and above was conducted, relating their individual attitudes and perceptions of privacy in outsourcing to the actual policies and practices of their organization. Convenience sampling was utilized to identify respondents, who were referred to an electronic version of a 23 question survey. Responses indicate that a link exists between the perceptions of hospital executives and the hospital's policies and procedures. The study also reinforces a number of best practice models and implies a need for executives to stay informed regarding potential issues in choosing outsourcing partners.*

**KEYWORDS:** *Healthcare, Offshore Outsourcing, Information Privacy, Health Insurance Portability and Accountability Act (HIPAA), Protected Health Information (PHI).*

## 1. Introduction

As in other industries, outsourcing has become a powerful tool for many healthcare executives looking to reduce costs or address a myriad of organizational pressures (Davino, 2004). However, the dynamic nature of this industry and the highly sensitive nature of personal health information create a number of issues that should be considered prior to engaging in outsourcing activities. To better understand these issues, background information will be provided regarding the nature of outsourcing in the healthcare industry.

### 1.1 What is outsourcing?

Outsourcing, the contracting of traditionally internally provided goods and services to outside third party contractors, has quickly become a \$4 trillion-a-year business. Healthcare providers, along with many businesses, have utilized outsourcing to reduce their bottom line and address a number of operational issues within their organizations. Initially, outsourcing was only utilized to provide noncore hospital services such as food

services, housekeeping, and security. These functions have expanded, however, to include core service areas such as top executive positions, clinical areas (e.g. nurse and physician staffing), medical transcription, and a number of business functions, including coding and billing. Degrees of outsourcing may vary, from contracting a single function such as medical transcription, to outsourcing whole hospital divisions, such as human resources (Hazelwood, Hazelwood and Cook, 2005).

### *1.2 Why do healthcare providers outsource?*

While there are a number of different reasons why managers may choose to outsource a particular business function, the decision almost always comes back to the question of cost reduction. In the healthcare industry, human capital accounts for one of the largest operating expenses. The cost of recruiting, training, and retaining qualified employees is often a very expensive and time consuming task. Transferring some of these functions off-site may enable the healthcare provider to eliminate some of the costs associated with supporting a full-time staff, including the reduction of physical space requirements and expenses (Forsman, 2003). This has become especially important considering the limited labor market for some professions that are typically candidates for outsourcing, such as medical transcription. Further justification is offered due to the fact that many outsourcing firms are also specialists in their given field and may be able to offer more reliable and efficient services at a lower price than is possible with an in-house operation.

Outsourcing certain functions can also help in-house staff concentrate on core-competencies important to the healthcare provider, such as providing quality healthcare. Easing heavy or irregular workloads (Hazelwood et al., 2005), providing predictable annual costs, and decreasing internal management's responsibilities allow hospital employees to concentrate on providing for their patients (Forsman, 2003).

### *1.3 Are benefits really benefits?*

Despite the apparent benefits of outsourcing, many still argue that it is not a cure-all and might actually end up costing the hospital more than doing the job themselves. Executives may be lured in by the promise of a quick fix and reassured by the low costs that outsourcing offers, especially if it is done overseas where labor is cheap. This low price, however, may conceal a number of hidden costs that could make outsourcing just as expensive as providing the service in-house (Rhodes, Dennis, and Roach, 2004). In their article about outsourcing medical transcription, Rhodes et al. (2004) state that "When you consider the investment in technology, the cost of telephone and internet communications, staff training, management staff, travel, and proofreading costs, it is probably not less expensive to outsource medical transcription overseas." Providers that seek outsourcing

partners solely on the basis of cost may in turn threaten quality. Correcting mistakes and verifying the quality of the service/product provided creates an additional burden on the provider's staff, which may indirectly increase costs associated with outsourcing (Forsman, 2003). Other inefficiencies that may have similar effects on the actual costs of outsourcing include reduced provider control over information and increased turnaround times (Forsman, 2003). In addition to this, outsourcing firms add a profit margin to their fees to earn a profit off of the services they provide.

#### *1.4 Privacy in outsourcing and the law*

One of the most important ethical concerns regarding outsourcing is the privacy of patient health information. There are a large number of rules and regulations that apply to healthcare providers that outsource services. These laws, however, are far from conclusive, so it is important to be informed about their stipulations, how they are able to protect patient health information, and also what limitations might exist.

The most notable U.S. law regarding privacy in the health industry is the Health Insurance Portability and Accountability Act (HIPAA) of 1996. This act was put into place to help "improve the productivity of the American healthcare system and to provide federal regulations for the security and confidentiality of health information (Hazelwood et al., 2005)." While these laws only directly apply to healthcare providers, payers, and clearinghouses, HIPAA does require that these entities undergo certain actions when entrusting their health information to outside parties (Davino, 2004). As mentioned by Davino (2004), HIPAA requires that business associates who have access to protected health information maintain the information's confidentiality. Certain provisions must be included in contracts with business associates that have access to medical information, such as specifications for the permitted uses and disclosures of information by the business associate. Appropriate safeguards, such as guidelines for the release of information to subcontractors, provisions for contract termination (Davino, 2004), and a means to comply with current and prospective legislation that deals with notifying individuals about possible breaches of privacy, should also be included. These obligations are the same whether the business associate is a foreign or domestic entity (Rhodes et al., 2004), even though the ability to enforce the contract in a foreign country may create complications.

It is also important to take international legislation regarding privacy into account when dealing with foreign companies. Policies such as the European Union Data Protection Directive may limit the transfer of personally identifying information outside certain economic areas. Other emerging legislation, such as India's Information Technology Act, may also bring the privacy policies of lesser developed nations into line with their foreign outsourcing clients. Many of these policies, however, have not been fully implemented. In the interim, Rhodes et al. (2004) suggest that "US healthcare

organizations wishing to outsource functions to India that involve individually identifiable health information should be blending their security and privacy requirements into their outsourcing contracts and business associate agreements.”

### *1.5 Incidents and legislation*

While privacy has long been a concern in the healthcare industry, its importance in the outsourcing of patient information was brought into the public eye after a 2003 incident with the University of California at San Francisco Medical Center (UCSF) and a Pakistani subcontractor, Lubna Baloch. This incident occurred when a UCSF contractor subcontracted a portion of its medical transcription caseload, after which a chain of subcontracting ended with the information going overseas to Ms. Baloch. After a dispute over payment for the subcontracted work, Ms. Baloch sent UCSF an email threatening the release of a number of patient files if she was not paid. Luckily, one of the subcontractors eventually paid Ms. Baloch and disaster was avoided, but it does serve as a lesson regarding the risks assumed when patient information is outsourced (Lazarus, 2003).

Since some degree of risk to privacy exists when healthcare providers choose to outsource services that involve patient information, a key ethical consideration that the provider should consider is whether they should inform patients that their information is being outsourced. Despite current trends in other industries, few healthcare providers inform their patients if their information is outsourced (Hazelwood et al., 2005). State and National lawmakers are currently proposing legislation to address these issues, even though there is considerable debate about whether such laws are logical or tenable for the healthcare industry (AHIMA [American Health Information Management Association], 2004).

### *1.6 Identifying and minimizing risk*

While there are no fail-safe ways to ensure privacy during outsourcing, there are a number of considerations that should be made to identify and minimize risk in an outsourcing environment. These considerations are used to construct the basis of our survey instrument, discussed later.

1. The first step that should be taken before outsourcing is a self-audit. This is basically a research step in which you document, summarize, and ensure accessibility and understanding of all applicable laws and regulations under which the provider and its business associates operate. This should be followed by an analysis of current policies and procedures that are in place at the hospital. Areas of improvement should be identified, as should any disparities between existing laws and current policies. Steps should then be taken to align policies with legal requirements for privacy (Rhodes et al., 2004).

2. Ensure that contracts with any outside vendors obligate not only the vendor to maintain confidentiality of information, but also require that any party to whom the vendor sends information maintains the privacy and security of information. While the HIPAA (The Health Insurance Portability and Accountability Act) law does extend to business associates and make them responsible for the privacy and security of the provider's health information, complications may arise if the information finds its way overseas. According to Margaret Davino (2004), "Entities not domiciled in the US may not be subject to, or even aware of, US laws." Rhodes et al. (2004) also address this subject in their article "Overseas Outsourcing." They explain that obtaining a judgment against a foreign party is difficult in and of itself, but in most situations involving the inappropriate release of information, the goal of legal action is to stop or prevent a behavior, not to seek judgment for damages or breach of contract. If such an injunction could be obtained from a US court for an individual outside the country, it would be nearly impossible to enforce the injunction in a timely fashion. Thus, Rhodes et al. suggest including contractual provisions with business associates that allow the provider to obtain an injunction if contractual terms are violated. Including a provision of this nature would speed court proceedings allowing an injunction against the business associate to be made in an expedited manner (Rhodes et al., 2004).
3. Require indemnification both from vendors and their subcontractors for any breach of contract, including confidentiality and privacy of information. This will ensure that vendors and their subcontractors will be held wholly liable for their actions which will hopefully dissuade them from handling provider information in an unsafe manner (Davino, 2004).
4. If sending patient information overseas is not a risk worth taking, placing stipulations and requirements on current business associates may be a viable solution. Including contractual provisions with business associates that explicitly prohibits them, or their subcontractors, from sending provider information overseas may not necessarily stop contractors or subcontractors from releasing patient information, but it will ensure that they are privy to American privacy laws (Davino, 2004). Other options may include requiring the disclosure of subcontracts. Based on the UCSF case, however, keeping track of information once it is outsourced can sometimes be a difficult task.
5. Another option that would eliminate the risks associated with overseas outsourcing is to use business associates that do not subcontract any work at all. Many companies have full time domestic staffs that may offer many of the same benefits as in-house departments. For example, employees may be offered hourly wages and other performance incentives that increase their productivity. Some business associates

even assign employees to single contracts, which allow them to build familiarity with the provider's needs and requirements. This service, however, is likely to come at a premium, so providers must weigh the benefits and costs associated with choosing domestic outsourcing firms that do not subcontract work (Davino, 2004).

6. Another consideration to keep in mind is whether business partners are making investments to obtain and retain the healthcare provider as a customer. A company that is willing to make investments into a relationship with their customer is clearly communicating the importance of maintaining the terms of the relationship. For example, the company may purchase new computers or invest in new technology to help retain or obtain the customer's business (Davino, 2004).
7. Including specific performance standards in the contract, such as turnaround time or error rate, may help protect the provider by allowing them to terminate the contract if standards are not met. These standards may also help the provider identify hidden costs associated with vendor inefficiency. Many companies may appear to be less expensive because they charge lower fees, but may actually create other expenses to the provider. For example, if the contractor has a high error rate, employees for the healthcare provider may have to dedicate time to review, edit, and correct the contractor's work (Davino, 2004).
8. Weighing the costs of training staff with regards to privacy is also an important step in analyzing the feasibility of outsourcing. HIPAA requires that individuals with access to personal health information receive training on the requirements of the law. In addition, some states require additional training in other areas of confidentiality, such as the New York AIDS confidentiality law. The burden associated with training employees, in addition to recruiting, hiring, and retaining qualified workers, may be easier and more cost-effective to place in the hands of a contractor (Davino, 2004).
9. It is also important to include standard protection terms in any contract with outside vendors. These terms include provisions required by HIPAA, the ability of both parties to terminate the contract with or without cause, an appropriate length of time for the contract, the inability of the vendor to assign the contract without the provider's permission, and a requirement that any claim be brought in the state in which the provider is located (Davino, 2004).
10. Verify the security practices of any vendors with which personal health information will be exchanged. Partners should be able to assure that they are able to meet the demanding requirements and regulations within the healthcare industry, most notably, how their practices comply with the new HIPAA laws. For example, vendors may be required to complete a security audit or verify current practices with regards to industry regulations (Zeile, 2005).



### **1.7 Questions to ask prospective outsourcing partners**

According to the AHIMA, there are a number of questions that providers should answer when considering possible outsourcing partners. These questions are listed below (Hazelwood et al., 2005).

1. How and where will the work be done and will any portion of the work be subcontracted?
2. Who will be performing the work and at what pay?
3. What policies, procedures, and training programs are in place at all of the contractor's sites, and are they compliant with industry standards for privacy and security?
4. What laws govern the protection of personal health information in the countries where services are being performed?
5. How will the information be securely transported to and from the healthcare facility?
6. How and when will physician and patient demographic information be provided to the contractor?
7. How long will information reside on the contractor's database?
8. How will information retained on the contractor's database be destroyed?
9. How will the service ensure and measure quality?
10. What language exists in your contracts to assign responsibility for breaches of privacy and security?

## **2. Premise for the hypothesis**

Based on the discussion above, it is evident that many healthcare executives believe significant cost savings are possible for organizations interested in outsourcing various components of their operations. However, the question is whether executives are placing too great of an emphasis on creating cost savings, while neglecting the safety of their patient's personal information. This research will seek to identify relationships between the personal attitudes and perceptions of privacy in outsourcing among executives and the actual policies and practices of the organization. It is hypothesized that while individual executives may place a strong personal emphasis on the privacy of health information, these attitudes will not be reflected in the outsourcing policies and practices of the organization.

### 3. Research methodology

Participants were asked to complete a 23-question online survey assessing organizational policies and procedures regarding privacy in outsourcing, personal perceptions of privacy, and demographics. Survey questions were developed based on current literature, as well as best practices within the industry for privacy in outsourcing (see Appendix A for full survey). Survey responses were compared and statistically analyzed to identify significant relationships between the organization's policies/practices and the perceptions of the individual respondents. All participants are current employees in hospital or hospital systems throughout the United States. Individuals at the Vice-President level and above, as well as individuals at the director level serving in a health information management role, were invited to participate in the survey. Information was collected over a two month period in the following manner.

#### 3.1 *Partnership with Health Data Management*

The research team worked closely with the professional journal *Health Data Management* to identify prospective participants for the survey. Subscribers to this journal who met the criteria listed above were sent an email inviting them to take the online survey. A follow-up email was then sent out two weeks after the initial email.

#### 3.2 *Convenience sampling*

The research team also utilized personal contacts, primarily within the Dallas/Ft. Worth and Houston markets, to identify participants for the survey. These individuals were sent a personal email inviting them to take the online survey, as well as a reminder email approximately two weeks after the initial contact.

All participants were instructed to access the survey using a URL that was provided to them in each email contact. This URL led the participant to a secure site where responses were collected and tabulated. Participants were not required to provide personally-identifiable information, but had the option of including their email address to receive information regarding the results of the survey.

## 4. Measures

A total of 33 individuals, approximately half from each sampling measure, completed the survey in its entirety. An additional 10 surveys were unusable due to incomplete responses. Inadequate sample size restricted the research team from conducting Pearson's Product Moment Correlations between survey responses, so its nonparametric equivalent



(Spearman's Rho Correlation) was used to assess the statistical significance of our findings (Results from the survey can be found in Appendix B, while the statistical analysis can be found in Appendix C).

## 5. Results

1. Q1. The majority (60.6%) of participants were from the state of Texas. There were not enough participants from any other state to make comparisons with.
2. Q2. There was no significant correlation between hospital size and the eight perceptions of privacy in outsourcing.
3. Q3. No significant differences were found regarding the eight perceptions of privacy in outsourcing between urban and suburban participants. (Only 3 rural, thus these were not included in the analysis.)
4. Q4. No comparison could be made between CEO ( $n = 1$ ), COO ( $n = 4$ ), CIO ( $n = 3$ ) and Other ( $n = 25$ ) because the majority listed other as their position.
5. Q6. Participants who said that patients are notified if their health info is released to contractors had significantly greater agreement than participants who said that patients are not notified if their health info is released to contractors regarding the question "authorization should be required before contractors may share patient health info with subcontractors."
6. Q7. Participants who said that contractors are required to notify their organization if patient health information is released to subcontractors had significantly less agreement than participants who said that contractors are not required to notify their organization if patient health information is released to subcontractors on the item "the benefits of outsourcing outweigh its possible risks to privacy."

Participants who said that contractors are required to notify your organization if patient health information is released to subcontractors had significantly greater agreement than participants who said that contractors are not required to notify your organization if patient health information is released to subcontractors on the item "companies should never share personal information with other companies unless it has been authorized by the individual who provided the information."

Of those who said yes, to Q7. Sixteen of them said that the contractors are required to submit the information of the subcontractors (Q8).

7. Q9. There were no differences on the eight perceptions of privacy in outsourcing between participants who did and did not have contractors restricted from sending patients health information outside the US.
8. Q10. Only 2 respondents reported that indemnification is not required, compared to 16 who said yes it is required. Thus no stats were conducted.
9. Q11. Only 1 respondent reported that all contracts do not obligate business partners, compared to 31 who said yes. Thus, no stats were conducted.
10. Q12. There were no differences on the eight perceptions of privacy in outsourcing between participants who did and did not specific performance standards present in contracts with businesses
11. Q14. There is a significant moderate positive correlation between Q14 and Q17. Participants who agreed that contractors used by their organization make adequate investments of time and money to obtain and retain their organization as a customer also agreed that they can trust outsourcing partners to maintain the integrity of patient health information and vice versa.
12. Q13, 14, and 15 are all significantly moderately positively correlated to one another. Participants who agreed on one, agreed on the other two and vice versa.

## **6. Discussion**

While the relatively low response rate inhibited this survey from providing the most statistically viable results, it did provide interesting insight into the relationship between organizational policies regarding privacy in outsourcing and the individual executive's personal views of the topic. The majority of the information gathered in this research negates the hypothesis that executives within the healthcare field may place a strong personal emphasis on the privacy of health information, but that these attitudes are not reflected in the outsourcing policies and practices of the organization.

Significant agreement can be seen between the perceptions of executives and the practices of their organization in a number of different areas. The following list outlines these relationships:

1. Executives that felt authorization should be required before contractors are able to share patient health information with subcontractors typically indicated that their organization did indeed notify patients if health information was released to contractors.

2. Respondents who felt that companies should not release personal health information without prior authorization typically required contractors to notify their organizations if personal information was released to subcontractors.

This relationship implies that the values of the individual tend to align with the policies and practices of their organization. The cause of this alignment, however, is unclear.

Other important discoveries focused around the respondent's knowledge and approach towards the safekeeping of their organization's protected health information. In an article written by Joanne Wojcik, many problems with privacy arise from the fact that companies do not know what's being outsourced offshore (Wojcik, 2004) and often do not find out unless there is a problem. This can be a significant issue, however, since most security incidents go unreported. According to a study conducted by the Government Accountability Office, as many as 80% of such incidents go unreported because managers do not realize a problem exists (Robeznieks and Conn, 2006).

Based on our research, less than half of respondents were fully aware of who had access to their organization's protected health information. Approximately 42% of respondents did not know whether their PHI was restricted from going overseas, while 21.2% of respondents had no such restrictions in place. These are very interesting statistics, especially when you consider that 51.6% of respondents did not require indemnification of contractors and subcontractors regarding breaches in privacy. Since HIPAA regulations are largely unenforceable internationally, organizations that are not diligent in protecting their patient's information may face legal recourse if a breach should occur. This threat has been highlighted by organizations such as the American Medical Association, who has recently issued a statement encouraging U.S. physicians to be wary of outsourcing services overseas without first verifying the security practices of contractors and subcontractors (Robeznieks, 2005), as well as incorporating language in all contracts that protects the customer.

Another discrepancy could be seen based on certain responses to the survey. Approximately 90% of respondents indicated that the protection of privacy should be maintained at any cost, yet they also overwhelmingly indicated that they do not feel U.S. HIPAA laws or foreign privacy laws adequately protect PHI abroad. At the same time, 63.6% of respondents either had no restrictions regarding overseas outsourcing or did not know if such policies were in place. Despite this, 70% of respondents maintained that they trusted their outsourcing partners. This information seems to imply that many managers are unaware of the threats that face their PHI or have done little to "put their money where their mouth is" in regards to protecting their organization's information.

Results from the survey were also able to reinforce a number of measures identified by related literature as key methods to minimizing privacy risk in outsourcing. For example, individuals who indicated that they verify the security practices of business partners (Zeile, 2005) and felt that their partners make adequate investments of time and money to retain their business were more aware of who had access to their patients' information after it is released to contractors. The survey also reinforced the idea that business partners who invest time and money into their relationships with healthcare providers are typically better trusted to ensure the integrity of personal health information (Davino, 2004).

## **7. Implications**

While a number of key findings from this survey proved to be very interesting, the survey will need to be replicated and conducted on a much larger scale to provide any conclusive information. In addition, a more randomized approach to identifying survey recipients is needed to improve the validity of the survey instrument.

As stated previously, this research seems to imply that the values of the individual tend to align with the policies and practices of their organization, even though a clear cause of this alignment is not apparent. Further research is needed to determine whether executives exert influence over policies and practices based on their personal views, whether the executive chooses to join an institution because its policies closely mirror their personal values, or whether the executive assimilates the values of the organization's corporate culture into their own values. Additional research is also needed to establish a more viable relationship between the executive's personal values and the policies and practices of their organization. However, establishing a better defined link between these two factors may help managers involved in the hiring process better understand what types of individuals may thrive in positions whose responsibilities involve privacy and outsourcing.

Despite a lack of knowledge regarding who is handling an organization's information, more than 70% of respondents still felt that they could trust their outsourcing partners. Upon consideration of the number of incidents that go largely unreported, managers may need to take a closer look at the organizations that are handling their information to truly understand what privacy risks they may be facing. Contracts may also need to be reevaluated to provide secure terms in the case of a legal challenge, or possibly prohibit the overseas outsourcing of PHI altogether. In addition, future research may seek to address questions regarding how often privacy issues go unnoticed and what can be done to improve awareness and prevention of such problems.

Other future research may also seek to address issues within a wide range of outsourcing areas. While most current research focuses on issues surrounding the outsourcing of medical transcription, other services such as radiology, payroll, and customer services are also increasingly being sent overseas.

## 8. Conclusion

The major contribution of this research stems from its ability to provide an initial link between the perceptions of privacy among hospital executives regarding outsourcing and the actual policies and practices exhibited by their organization. Such a link may be important in developing an organization focused around privacy, as well as choosing administrators that are compatible with the hospital's culture and goals.

While outsourcing may provide numerous benefits to an organization, hospital executives must be careful in choosing partners whose processes are focused around security and privacy. Numerous regulations in the U.S. and abroad have attempted to address the issue of privacy, but the responsibility in protecting this information is largely in the hands of the organization which it originates. Remaining knowledgeable about the risks faced by the organization, as well as how to adequately address them while still capitalizing on the benefits offered by outsourcing will enable organizations to significantly decrease potential violations of protected health information.

## References

1. AHIMA [American Health Information Management Association] (2004) 'Regulation of health information processing in an outsourcing environment', 29 December, 2005, [http://library.ahima.org/xpedio/groups/public/documents/ahima/pub\\_bok1\\_022610.html](http://library.ahima.org/xpedio/groups/public/documents/ahima/pub_bok1_022610.html)
2. Davino, M. (2004) 'Assessing privacy risk in outsourcing', *Journal of AHIMA*, Vol. 75, No. 3, pp. 42-46.
3. Forsman, J.A. (2003) 'Cutting medical transcription costs', *Healthcare Financial Management*, Vol. 57, No. 7, pp. 64-68.
4. Hazelwood, S.E., Hazelwood, A.C. and Cook, E.D. (2005) 'Possibilities and pitfalls of outsourcing', *Healthcare Financial Management*, Vol. 59, No. 10, pp. 44-48.
5. Lazarus, D. (2003) 'A tough lesson on medical privacy: Pakistani transcriber threatens UCSF over back pay', *San Francisco Chronicle*, October 22, A1.

6. Rhodes, H., Dennis, J.C. and Roach, M.C. (2004) 'Overseas outsourcing: The risk of doing business?', *Journal of AHIMA*, Vol. 75, No. 4, pp. 26-31.
7. Robeznieks, A. (2005) 'Balancing privacy, outsourcing; Docs advised to resolve HIPAA issues with foreign companies in contracts', *Modern Healthcare*, Vol. 36, December, p. 32.
8. Robeznieks, A. and Conn, J. (2006) 'GAO blasts HHS on IT, privacy. But exec argues before there can be "detailed plans", ONCHIT needs a leader.', *Modern Healthcare*, Vol. 36, September, pp. 8-9.
9. Wojcik, J. (2004) 'Offshore outsourcing creates privacy-related risks; HIPAA-covered entities urged to push vendors for disclosure of outsourcing arrangements', *Business Insurance*, Vol. 38, p. 12.
10. Zeile, A. (2005) 'Secure outsourcing. The right managed services provider can meet your organization's unique needs.', *Healthcare Informatics*, Vol. 22, No. 4, p. 52.

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## Appendix A: Survey Instrument

*The return of your completed questionnaire constitutes your informed consent to act as a participant in this research.*

### Survey Instrument

#### **Demographic Information**

1. State where hospital is located. (Pull down menu with states listed)
2. Size of Hospital  
\_\_\_\_\_ Beds
3. Hospital Setting
  - a. Urban
  - b. Suburban
  - c. Rural
4. Position at Hospital
  - a. Chief Executive Officer
  - b. Chief Operations Officer
  - c. Chief Information Officer
  - d. Other (Please Specify): \_\_\_\_\_
5. Email Address (This information will be used only to send you an executive summary of this research. Please leave this field blank if you do not wish to receive such information.)  

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#### **Privacy Practices in Outsourcing**

*Please indicate the most appropriate response in regards to the current practices of your hospital.*

*For the purposes of this survey, the term “contractor” is defined as any business partner that your organization enters into contract with to perform services for your organization. “Subcontractors” are business partners used by contractors to help perform services for your organization.*

6. Are patients notified if their health information is released to contractors?
  - a. Yes
  - b. No
  - c. I don't know

7. Are contractors required to notify your organization if patient health information is released to subcontractors?
  - a. Yes
  - b. No
  - c. I don't know
  
8. If yes, are the contractors required to submit the information of the subcontractors to you?
  - a. Yes
  - b. No
  - c. I don't know
  
9. Are contractors for your organization restricted from sending patient health information outside the United States?
  - a. Yes
  - b. No
  - c. I don't know
  
10. Is indemnification required from contractors for any breach of contract, as well as from any subcontractors that they may send information to?
  - a. Yes
  - b. No
  - c. I don't know
  
11. Do all contracts with business partners obligate them, as well as any other person or entity to which the information is sent, to maintain the confidentiality and security of patient health information?
  - a. Yes
  - b. No
  - c. I don't know
  
12. Are specific performance standards present in contracts with businesses that will have access to patient health information (ex. Turnaround time, error rate, template consistency, etc.)?
  - a. Yes  
If yes, please specify some key performance standard/s used by your organization: \_\_\_\_\_
  - b. No
  - c. I don't know

*Indicate the degree to which you, as an employee, agree with the following statements by selecting the appropriate number.*

*1=Strongly Disagree; 2=Disagree; 3=Somewhat Disagree; 4=Neutral; 5= Somewhat Agree; 6=Agree; 7=Strongly Agree.*

13. The security practices of business partners are verified before entering into a contractual agreement where patient health information will be exchanged.
14. I feel that the contractors used by my organization make adequate investments of time and money to obtain and retain my organization as a customer.
15. I am aware of who has access to the personal health information of my organization's patients after it has been released to contractors.

### **Perceptions of Privacy in Outsourcing**

*Indicate the degree to which you, as an individual, agree with the following statements by selecting the appropriate number.*

*1=Strongly Disagree; 2=Disagree; 3=Somewhat Disagree; 4=Neutral; 5= Somewhat Agree; 6=Agree; 7=Strongly Agree.*

16. The benefits of outsourcing outweigh its possible risks to privacy.
17. I can trust outsourcing partners to maintain the integrity of patient health information.
18. The privacy of patient health information should be protected no matter how much it costs.
19. Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.
20. Authorization should be required before contractors may share patient health information with subcontractors.
21. The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies outside of the United States.
22. Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.
23. I feel that patient health information shared with domestic business partners is more secure than patient health information shared with foreign business partners.

## Appendix B: Survey Results

### Section 1: Demographic Information

#### 1. State where hospital is located

State	Response Percent	Response Total
Alabama	3	1
California	6.1	2
Florida	3	1
Michigan	3	1
North Carolina	6.1	2
Ohio	3	1
South Dakota	3	1
Tennessee	3	1
Texas	60.6	20
Utah	3	1
Virginia	3	1
Wyoming	3	1
Total Respondents		33
Skipped Question		0

#### 2. Size of hospital (number of beds)

Mean	361
Median	245
Mode	216

#### 3. Hospital setting

	Response Percent	Response Total
Urban	45.5	15
Suburban	45.5	15
Rural	9.1	3
Total Respondents		33
Skipped Question		0

4. Position at hospital

	Response Percent	Response Total
CEO	3	1
COO	12.1	4
CIO	9.1	3
Other	75.8	25
Total Respondents		33
Skipped Question		0

5. Email Address (confidential)

**Section 2: Privacy Practices in Outsourcing**

6. Are patients notified if their health information is released to contractors?

	Response Percent	Response Total
Yes	36.4	12
No	42.4	14
I don't know	21.2	7
Total Respondents		33
Skipped Question		0

7. Are contractors required to notify your organization if patient health information is released to subcontractors?

	Response Percent	Response Total
Yes	66.7	22
No	18.2	6
I don't know	15.2	5
Total Respondents		33
Skipped Question		0

8. If yes, are the contractors required to submit the information of the subcontractors to you?

	Response Percent	Response Total
Yes	55.2	16
No	24.1	7
I don't know	20.7	6
Total Respondents		29
Skipped Question		4

9. Are contractors for your organization restricted from sending patient health information outside the United States?

	<b>Response Percent</b>	<b>Response Total</b>
Yes	36.4	12
No	21.2	7
I don't know	42.4	14
Total Respondents		33
Skipped Question		0

10. Is indemnification required from contractors for and breach of contract, as well as from any subcontractors that they may send information to?

	<b>Response Percent</b>	<b>Response Total</b>
Yes	48.5	16
No	6.1	2
I don't know	45.5	15
Total Respondents		33
Skipped Question		0

11. Do all contracts with business partners obligate them, as well as any other person or entity which the information is sent, to maintain the confidentiality and security of patient health information?

	<b>Response Percent</b>	<b>Response Total</b>
Yes	93.9	31
No	3	1
I don't know	3	1
Total Respondents		33
Skipped Question		0

12. Are specific performance standards present in contracts with businesses that will have access to patient health information?

	<b>Response Percent</b>	<b>Response Total</b>
Yes	45.5	15
No	24.2	8
I don't know	30.3	10
Total Respondents		33
Skipped Question		0



13. If yes, please specify some key performance standard/s used by your organization (open ended).

14. The security practices of business partners are verified before entering into a contractual agreement where patient health information will be exchanged.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	0	0
2 = Disagree	3	1
3 = Somewhat Disagree	9.1	3
4 = Neutral	12.1	4
5 = Somewhat Agree	21.2	7
6 = Agree	30.3	10
7 = Strongly Agree	24.2	8
Total Respondents		33
Skipped Question		0

15. I feel that contractors used by my organization make adequate investments of time and money to obtain and retain my organization as a customer.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	0	0
2 = Disagree	0	0
3 = Somewhat Disagree	3	1
4 = Neutral	6.1	2
5 = Somewhat Agree	15.2	5
6 = Agree	63.6	21
7 = Strongly Agree	12.1	4
Total Respondents		33
Skipped Question		0

**Section 3: Perceptions of Privacy in Outsourcing**

16. I am aware of who has access to the personal health information of my organization's patients after it has been released to contractors.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	9.1	3
2 = Disagree	18.2	6
3 = Somewhat Disagree	12.1	4
4 = Neutral	12.1	4
5 = Somewhat Agree	15.2	5
6 = Agree	27.3	9
7 = Strongly Agree	6.1	2
Total Respondents		33
Skipped Question		0

17. The benefits of outsourcing outweigh its possible risks to privacy.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	3.2	1
2 = Disagree	9.7	3
3 = Somewhat Disagree	6.5	2
4 = Neutral	16.1	5
5 = Somewhat Agree	22.6	7
6 = Agree	38.7	12
7 = Strongly Agree	3.2	1
Total Respondents		31
Skipped Question		2

18. I can trust outsourcing partners to maintain the integrity of patient health information.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	3.2	1
2 = Disagree	6.5	2
3 = Somewhat Disagree	6.5	2
4 = Neutral	12.9	4
5 = Somewhat Agree	12.9	4
6 = Agree	45.2	14
7 = Strongly Agree	12.9	4
Total Respondents		31
Skipped Question		2

19. The privacy of patient health information should be protected no matter how much it costs.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	0	0
2 = Disagree	0	0
3 = Somewhat Disagree	3.2	1
4 = Neutral	6.5	2
5 = Somewhat Agree	12.9	4
6 = Agree	35.5	11
7 = Strongly Agree	41.9	13
Total Respondents		31
Skipped Question		2

20. Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	3.2	1
2 = Disagree	0	0
3 = Somewhat Disagree	6.5	2
4 = Neutral	9.7	3
5 = Somewhat Agree	6.5	2
6 = Agree	32.3	10
7 = Strongly Agree	41.9	13
Total Respondents		31
Skipped Question		2

21. Authorization should be required before contractors may share patient health information with subcontractors.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	9.7	3
2 = Disagree	0	0
3 = Somewhat Disagree	3.2	1
4 = Neutral	16.1	5
5 = Somewhat Agree	3.2	1
6 = Agree	41.9	13
7 = Strongly Agree	25.8	8
Total Respondents		31
Skipped Question		2

22. The Health Insurance Portability and Accountability Act (HIPAA) adequately protects health information that is exchanged during outsourcing to companies outside of the United States.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	6.5	2
2 = Disagree	16.1	5
3 = Somewhat Disagree	6.5	2
4 = Neutral	38.7	12
5 = Somewhat Agree	9.7	3
6 = Agree	12.9	4
7 = Strongly Agree	9.7	3
Total Respondents		31
Skipped Question		2

23. Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	9.7	3
2 = Disagree	25.8	8
3 = Somewhat Disagree	6.5	2
4 = Neutral	51.6	16
5 = Somewhat Agree	0	0
6 = Agree	3.2	1
7 = Strongly Agree	3.2	1
Total Respondents		31
Skipped Question		2

24. I feel that patient health information shared with domestic business partners is more secure than patient health information shared with foreign business partners.

	<b>Response Percent</b>	<b>Response Total</b>
1 = Strongly Disagree	3.2	1
2 = Disagree	3.2	1
3 = Somewhat Disagree	0	0
4 = Neutral	51.6	16
5 = Somewhat Agree	12.9	4
6 = Agree	19.4	6
7 = Strongly Agree	9.7	3
Total Respondents		31
Skipped Question		2



**Correlations (conti.)**

Size of Hospital (Number of beds)	Correlation Coefficient	-0.279	-0.017	-0.155	1.000	-0.151	0.022	-0.160	0.052	0.104	-0.176	-0.101	.194
	Sig. (2-tailed)	.116	.925	.390	.	.416	.908	.390	.781	.577	.342	.587	.295
	N	33	33	33	33	31	31	31	31	31	31	31	31
The benefits of outsourcing outweigh its possible risks to privacy.	Correlation Coefficient	-0.173	.026	-0.032	-0.151	1.000	.582(**)	-0.313	-0.413(*)	-0.215	.186	.063	.319
	Sig. (2-tailed)	.353	.889	.864	.416	.	.001	.087	.021	.245	.316	.735	.080
	N	31	31	31	31	31	31	31	31	31	31	31	31
I can trust outsourcing partners to maintain the integrity of patient health information.	Correlation Coefficient	-0.022	.405(*)	.216	.022	.582(**)	1.000	-0.203	-0.267	-0.368(*)	.423(*)	.346	.089
	Sig. (2-tailed)	.907	.024	.244	.908	.001	.	.273	.147	.042	.018	.057	.632
	N	31	31	31	31	31	31	31	31	31	31	31	31
The privacy of patient health information should be protected no matter how much it costs.	Correlation Coefficient	-0.038	.036	.100	-0.160	-0.313	-0.203	1.000	.515(**)	.291	.044	.005	-.281
	Sig. (2-tailed)	.838	.847	.591	.390	.087	.273	.	.003	.112	.813	.979	.125
	N	31	31	31	31	31	31	31	31	31	31	31	31
Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	Correlation Coefficient	.146	.195	.227	.052	-0.413(*)	-0.267	.515(**)	1.000	.639(**)	-0.053	-0.122	-.119





**Correlations (conti.)**

I feel that patient health information shared with domestic business partners is more secure than patient health information shared with foreign business partners.	.222	.215	.270	.194	.319	.089	-.281	-.119	.082	.031	-.086	1.000
Correlation Coefficient												
Sig. (2-tailed)	.230	.247	.141	.295	.080	.632	.125	.523	.663	.867	.646	.
N	31	31	31	31	31	31	31	31	31	31	31	31

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Footnote (Legend for Column Name):**

- X1: The security practices of business partners are verified before entering into a contractual agreement where patient health information will be exchanged.
- X2: I feel that the contractors used by my organization make adequate investments of time and money to obtain and retain my organization as a customer.
- X3: I am aware of who has access to the personal health information of my organization's patients after it has been released to contractors.
- X4: Size of Hospital (Number of beds)
- X5: The benefits of outsourcing outweigh its possible risks to privacy.
- X6: I can trust outsourcing partners to maintain the integrity of patient health information.
- X7: I can trust outsourcing partners to maintain the integrity of patient health information.
- X8: I can trust outsourcing partners to maintain the integrity of patient health information.
- X9: Authorization should be required before contractors may share patient health information with subcontractors.
- X10: The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies outside of the United States.
- X11: Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.
- X12: I feel that patient health information shared with domestic business partners is more secure than patient health information shared with foreign business partners.

**T-Test  
Group Statistics**

	Hospital Setting	N	Mean	Std. Deviation	Std. Error Mean
The benefits of outsourcing outweigh its possible risks to privacy.	Urban	14	4.71	1.729	.462
	Suburban	14	5.00	1.301	.348
I can trust outsourcing partners to maintain the integrity of patient health information.	Urban	14	5.14	1.916	.512
	Suburban	14	5.29	1.383	.370
The privacy of patient health information should be protected no matter how much it costs.	Urban	14	6.07	1.141	.305
	Suburban	14	6.00	1.038	.277
Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	Urban	14	5.50	1.951	.522
	Suburban	14	6.07	.917	.245
Authorization should be required before contractors may share patient health information with subcontractors.	Urban	14	5.21	1.805	.482
	Suburban	14	5.36	1.985	.530
The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies.	Urban	14	4.00	1.569	.419
	Suburban	14	4.21	1.672	.447
Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.	Urban	14	3.29	1.590	.425
	Suburban	14	3.29	1.326	.354
I feel that patient health information shared with domestic business partners is more secure.	Urban	14	4.71	1.541	.412
	Suburban	14	4.57	1.284	.343

**Independent Samples Test**

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
The benefits of outsourcing outweigh its possible risks to privacy.	1.187	.286	-.494	26	.625	-.286	.578	-1.474	.903
I can trust outsourcing partners to maintain the integrity of patient health information.	1.670	.208	-.226	26	.823	-.143	.631	-1.441	1.155
The privacy of patient health information should be protected no matter how much it costs.	.081	.778	.173	26	.864	.071	.412	-.776	.919
Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	7.620	.010	-.992	26	.330	-.571	.576	-1.756	.613
Authorization should be re- quired before contractors may share patient health information with subcontractors.	.005	.944	-.199	26	.844	-.143	.717	-1.617	1.331

**Independent Samples Test (conti.)**

The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies.	Equal variances assumed	.437	.514	-.350	26	.729	-.214	.613	-1.474	1.045
	Equal variances not assumed			-.350	25.895	.729	-.214	.613	-1.474	1.046
Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.	Equal variances assumed	.218	.644	.000	26	1.000	.000	.553	-1.137	1.137
	Equal variances not assumed			.000	25.189	1.000	.000	.553	-1.139	1.139
I feel that patient health information shared with domestic business partners is more secure.	Equal variances assumed	.140	.711	.267	26	.792	.143	.536	-.959	1.245
	Equal variances not assumed			.267	25.181	.792	.143	.536	-.961	1.246

**Frequencies**  
**State where hospital is located.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Alabama	1	3.0	3.0	3.0
	California	2	6.1	6.1	9.1
	Florida	1	3.0	3.0	12.1
	Michigan	1	3.0	3.0	15.2
	North Carolina	2	6.1	6.1	21.2
	Ohio	1	3.0	3.0	24.2
	South Dakota	1	3.0	3.0	27.3
	Tennessee	1	3.0	3.0	30.3
	Texas	20	60.6	60.6	90.9
	Utah	1	3.0	3.0	93.9
	Virginia	1	3.0	3.0	97.0
	Wyoming	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

**Hospital Setting**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	15	45.5	45.5	45.5
	Suburban	15	45.5	45.5	90.9
	Rural	3	9.1	9.1	100.0
	Total	33	100.0	100.0	

**Position at Hospital**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CEO	1	3.0	3.0	3.0
	COO	4	12.1	12.1	15.2
	CIO	3	9.1	9.1	24.2
	Other	25	75.8	75.8	100.0
	Total	33	100.0	100.0	



**Are patients notified if their health information is released to contractors?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	14	42.4	42.4	42.4
	Yes	12	36.4	36.4	78.8
	I don't know	7	21.2	21.2	100.0
	Total	33	100.0	100.0	

**Are contractors required to notify your organization if patient health information is released to subcontractors?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	6	18.2	18.2	18.2
	Yes	22	66.7	66.7	84.8
	I don't know	5	15.2	15.2	100.0
	Total	33	100.0	100.0	

**If yes, are the contractors required to submit the information of the subcontractors to you?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	7	21.2	24.1	24.1
	Yes	16	48.5	55.2	79.3
	I don't know	6	18.2	20.7	100.0
	Total	29	87.9	100.0	
Missing	9999	4	12.1		
Total		33	100.0		

**Are contractors for your organization restricted from sending patient health information outside the United States?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	7	21.2	21.2	21.2
	Yes	12	36.4	36.4	57.6
	I don't know	14	42.4	42.4	100.0
	Total	33	100.0	100.0	

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**Is indemnification required from contractors for any breach of contract, as well as from any subcontractors that they may send information to?**

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	2	6.1	6.1	6.1
	Yes	16	48.5	48.5	54.5
	I don't know	15	45.5	45.5	100.0
	Total	33	1000.0	100.0	

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**Do all contracts with business partners obligate them, as well as any other person or entity to which the information is sent, to maintain the confidentiality and security of patient health information?**

---

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1	3.0	3.0	3.0
	Yes	31	93.9	93.9	97.0
	I don't know	1	3.0	3.0	100.0
	Total	33	100.0	100.0	

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**Are specific performance standards present in contracts with businesses that will have access to patient health information (ex. Turnaround time, error rate, template consistency, etc.)?**

---

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	8	24.2	24.2	24.2
	Yes	15	45.5	45.5	69.7
	I don't know	10	30.3	30.3	100.0
	Total	33	100.0	100.0	

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**The security practices of business partners are verified before entering into a contractual agreement where patient health information will be exchanged.**

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	1	3.0	3.0	3.0
	SWD	3	9.1	9.1	12.1
	Neutral	4	12.1	12.1	24.2
	SWA	7	21.2	21.2	45.5
	A	10	30.3	30.3	75.8
	SA	8	24.2	24.2	100.0
	Total	33	100.0	100.0	

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**I feel that the contractors used by my organization make adequate investments of time and money to obtain and retain my organization as a customer.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SWD	1	3.0	3.0	3.0
	Neutral	2	6.1	6.1	9.1
	SWA	5	15.2	15.2	24.2
	A	21	63.6	63.6	87.9
	SA	4	12.1	12.1	100.0
	Total	33	100.0	100.0	

**I am aware of who has access to the personal health information of my organization's patients after it has been released to contractors.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	3	9.1	9.1	9.1
	D	6	18.2	18.2	27.3
	SWD	4	12.1	12.1	39.4
	Neutral	4	12.1	12.1	51.5
	SWA	5	15.2	15.2	66.7
	A	9	27.3	27.3	93.9
	SA	2	6.1	6.1	100.0
	Total	33	100.0	100.0	

**The benefits of outsourcing outweigh its possible risks to privacy.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	1	3.0	3.2	3.2
	D	3	9.1	9.7	12.9
	SWD	3	6.1	6.5	19.4
	Neutral	5	15.2	16.1	35.5
	SWA	7	21.2	22.6	58.1
	A	12	36.4	28.7	96.8
	SA	1	3.0	3.2	100.0
	Total	31	93.9	100.0	
Missing	9999	2	6.1		
Total		33	100.0		

**I can trust outsourcing partners to maintain the integrity of patient health information.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	1	3.0	3.2	3.2
	D	2	6.1	6.5	9.7
	SWD	2	6.1	6.5	16.1
	Neutral	4	12.1	12.9	29.0
	SWA	4	42.4	12.9	41.9
	A	14	12.1	45.2	87.1
	SA	4	12.1	12.9	100.0
	Total	31	93.9	100.0	
Missing	9999	2	6.1		
Total		33	100.0		

**The privacy of patient health information should be protected no matter how much it costs.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SWD	1	3.0	3.2	3.2
	Neutral	2	6.1	6.5	9.7
	SWA	4	12.1	12.9	22.6
	A	11	33.3	35.5	58.1
	SA	13	39.4	41.9	100.0
	Total	31	93.9	100.0	
Missing	9999	2	6.1		
Total		33	100.0		

**Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	1	3.0	3.2	3.2
	SWD	2	6.1	6.5	9.7
	Neutral	3	9.1	9.7	19.4
	SWA	2	6.1	6.5	25.8
	A	10	30.3	32.3	58.1
	SA	13	39.4	41.9	100.0
	Total	31	93.9	100.0	
Missing	9999	2	6.1		
Total		33	100.0		

**Authorization should be required before contractors may share patient health information with subcontractors.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	3	9.1	9.7	9.7
	SWD	1	3.0	3.2	12.9
	Neutral	5	15.2	16.1	29.0
	SWA	1	3.0	3.2	32.3
	A	13	39.4	41.9	74.2
	SA	8	24.2	25.8	100.0
	Total	31	93.9	100.0	
Missing	9999	2	6.1		
Total		33	100.0		

**The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies outside of the United States.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	2	6.1	6.5	6.5
	D	5	15.2	16.1	22.6
	SWD	2	6.1	6.5	29.0
	Neutral	12	36.4	38.7	67.7
	SWA	3	9.1	9.7	77.4
	A	4	12.1	12.9	90.3
	SA	3	9.1	9.7	100.0
	Total	31	93.9	100.0	
Missing	9999	2	6.1		
Total		33	100.0		

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**Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.**

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	3	9.1	9.7	9.7
	D	8	24.2	25.8	35.5
	SWD	2	6.1	6.5	41.9
	Neutral	16	48.5	51.6	93.5
	A	1	3.0	3.2	96.8
	SA	1	3.0	3.2	100.0
	Total	31	93.9	100.0	
Missing	9999	2	6.1		
Total		33	100.0		

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**I feel that patient health information shared with domestic business partners is more secure than patient health information shared with foreign business partners.**

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	1	3.0	3.2	3.2
	D	1	3.0	3.2	6.5
	Neutral	16	48.5	51.6	58.1
	SWA	4	12.1	12.9	71.0
	A	6	18.2	19.4	90.3
	SA	3	9.1	9.7	100.0
	Total	31	93.9	100.0	
Missing	9999	2	6.1		
Total		33	100.0		

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**Descriptives**

	N	Minimum	Maximum	Mean	Std. Deviation
The security practices of business partners are verified before entering into a contractual agreement where patient health information will be exchanged.	33	2	7	5.39	1.391
I feel that the contractors used by my organization make adequate investments of time and money to obtain and retain my organization as a customer.	33	3	7	5.76	.867
I am aware of who has access to the personal health information of my organization's patients after it has been released to contractors.	33	1	7	4.12	1.883
The benefits of outsourcing outweigh its possible risks to privacy.	31	1	7	4.74	1.527
I can trust outsourcing partners to maintain the integrity of patient health information.	31	1	7	5.13	1.586
The privacy of patient health information should be protected no matter how much it costs.	31	3	7	6.06	1.063
Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	31	1	7	5.81	1.515
Authorization should be required before contractors may share patient health information with subcontractors.	31	1	7	5.32	1.815
The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies outside of the United States.	31	1	7	4.06	1.692
Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.	31	1	7	3.29	1.395
I feel that patient health information shared with domestic business partners is more secure than patient health information shared with foreign business partners.	31	1	7	4.65	1.355
Valid N (listwise)	31				

### T-Test Group Statistics

	Are patients notified		N	Mean	Std. Deviation	Std. Error Mean
	if their health information is					
Size of Hospital (Number of beds)	No	14	283.14	256.333	68.508	
	Yes	12	390.08	251.406	72.575	
The benefits of outsourcing outweigh its possible risks to privacy.	No	12	5.00	1.595	.461	
	Yes	12	4.42	1.782	.514	
I can trust outsourcing partners to maintain the integrity of patient health information.	No	12	5.50	1.508	.435	
	Yes	12	4.67	1.923	.555	
The privacy of patient health information should be protected no matter how much it costs.	No	12	6.17	.835	.241	
	Yes	12	6.25	.866	.250	
Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	No	12	5.33	1.875	.541	
	Yes	12	6.50	.522	.151	
Authorization should be required before contractors may share patient health information with subcontractors.	No	12	4.25	2.261	.653	
	Yes	12	6.17	.835	.241	
The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies.	No	12	4.00	1.907	.550	
	Yes	12	3.92	1.832	.529	
Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.	No	12	3.25	1.485	.429	
	Yes	12	3.08	1.621	.468	
I feel that patient health information shared with domestic business partners is more secure.	No	12	4.75	1.357	.392	
	Yes	12	4.92	1.676	.484	



**NPar Tests**  
**Mann-Whitney Test**  
**Ranks**

	Are patients notified if	N	Mean Ranks	Sum of Ranks
Size of Hospital (Number of beds)	No	14	11.61	162.50
	Yes	12	15.71	188.50
	Total	26		
The benefits of outsourcing outweigh its possible risks to privacy.	No	12	13.58	163.00
	Yes	12	11.42	137.00
	Total	24		
I can trust outsourcing partners to maintain the integrity of patient health information.	No	12	14.13	169.50
	Yes	12	10.88	130.50
	Total	24		
The privacy of patient health information should be protected no matter how much it costs.	No	12	12.04	144.50
	Yes	12	12.96	155.50
	Total	24		
Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	No	12	10.25	123.00
	Yes	12	14.75	177.00
	Total	24		
Authorization should be required before contractors may share patient health information with subcontractors.	No	12	9.29	111.50
	Yes	12	15.71	188.50
	Total	24		
The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies.	No	12	12.54	150.50
	Yes	12	12.46	149.50
	Total	24		
Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.	No	12	12.67	152.00
	Yes	12	12.33	148.00
	Total	24		
I feel that patient health information shared with domestic business partners is more secure.	No	12	11.88	142.50
	Yes	12	13.13	157.50
	Total	24		

### Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Size of Hospital (Number of beds)	.021	.887	-1.070	24	.295	-106.940	99.957	-313.242	99.361
			-1.072	23.529	.295	-106.940	99.802	-313.140	99.259
The benefits of outsourcing outweigh its possible risks to privacy.	.834	.371	.845	22	.407	.583	.690	-.848	2.015
			.845	21.737	.407	.583	.690	-.849	2.016
I can trust outsourcing partners to maintain the integrity of patient health information.	1.434	.244	1.181	22	.250	.833	.705	-.629	2.296
			1.181	20.815	.251	.833	.705	-.634	2.301
The privacy of patient health information should be protected no matter how much it costs.	.117	.736	-.240	22	.813	-.083	.347	-.803	.637
			-.240	21.970	.813	-.083	.347	-.804	.637
Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	8.639	.008	-2.077	22	.050	-1.167	.562	-2.332	-.001
			-2.077	12.697	.059	-1.167	.562	-2.383	.050
Authorization should be required before contractors share patient health information with subcontractors.	15.161	.001	-2.754	22	.012	-1.917	.696	-3.360	-.474
			-2.754	13.944	.016	-1.917	.696	-3.410	-.424

**Independent Samples Test (conti.)**

The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies.	Equal variances assumed	.016	.899	.109	22	.914	.083	.763	-1.500	1.666
	Equal variances not assumed			.109	21.965	.914	.083	.763	-1.500	1.667
Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.	Equal variances assumed	.709	.409	.263	22	.795	.167	.635	-1.150	1.483
	Equal variances not assumed			.263	21.832	.795	.167	.635	-1.150	1.483
I feel that patient health information shared with domestic business partners is more secure.	Equal variances assumed	.240	.629	.268	22	.791	.167	.623	-1.458	1.125
	Equal variances not assumed			.268	21.084	.792	.167	.623	-1.461	1.125

**NPar Tests**  
**Mann-Whitney Test**  
**Ranks**

	Are patients notified if	N	Mean Ranks	Sum of Ranks
Size of Hospital (Number of beds)	No	6	10.67	64.00
	Yes	22	15.55	342.00
	Total	28		
The benefits of outsourcing outweigh its possible risks to privacy.	No	6	20.50	123.00
	Yes	21	12.14	255.00
	Total	27		
I can trust outsourcing partners to maintain the integrity of patient health information.	No	6	17.83	107.00
	Yes	21	12.90	271.00
	Total	27		
The privacy of patient health information should be protected no matter how much it costs.	No	6	12.33	74.00
	Yes	21	14.48	304.00
	Total	27		
Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	No	6	7.58	45.50
	Yes	21	15.83	332.50
	Total	27		
Authorization should be required before contractors may share patient health information with subcontractors.	No	6	8.92	53.50
	Yes	21	15.45	324.50
	Total	27		
The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies.	No	6	13.33	80.00
	Yes	21	14.19	298.00
	Total	27		
Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.	No	6	11.50	69.00
	Yes	21	14.71	309.00
	Total	27		
I feel that patient health information shared with domestic business partners is more secure.	No	6	13.33	80.00
	Yes	21	14.19	298.00
	Total	27		

**Test Statistics<sup>b</sup>**

	Size of Hospital (Number of beds)	The benefits of outsourcing outweigh its possible risks to privacy.	I can trust outsourcing partners to maintain the integrity of patient health information.	The privacy of patient health information should be protected no matter how much it costs.	Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies outside of the United States.	I feel that patient health information shared with domestic business partners is more secure than patient health information shared with foreign business partners.
Mann-Whitney U	57.500	59.000	52.500	66.500	45.000	71.500	64.500
Wilcoxon W	162.500	137.000	130.500	144.500	123.000	149.500	142.500
Z	-1.363	-.784	-1.173	-.343	-1.666	-.029	-.450
Asymp. Sig. (2-tailed)	.173	.433	-.241	.731	.096	.977	.653
Exact Sig. [2*(1-tailed Sig.)]	.176 <sup>a</sup>	.478 <sup>a</sup>	2.66 <sup>a</sup>	.755 <sup>a</sup>	.128 <sup>a</sup>	.977 <sup>a</sup>	.671 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: Are patients notified if their health information is released to contractors?

### T-Test Group Statistics

	Are patients notified if their health information is	N	Mean	Std. Deviation	Std. Error Mean
Size of Hospital (Number of beds)	No	6	306.83	368.254	150.339
	Yes	22	395.73	336.832	71.813
The benefits of outsourcing outweigh its possible risks to privacy.	No	6	6.00	.632	.258
	Yes	21	4.43	1.630	.356
I can trust outsourcing partners to maintain the integrity of patient health information.	No	6	5.83	1.602	.654
	Yes	21	5.00	1.673	.365
The privacy of patient health information should be protected no matter how much it costs.	No	6	5.83	.983	.401
	Yes	21	6.00	1.140	.249
Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	No	6	4.33	2.160	.882
	Yes	21	6.33	.966	.211
Authorization should be required before contractors may share patient health information with subcontractors.	No	6	3.67	2.503	1.022
	Yes	21	5.71	1.454	.317
The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies.	No	6	3.83	2.229	.910
	Yes	21	3.90	1.546	.337
Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.	No	6	2.67	1.033	.422
	Yes	21	3.33	1.560	.340
I feel that patient health information shared with domestic business partners is more secure.	No	6	4.67	.816	.333
	Yes	21	4.76	1.578	.344

**Test Statistics<sup>b</sup>**

	Size of Hospital (Number of beds)	The benefits of outsourcing outweigh its possible risks to privacy.	I can trust outsourcing partners to maintain the integrity of patient health information.	The privacy of patient health information should be protected no matter how much it costs.	Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies outside of the United States.	I feel that patient health information shared with domestic business partners is more secure than patient health information shared with foreign business partners.
Mann-Whitney U	43.000	24.000	40.000	53.000	24.500	32.500	59.000
Wilcoxon W	64.000	255.000	271.000	74.000	45.500	53.500	80.000
Z	-1.288	-2.379	-1.427	-.616	-2.400	-1.863	-.246
Asymp. Sig. (2-tailed)	.198	.017	.154	.538	.016	.062	.806
Exact Sig. [2*(1-tailed Sig.)]	.214 <sup>a</sup>	.022 <sup>a</sup>	.195 <sup>a</sup>	.589 <sup>a</sup>	.022 <sup>a</sup>	.075 <sup>a</sup>	.842 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: Are patients notified if their health information is released to contractors?

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		95% Confidence Interval of the Difference				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Size of Hospital (Number of beds)	Equal variances assumed	.580	.453	-.563	26	.579	-88.894	158.019	-413.708	235.920
	Equal variances not assumed			-.534	7.450	.609	-88.894	166.610	-478.094	300.306
The benefits of outsourcing outweigh its possible risks to privacy.	Equal variances assumed	8.527	.007	2.286	25	.031	1.571	.687	.156	2.987
	Equal variances not assumed			3.575	22.094	.002	1.571	.440	.660	2.483
I can trust outsourcing partners to maintain the integrity of patient health information.	Equal variances assumed	.064	.802	1.085	25	.288	.833	.768	-.749	2.415
	Equal variances not assumed			1.112	8.399	.297	.833	.749	-.880	2.547
The privacy of patient health information should be protected no matter how much it costs.	Equal variances assumed	.041	.841	-.324	25	.748	-.167	.514	-1.225	.892
	Equal variances not assumed			-.353	9.240	.732	-.167	.472	-1.231	.897
Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	Equal variances assumed	7.248	.012	-3.333	25	.003	-2.000	.600	-3.236	-.764
	Equal variances not assumed			-2.206	5.583	.073	-2.000	.907	-4.260	.260
Authorization should be re-quired before contractors may share patient health information with subcontractors.	Equal variances assumed	4.062	.055	-2.578	25	.016	-2.048	.794	-3.684	-.412
	Equal variances not assumed			-1.913	5.996	.104	-2.048	1.070	-4.666	.571



**Independent Samples Test (conti.)**

The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies.	Equal variances assumed	.138	-.091	25	.929	-.071	.789	-1.697	1.554
	Equal variances not assumed	2.346	-.074	6.439	.944	-.071	.970	-2.407	2.264
Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.	Equal variances assumed	.370	-.980	25	.337	-.667	.680	-2.068	.735
	Equal variances not assumed	.834	-1.230	12.332	.242	-.667	.542	-1.844	.511
I feel that patient health information shared with domestic business partners is more secure.	Equal variances assumed	.117	-.141	25	.889	-.095	.675	-1.485	1.295
	Equal variances not assumed	2.632	-.199	16.633	.845	-.095	.479	-1.108	.918



**Correlations (conti.)**

Companies should never share personal information with other companies unless it has been authorized by the individual who provided the information.	.052	-.413(*)	-.267	.515(**)	1.000	.639(**)	-.053	-.122	-.119
Authorization should be required before contractors may share patient health information with subcontractors.	.104	-.215	-.368(*)	.291	.639(**)	1.000	-.081	-.211	.082
The Health Insurance Portability and Accountability Act (HIPAA) adequately protects patient health information that is exchanged during outsourcing to companies outside of the United States.	-.176	.186	.423(*)	.044	-.053	-.081	1.000	.717(**)	.031
Foreign laws are as effective as U.S. HIPAA laws in protecting the privacy of patient health information.	-.101	.063	.346	.005	-.122	-.211	.717(**)	1.000	-.086
I feel that patient health information shared with domestic business partners is more secure than patient health information shared with foreign business partners.	.194	.319	.089	-.281	-.119	.082	.031	-.086	1.000
	.295	.080	.632	.125	.523	.663	.867	.646	.
	.31	.31	.31	.31	.31	.31	.31	.31	.31

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).