

Privacy and Security Solutions for Interoperable Health Information Exchange

Wyoming Health Information Security and Privacy Collaboration: Final Implementation Plan Report

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Introduction

In the short time that the Wyoming Health Information Security and Privacy Collaboration (WyoHISPC) has been active, the project staff have documented a significant increase in awareness of the issues relating to health information technology (HIT) in general and health information exchange (HIE) in particular. We have also seen a dramatic increase in the number of people desiring to participate in activities to support and enhance the use of these technologies in Wyoming. The project can take credit for catalyzing conversations among high-ranking policymakers, including Wyoming's Congressional delegation, the Governor's Office, the Dean of the College of Health Sciences at the University of Wyoming, Wyoming State Legislators, the Wyoming Healthcare Commission, and the Wyoming Health Information Organization. The project has also spurred an interest in electronic health records among members of the press and has received a fair amount of coverage in both print and radio statewide.

The HISPC project has also brought Wyoming health care professionals together and provided them with the opportunity to express their concerns and visions regarding HIT/HIE in a collaborative fashion, and we think Wyoming's population will be rewarded because of these discussions. The process to implement some of the solutions that we have proposed in this and previous reports has begun, and we believe that many of the remaining solutions will gain traction in the future. This project has worked to initiate the discussion, and Wyoming's health care community appears to be excited to continue the process.

The project has also initiated discussions at regional and national levels, and we in Wyoming are pleased to be included in these discussions. As a result of our work, we are participating in a variety of activities outside the state. As of the date this report is being submitted, two members of the project staff are attending a regional meeting on inter-state HIE being held in Colorado. The Wyoming project director, Dr. Rex Gantenbein, was one of three state project directors invited by RTI to discuss the project at the American Health Information Community meeting in March 2007, a meeting that we believe went a long way in convincing HHS Secretary Mike Leavitt of the work's value. Dr. Gantenbein will also be participating in a CMS-sponsored Region VIII Health IT Roundtable in Salt Lake City this coming May, which will be attended by several governors and state officials, CMS representatives, and others involved in HIT in the six Western states comprising the region.

Overall, we believe that the WyoHISPC project has more than accomplished the goals set out in the original contract proposal, and we look forward to continuing the efforts started here to improve HIT and HIE in our state.

Section One – Background

Throughout the duration of this project, Wyoming Health Information Security and Privacy Collaboration (HISPC) stakeholders have identified barriers related to maintaining and establishing privacy and security in health information exchange (HIE) and solutions to overcome these obstacles. In all of our project activities we have been most fortunate to reach key stakeholders representing a broad variety of categories and professions. These stakeholders have consistently come to the table with a candid and open approach to the discussion, resulting in input which has significant relevance to our project objectives and goals.

The purpose of this report is to describe implementation plans for the solutions identified by our stakeholders. The plans aim to remove or mitigate the barriers identified while creating or preserving essential privacy and security protections for consumers. In short, this Final Implementation Plan Report aims to document, in detail, what actions need to be taken to implement the proposed solutions; what stakeholders, organizations, and agencies within the state are particularly responsible for taking action; what level of resources are needed to implement the solutions; and, finally, how much time is necessary for implementing our proposed solutions.

From the outset of the project, our stakeholders have approached this project pragmatically. While they could have proposed solutions necessitating a revolution within the health care industry, our stakeholders instead called for incremental steps in an effort to reform business practices from the ground up. At the heart of this approach lies an assumption that incremental steps for change are qualitatively superior to radical reversals of the status quo. Our stakeholders did not find it useful to call for a complete rewrite of HIPAA regulations, but rather to use education and outreach to address the regulation's various misinterpretations.

There are obviously limitations to this report. But we are taking this opportunity to create a document that will be used for vetting purposes. Although Wyoming stakeholders know the seriousness of the subject matter and have volunteered many hours to discussing the problems of HIE with our team, we could not speak with every consumer and healthcare professional in Wyoming. This report reflects the opinions of those who had the chance to discuss these issues in workgroup sessions or individually with project team members. We attempted to obtain input about the security and privacy concerns related to HIE from a cross-section of the Wyoming population, including consumers, physicians, nurses, academics, legislators, ombudspersons, etc.

The Interim Implementation Plan Report was circulated to known stakeholders throughout Wyoming for their scrutiny. A symposium on privacy, security, and health information exchange was held on March 26, 2007 to report on our findings and invite more stakeholders to share their perceptions and concerns. We believe this process of oversight is important for capturing the sentiment of all stakeholders groups involved in the process and for building support for the future of HIE in Wyoming. Using the information garnered from various workgroup sessions, implementation plans were crafted to address our stakeholders' most pressing concerns and interests.

Section Two – Summary of Final Analysis of Solutions Report

For Electronic Health Records (EHRs) to be truly useful, there must be some mechanism by which private information can be exchanged securely among separate and independent systems. This is the primary driver behind the Health Information Security and Privacy Collaboration (HISPC) project, in which Wyoming and other states/territories are participating. During the course of this project, privacy and security barriers and effective practices impacting the exchange of health information have been identified. The barriers result in lower quality and more costly health services, inhibited ability for early detection of adverse public health events, and constraints to health and patient safety research, to name a few.

Wyoming currently has relatively little infrastructure supporting large-scale Health Information Exchange (HIE). EHRs are in use in several of Wyoming's health care facilities, but attempts to fund the creation of infrastructure that would support interoperability among these and developing EHR systems have, by and large, been unsuccessful.

In November 2006, the Wyoming HISPC team submitted an Interim Assessment of Variations Report to the HISPC contracting agency. Several themes surrounding HIE emerged during this phase of the project, including:

- interoperability, timeliness, and completeness of medical records
- user and entity authentication
- information authorization and access controls
- patient and provider identification
- transmission security
- state law restrictions
- information use and disclosure policies

The purpose of this section is to summarize the recommendations and solutions offered by Wyoming stakeholders regarding the privacy and security barriers affecting HIE.

(1) Establishment of a Wyoming HIE Policy Coordinating Center

Stakeholder discussions of issues surrounding HIE invariably included the need to have good information regarding current laws and implications for policy and practice. Paired with this determination was a general acknowledgment that Wyoming lacked the focus of a single resource, available to all health care professionals to provide consistent information, education and training in these important areas. Stakeholders recognized value in the concept of a resource and policy center to address 1) education and training; 2) present a multidisciplinary approach; and 3) assist in supporting consumer empowerment.

(a) Education and Training

One of the fundamental barriers facing HIE in Wyoming is general misunderstanding of relevant laws. The Health Insurance Portability and Accountability Act of 1996 (HIPAA)¹ appears to be a universal concern for health care professionals in this state. Among other things, HIPAA defines how “protected health information” can be used and disclosed by covered entities, and details the safeguards covered entities must implement to ensure a secure

¹ 45 CFR Part 164

transmission of patient information. The inconsistent and incorrect interpretation of HIPAA, at best, engenders conservative practices regarding exchanging health information.

While misinterpretation of HIPAA was the primary legal concern for Wyoming stakeholders, there were also misinterpretations of state statutes as well, particularly the Wyoming Hospital Records and Information Act.² Overall, there is a fear of legal reprisal for wrongful disclosure of health information. Because misinterpretations seem to be so prevalent, Wyoming stakeholders championed the establishment of a statewide center for health information exchange policy that would analyze, clarify and communicate to Wyoming's health care professionals and consumers the current legal and technical issues encompassing HIE. "Education and training" were the most often cited solutions for addressing problems associated with HIE in Wyoming, making education in health, legal and technical areas critical components of a policy center. This education could be delivered through multiple formats, including web and video outreach, on-site trainings, and the development of training modules tailored to Wyoming's needs.

(b) Development of Multidisciplinary Training Programs

Wyoming stakeholders made it clear that the training addressing the misinterpretations of HIPAA, as well as virtually *all* subsequent HIPAA training, should be done in a multidisciplinary manner. The multidisciplinary approach will, at the very least, make sure that all participants in the provision of health care are "on the same page" with their understanding of critical HIPAA regulations and deepen the participants' understanding and improve their perceptions of the quality, role and importance of their fellow health team members. These training programs could be offered for providers themselves, but one stakeholder advocated having an orientation-type class at the university for all students entering the health field.

(c) Promoting Privacy Through Consumer Empowerment

Wyoming stakeholders had various ideas to empower consumers in their understanding and utilization of their personal health information. Of primary concern among consumer stakeholders was the ability of an HIE system to prevent the disclosure of information that could jeopardize their health insurance coverage. Educating consumers about HIE and issues of privacy and security is one solution to these concerns, and promotion of personal patient health information (PHI) devices, such as jump drives or websites, is another.

(2) Creation of an HIE Demonstration Project

Wyoming stakeholders' concerns about the cost, capabilities, effectiveness and security of EHR systems, support a demonstration project that would educate health care providers and consumers alike about the benefits of an interoperable system in the state. Rather than compiling health data in a centralized data repository, an approach which appears to be politically infeasible, the demonstration project would be an interface that works to connect systems. The proposed pilot project would use the University of Wyoming's family practice residency facilities, as well as other facilities throughout the state and region willing to participate, to demonstrate the interoperability of EHRs through a distributive network.

² W. S. §35-2-601 to 617 (2005)

(3) Sustainable Support – Wyoming Health Information Technology Commission

Several stakeholders reiterated the notion that if providers are going to adopt EHRs, and if there is any hope that those EHRs are going to be interoperable, the government will have to be a driving force for their implementation. Thus, our stakeholders have supported the concept of a state-managed (and state-funded) commission directed to investigate the future of HIT in Wyoming and the Rocky Mountain Region by bringing parties together in a collaborative manner.

(a) Establishment of Multi-State Panel to Address HIE Policy and Law

Due to the *regionality* of Wyoming's health care, one stakeholder recommended creating a panel consisting of knowledgeable, high-ranking individuals from Wyoming, Utah, Idaho, Montana, South Dakota, Nebraska and Colorado to analyze and make policy recommendations to state versions of HIPAA. This type of panel could assess the available technologies for HIE, and bring to the table experiences of individual states. Common issues, practices, and solutions could be identified by the panel, and could facilitate a more effective and efficient process of HIE. If nothing else, this endeavor would put the issues surrounding the regionality of Wyoming's HIE on the table. This panel could also be instrumental in the region addressing issues such as standards for interoperability, operating procedures and best practices, protocols for access and standard formats for authorization.

(4) Legal Focus: Notification of Breach and Clarification of Laws

Stakeholders expressed fear of electronic data systems experiencing a breach resulting in disclosure of protected health information and a strong interest in receiving clarification of existing laws related to disclosure of protected health information in certain situations.

(a) Notification of Breach of Data Systems

One of the primary concerns among Wyoming consumer stakeholders regarding HIE was *security*. Due to the surge in the number of records containing sensitive personal information that have been compromised, Wyoming stakeholders supported enacting mandatory reporting laws that require all individuals potentially impacted by such transgressions to be notified so they can take the appropriate steps to protect themselves against identity theft. While the Wyoming HISPIC project was underway and workgroups were meeting, the Wyoming Legislature supported a bill addressing security breaches. A "credit freeze" bill requiring notification to consumers when the security of a computerized data system containing personal identifying information is breached became law during the 2007 legislative session. The law applies to "an individual or commercial entity that conducts business in Wyoming and that owns or licenses computerized data that includes personal identifying information about a Wyoming resident." Enrolled Act No. 76. While not specifically addressing health care information, arguably, it would apply to health care providers who maintain personal identifying information about their patients as computerized data. According to the bill, a "breach of the security of the data system" means unauthorized acquisition of computerized data that materially compromises the security, confidentiality or integrity of personal identifying information maintained by a person or business and causes or is reasonably believed to cause loss or injury to a resident of this state.³ This new provision may alleviate some patient fears regarding unauthorized access, while at the

³ See <http://legisweb.state.wy.us/2007/Introduced/SF0053.pdf> for a full version of the pre-filed bill.

same time, providing yet another regulation for health care professionals to interpret on these issues.

(b) Legislation Harmonization

We are proposing the harmonization of state and federal law to provide a legal environment that is clear and consistent for exchanging health information. Most of the issues surrounding HIE identified by stakeholders were deemed conflicting interpretations of existing law. Stakeholders identified the Wyoming Hospital Records and Information Act (§ W.S. 35-2-601) as a barrier to HIE, because it assumed to prohibit re-disclosing protected health information that was not created by the releasing provider. However, this is a misinterpretation. With the exception of mental health or substance abuse records, there is nothing anywhere in state statutes or federal acts that work to prohibit the re-release of *health care information*. Stakeholders identified the confusion and inefficiencies caused by the variations in interpreting HIPAA and the Wyoming Hospital Records and Information Act as a key concern for HIE in Wyoming, and they called for a synchronization of law to avoid the conflicting interpretations which affect the exchange of health information in Wyoming.

Section Three – Review of State Implementation Planning Process

The State Implementation Planning Workgroup, led by a Cheyenne physician, was charged with making recommendations to the WyoHISPC team to implement the solutions proposed by stakeholders during the solutions phase of the HISPC project. The Implementation Workgroup's membership consisted of a broad representation of Wyoming health care stakeholders, including physicians, members of the Wyoming Health Information Organization (WyHIO), members of the Wyoming Healthcare Commission, administrators from the Wyoming Department of Health, hospital administrators, Deputy Attorney Generals, hospital attorneys, consumer advocates, hospital IT professionals, and hospital medical records staff.

To formulate, develop, and assess the feasibility of implementation plans, the WyoHISPC team synopsised the State Interim Analysis of Solutions Report into an Executive Summary, which was then circulated to the WyoHISPC Steering Committee and the stakeholders who have participated in the HISPC project. The summary was also posted on the WyoHISPC website, along with the full report. Stakeholders were invited to participate in an Implementation Workgroup in Cheyenne, WY, during which we summarized the identified solutions and held breakout sessions to assess each solution's avenue for implementation. Following the breakout groups, the group reconvened to summarize the ideas for each implementation plan. Walking through each solution and its plan for implementation worked to vet the recommendations among the larger stakeholder group. This process of proposing solutions and then asking for suggestions and comments was effective for generating ideas and determining feasibility. Subsequent to the workgroup, we summarized the proposed implementation plans and sent a copy to all participating stakeholders to gather clarifications, concerns, thoughts, and general remarks.

In addition to the initial Implementation Workgroup, the WyoHISPC team conducted several other workgroups via teleconference with stakeholders around Wyoming. A similar information gathering process was undertaken with these stakeholders: the Executive Summary was provided via email, a brief overview of each solution was given over the phone, and the stakeholder was asked which solution s/he was most comfortable commenting on. We then gave stakeholders the opportunity to provide suggestions for implementing the solution and space to consider barriers to its implementation. We also gave stakeholders the opportunity to suggest additional barriers to HIE and propose supplementary solutions. We attempted to create an atmosphere with these workgroups in which stakeholders felt comfortable talking openly about their concerns.

In addition to the formal stakeholder workgroups, the project held a HIE symposium in Casper WY on March 26, 2007 to vet the implementation plans and to continue the momentum of this project. The morning session invited stakeholders to share their perceptions of the privacy and security barriers facing health information exchange and the proposed solutions to meet these challenges. While most of the attendees and speakers were from Wyoming, a speaker from the Research Triangle Institute (RTI) provided a national perspective. Colorado and Utah HISPC projects were also invited to provide a regional perspective. In the afternoon session, break-out groups discussed individual implementation plans, following which the group reconvened to report and evaluate the findings.

Section Four – State-level Implementation Plans

The Implementation Plans discussed in this report are organized by subject matter. Stakeholder solutions fell into three broad categories—legal, educational, and technical—and we have prioritized the solutions based upon stakeholder support. In short, we have provided implementation plans only for those solutions which stakeholders believed were the most relevant and practical for addressing health information exchange in Wyoming.

Legal Solution 1 – Health Information Privacy Law

(1) Summary of effective practice(s) to be instituted or barrier(s) to be mitigated or eliminated

Stakeholders are confident that the skyrocketing number of records containing sensitive personal information being breached is a barrier to the adoption of interoperable EHRs. According to the Privacy Rights Clearinghouse, over the past two years there have been nearly 100 million instances of sensitive data breached.⁴ As one commentator has pointed out,

The most vexing issue surround the creation of a national electronic healthcare network is the privacy, confidentiality, and security concerns of personal health information. The ability to gain consumer “trust” is essential for adoption. Even today, with our paper-based system, that trust is spotty. Millions of Americans perceive no self-interest, let alone a national public health interest, in sharing their health information. A sizable percentage of people who see mental health providers, for example, pay out-of-pocket for care and drugs, and request that any track record of that care be closely guarded. Thousands of people still get HIV and other sexually transmitted disease tests “off the grid.”⁵

Wyoming consumers are not unaffected by this development. Stakeholders repeatedly expressed concern that people in Wyoming are fearful of identity theft, job security, and insurance coverage, and this fear has reached the point where many patients who present at emergency rooms are unwilling to provide their social security numbers. Such concerns are well founded. In 2002, identity theft accounted for forty-three percent of all complaints to the Federal Trade Commission, up eighty-eight percent from 2001. Over 250,000 complaints of identity theft were lodged with the Federal Trade Commission in what “marks the seventh consecutive year that identity theft has been ranked number one.”⁶ Moreover, in 2002, a telephone survey indicated as many as one in 20 adults, or 11.8 million Americans, have been victims of identity theft.⁷

Due to the concern over the number of records containing personal information being compromised, the project discussed the enactment of statewide mandatory reporting law that would require all individuals potentially impacted by such a transgression to be notified by the entity which houses the data. Such legislation, according to stakeholders, will work to address consumer concerns regarding the practice of exchanging personal information electronically. Wyoming stakeholders feel that the widespread adoption of HIT will not progress without

⁴ Regan, Keith. (September 25, 2006). “No End in Sight: Data Breach Tally Approaches 100 million.” www.EcommerceTimes.com.

⁵ Findlay, Steve and Alison Rein. (January 15, 2007). “On IT, Privacy is the Priority.” *Healthcare* 37 3, p. 22.

⁶ McMillan, Robert. (February 7, 2007). “FTC: Identity Theft Remains Top Consumer Complaint.” *PC World*. See: www.pcworld.com

⁷ See: <http://www.privacy.ca.gov/cover/identitytheft.htm>

consumer support, and therefore a privacy law protecting patient health information is a much needed step toward an interoperable electronic health information system.

Many states have responded to the increase in data breaches by passing mandatory notification laws. California passed the country's first mandatory security breach notification law July 1, 2003. Since enactment of California's Security Breach Information Act, legislation has been introduced in thirty-five states and in Congress; twenty states have passed legislation, including two states that border Wyoming and resemble its political culture, Montana and Nebraska. Montana's legislation strengthens security and privacy for consumers by requiring entities housing personal information to inform individuals of security breaches. It also mandates that "Any person or business that conducts business in Montana and that owns or licenses computerized data that includes personal information shall disclose any breach of the security of the data system following discovery or notification of the breach to any resident of Montana whose unencrypted personal information was or is reasonably believed to have been acquired by an unauthorized person." The disclosure must be made without unreasonable delay. Individuals can be notified in writing, electronically (if in compliance with regulations governing electronic signatures), by telephone, or, in the event of certain circumstances, by substitute methods. In order for the damage of identity theft to be minimized, individuals must be given time to act expeditiously.⁸

In addition, several states have passed legislation that provides consumers with more extensive protection. New Jersey's Identity Theft Prevention Act, for example, "requires businesses to destroy all customer data that's no longer needed." Louisiana's Database Security Breach Notification Law requires entities that collect sensitive personal information to contact government officials in the event of a security breach, and some states require businesses to provide affected individuals with "credit-monitoring services."⁹

While the Wyoming HISPIC project was underway, the Wyoming Legislature in its 2007 session passed a "credit freeze" bill that requires notification to consumers when the security of a computerized data system containing personal identifying information is breached. The law applies to "an individual or commercial entity that conducts business in Wyoming and that owns or licenses computerized data that includes personal identifying information about a Wyoming resident."¹⁰ While not specifically addressing health care information, arguably, it would apply to health care providers who maintain personal identifying information about their patients as computerized data. According to the bill, a "breach of the security of the data system" means unauthorized acquisition of computerized data that materially compromises the security, confidentiality or integrity of personal identifying information maintained by a person or business and causes or is reasonably believed to cause loss or injury to a resident of this state.¹¹ This new provision may alleviate some patient fears regarding unauthorized access, while at the same time, providing yet another regulation for health care professionals to interpret on these issues.

⁸ Montana Code § 30-14-1704; <http://data.opi.state.mt.us/bills/2005/billhtml/HB0732.htm>.

⁹ Mearian, Lucas. (January 9, 2006). "Three More States Add Laws on Data Breaches." *Computerworld*, p. 8.

¹⁰ Enrolled Act No. 76

¹¹ See <http://legisweb.state.wy.us/2007/Introduced/SF0053.pdf> for a full version of the pre-filed bill.

In the absence of a comprehensive federal law, these are but a few of the options given to states to protect the sensitive information of their citizens. As an increasing amount of sensitive, personal information is collected and housed in electronic form, consumers will need—indeed demand—the information to be secure in order to safeguard privacy.

(2) *Planning assumptions or decisions*

Due to the prevalence of identity theft and the fact that Wyoming stakeholders are confident that HIT adoption will be consumer driven, safeguards on consumer privacy must be in place if consumers are to strongly support electronic HIE. Stakeholders insist safeguards must be in place to gain their confidence and trust. Without incorporating privacy protections on multiple levels—state and federal law, institutional policies, and technical safeguards—consumers will not support the development of statewide or national health information networks.

(3) *Project ownership and responsibilities*

To address the concerns of stakeholders, enactment of a health information privacy law is proposed. This task would be carried out with the leadership of key Wyoming legislators who would draft and propose a bill to the Wyoming State Legislature. An interim study would have to be conducted, perhaps by Wyoming's Legislative Service Office, to illustrate the necessity of such legislation. Legislators and citizens alike need to be convinced this is a problem. Partnering with the Wyoming Health Information Organization or the Wyoming Healthcare Commission could serve to facilitate such a bill finding its way to a legislative committee. The WyoHISPC team will present their recommendations at several Wyoming health care organization meetings, including the Wyoming Health Information Organization, the Wyoming Healthcare Commission, and the Wyoming Medical Society. According to one stakeholder, for this bill to pass legislators will have to be convinced security breaches of health information is a pressing problem.

(3) *Clearly defined project scope*

The main objective of the legislation is to provide consumers with an added layer of security for health information. Consumers are concerned that information shared electronically may not be secure or may be seen by unauthorized individuals, and there is also fear of inappropriate secondary uses of health information. This privacy law would require all individuals potentially impacted by security breaches involving sensitive personal information to be notified so they can take the appropriate steps to protect themselves against identity theft. Furthermore, the entity housing the data will also contact the appropriate state agency to report the security breach (with de-identified information).

Wyoming Session Laws 2007 Enrolled Act 76, provides for notification when security is breached which could reasonably lead to disclosure of personal information. However, the intent and focus of the bill is to provide an avenue for a consumer to freeze her credit report if a breach occurs. How this law, which does not specifically address health care information maintained electronically, will be applied to the health care industry, remains to be seen. Will provisions of the law address the specific concerns regarding privacy and security expressed by project stakeholders? How will this law be interpreted by health care counsel? Will this law only add to the current confusion regarding requirements under HIPAA and the Wyoming Hospital Records Act? Until the law is enacted and comes into use, speculation about these issues will continue. In the interim, the project is committed to representing the concerns of its stakeholders

previously noted in this report and will examine the development of a health information privacy law as described.

(4) Tasks required

The development of the legislation would require working closely with supportive Wyoming legislators, researching current legislation in other states, and drafting a bill that provides adequate consumer protection for breaches of sensitive personal data.

(5) Project timeline and milestones

Locating a legislator supportive of this privacy bill and willing to work toward its passage will be the primary objective of this solution. In order for this solution to build the political capital necessary to win support from the broad base of stakeholders it will affect, the Legislative Service Office (or some other non-partisan policy center) should conduct a study to determine the necessity and feasibility of enacting such legislation. Because this legislation aims protect the privacy and security of consumer information, a survey should be conducted to ascertain the perceptions of Wyoming consumers about computerized data and privacy.

(6) Projected costs and resources required

The development of this legislation would require very little financial resources (other than the initial study), but would require legal and legislative expertise capable of researching, drafting, and, potentially, passing the bill.

(7) Means for tracking, measuring, and reporting progress

The results of a consumer survey or opinion poll will help determine the likelihood of this bill passing. The initial assessment offered by the Legislative Service Office (or other entity) will provide a basis to measure this solution's progress, and its development as a proposed bill for review by legislative committee and filed for consideration in the legislature. If the bill is proposed and passed, the state could create a means for tracking the number and severity of data breaches over time, thereby providing consumers and policy makers with information to evaluate privacy and security concerns in the future.

(8) Impact assessment

Every consumer is a stakeholder and a citizen, and thus a mandatory reporting law affects everyone equally. Entities that store and maintain data will have the responsibility of contacting individuals whose data has been compromised, thus they are impacted more heavily. Stakeholders feel that an increased level of oversight of personal data will give entities that store sensitive personal data more legitimacy.

(9) Feasibility

If bill sponsors can be found, the proposed legislation may be feasible. However, any legislation impacting health care will require the support of the Wyoming Medical Society and perhaps the Wyoming Hospital Association as well. As mentioned earlier, Montana and Nebraska have made notification mandatory in the event of a breach of sensitive personal information, so there are models in nearby states for such legislation.

(10) *Potential barriers*

Wyoming has a citizen legislature that only meets a maximum of sixty days every two years. It can be difficult to pass legislation that does not have a broad base of support and a strong proponent in a leadership position.

Legal Solution 2 – Legislation Clarification

(1) *Summary of effective practice(s) to be instituted or barrier(s) to be mitigated or eliminated*

We are proposing the harmonization of state and federal law to provide a legal environment that is clear and consistent for exchanging health information. Most of the issues surrounding HIE identified by stakeholders were deemed conflicting interpretations of existing law. Stakeholders identified the Wyoming Hospital Records and Information Act (§ W.S. 35-2-601) as a barrier to HIE, because it assumed to prohibit re-disclosing PHI that was not created by the releasing provider. However, this is a misinterpretation. With the exception of mental health or substance abuse records, neither state statutes nor federal acts work to prohibit the re-release of *health care information*. Stakeholders identified the confusion and inefficiencies caused by the variations in interpreting HIPAA and the Wyoming Hospital Records and Information Act as a key concern for HIE in Wyoming, and they called for a synchronization of law to avoid the conflicting interpretations which affect the exchange of health information in Wyoming.

While the primary focus of synchronizing legislation was on HIPAA and the Hospital Records and Information Act, stakeholders were also concerned about the impact of the Wyoming Public Records Act on health information exchange (§ W.S. 9-2-401 through 9-2-415; 16-4-201 through 16-4-205). Stakeholders were particularly concerned about the differences between the Hospital Records Act and the Public Records Act. Although stakeholders did not provide any specific recommendations, many were certain that both statutes need to undergo thorough and critical analysis, especially with respect to provisions dealing with research, peer review, confidentiality, and limited data sets.¹² In short, state law appears more restrictive than federal law in terms of what kind of health information can be exchanged and how that information can be exchanged. As a consequence, there is much confusion and fear among health care professionals about HIE. Stakeholders are convinced that parallel law or a federal standard for HIE would result in more coherent HIE practices. This is particularly true for Wyoming, since a vast amount of information flows across state lines, thereby necessitating knowledge of Colorado, Utah, Montana, Nebraska, Idaho, and South Dakota law—all states where a significant amount of Wyoming residents seek medical treatment.

Consent/authorization for disclosure of protected health information is specifically discussed in federal mental health and substance abuse law as well as HIPAA. Wyoming's Hospital Records Act also addresses consent to disclose. The issue of adequate or informed consent was not a primary concern for provider stakeholders, but may have been found to be more important among consumers. Perhaps consent was not determined to be an issue because Wyoming lacks widespread HIE or telemedicine delivery systems. Variation among states in how consent is considered will create difficulty in developing regional HIE. Some have suggested engaging the national Conference of Commissioners on Uniform State Laws, to consider the creation of a uniform law addressing consent for exchange of HIE. One area in which a standardized approach to consent that may benefit all states, including Wyoming, would

¹² One stakeholder noted that there are several other laws—including 42 CFR Part 2, public health laws, professional standards, privilege laws, etc.—that must be included in this process of review and analysis.

be through creation of uniform laws addressing emergency care that implicates the transmission of records across state lines. Prior to that undertaking or any federal pronouncement on consent, Wyoming should evaluate its current statutes and case law in this area.

(2) *Planning assumptions or decisions*

This solution is based on the idea that differences and inconsistencies between state and federal law are a barrier to the exchange of health information. Stakeholders clearly do not want to simply remove the more restrictive aspects of Wyoming law. The major problem, according to stakeholders, is that the overlap between the two laws causes confusion. Moreover, the Hospital Records and Information Act only applies to hospitals with in-patient beds, thereby limiting its usefulness to health information exchange generally. Stakeholders argued for applying more restrictive elements of the Hospital Records and Information Act among other state statutes to maintain the security of patient health information. From the vantage point of numerous stakeholders, the overlap of HIE law results in inefficiencies and, ultimately, a reluctance to exchange information for fear of liability associated with wrongful disclosure. Synchronizing state and federal law will alleviate the issues in the current paper-based system before a transition to a nationwide, interoperable, electronic system.

(3) *Project ownership and responsibilities*

The harmonization of state law with federal law would require: (1) statutory change and (2) revision of state agencies' rules and regulations. Clearly, statutory change would require buy-in and involvement of the state legislature. One stakeholder argued that the Department of Health could take a leadership role by revising its rules and regulations. In either event, harmonization of state and federal law regarding health information exchange is the objective, i.e., HIPAA, the Wyoming Hospital Records and Information Act, and the Wyoming Public Records Act.

Stakeholders feel that the Wyoming Health Information Organization and the Wyoming Healthcare Commission—two established Wyoming health care entities with broad representation and political backing—may be the best vehicles for getting this issue the publicity and support it needs.

(4) *Clearly defined project scope*

Stakeholders struggle to understand inconsistencies between federal and state privacy laws and how to apply the laws in particular situations. Health care agency rules and regulations only add to this confusion. The project scope for this legal solution would include a thorough analysis of all laws and rules and regulations related to health care privacy.

(5) *Tasks required*

An interim study to identify and assess the key differences between HIPAA and the Wyoming Hospital Records and Information Act is an essential task for this solution. The study would also have to assess state agencies' rules and regulations involving health information to determine if revising and updating these rules is a better avenue than legislative action. This study would be a major undertaking and would need to be conducted by a private entity or consulting firm. The Wyoming Legislative Service Office assists the state legislature in researching and drafting legislation and would not have the manpower to carry out this study.

(6) *Project timeline and milestones*

Obtaining funding is essential to commissioning a study to evaluate the benefits, challenges, and affects of harmonizing state and federal law. Finding state leaders, such as legislators, policymakers, and health care attorneys, who support this idea will be critical to its survival and in identifying needed funding. Once funding has been identified and procured, the next goal will be to locate and appoint an entity capable of conducting the research and policy analysis. The research will provide state agencies and legislators with the recommendations needed to take the necessary action.

(7) *Projected costs and resources required*

Monies to fund a thorough interim study are indispensable to the success of this solution. A full-time benefited staff position for one year, including expenses, would cost in the range of sixty thousand dollars. An alternative would be to issue a Request for Proposal (RFP) with a specifically defined scope of work.

(8) *Means for tracking, measuring, and reporting progress*

An interim study with several deliverables over the course of one year could assist in determining the feasibility and benefits of harmonizing state and federal law. Deliverables could include: (1) identifying all state and federal laws related to health information; (2) identifying agency rules and regulations relating to health information; (3) determining where laws and rules are identical and where they conflict; (4) recommending implementation strategies.

(9) *Impact assessment*

While this solution will affect all citizens of Wyoming, it will principally affect policy makers, legislators, and health care professionals actively engaged in the process of HIE. Analysis of Wyoming's current laws may discover that many do not reflect technical advances of recent years, or in terms of electronic transmission issues, are simply non-existent. Following analysis of Wyoming's laws, and comparison with federal requirements, Wyoming will need to determine an appropriate path to resolve current conflicts and ambiguities. One solution may be to create new statutes to specifically address HIE, with reference back to existing privacy laws.

(10) *Feasibility*

Stakeholders are confident that this can be accomplished in Wyoming. At least one legislator has participated in these discussions as well as numerous health care attorneys.

(11) *Potential barriers*

There are three major barriers to this solution. Its scope is so far-reaching that stakeholders may approach it with caution and hesitation. Second, Wyoming's political culture is very conservative. Legislators may be tentative about allocating funds for the purpose of revamping state statutes and shifting various provisions to other statutes, as well as a fear of losing state sovereignty in some instances of HIE. Third, this solution will not be painless to implement. It will require an extensive amount of research and analysis, a considerable amount of funding, as well as strong political will to carry out the solution to its realization. Also, a legislature which has failed to pass any legislation to promote HIE may not consider this a priority in terms of either time or funding.

Legal Solution 3 – HIE and Juveniles

(1) Summary of effective practice(s) to be instituted or barrier(s) to be mitigated or eliminated

The exchange of health information concerning juveniles in Wyoming is confused by conflicting interpretations of state and federal law. According to stakeholders, ambiguities regarding juveniles result in inconsistent business practices which negatively affect the quality of care offered. Stakeholders noted the usefulness of having a state statute that clearly defines who is allowed to share information about juveniles, particularly for high-risk individuals or as a matter of public safety/public health. Foster care was specifically noted as an area that could benefit from clearly defined authority to exchange health information. Our stakeholders noted a North Carolina statute that could lend some guidance: “Agencies that may be designated as ‘agencies authorized to share information’ include local mental health facilities, local health departments, local departments of social services, local law enforcement agencies, local school administrative units, the district attorney’s office, the Department of Juvenile Justice and Delinquency Prevention, and the Office of Guardian ad Litem services of the Administrative Office of the Courts.”¹³

In addition to identifying entities and situations where disclosure would be permitted, Wyoming law in this area should also define what health information is allowed to be shared, particularly among social workers, law enforcement, and parents/guardians. While HIPAA and 42 CFR Part 2 may address these concerns, stakeholders would like to more specific Wyoming law on this issue. Furthermore, due to the great sensitivity, perceptions and misconceptions surrounding mental health and related issues, the consequences for inappropriate disclosure will need to be examined and seriously considered as part of any such legislation.

(2) Planning assumptions or decisions

This solution presupposes that clarification of state law is an efficient mechanism for improving the problems associated with HIE and juveniles.

(3) Project ownership and responsibilities

With the assistance of child advocacy groups willing to research the topic and assist in drafting a bill, Wyoming State Legislators will work to enact law.

(4) Clearly defined project scope

Wyoming needs to clarify state laws defining the use and disclosure of protected health information involving juveniles.

(5) Tasks required

This proposed solution requires broad public support and the interests of a state legislature willing to work with stakeholders to research and draft appropriate legislation.

(6) Project timeline and milestones

Wyoming’s legislature only meets sixty days every two years, so passing legislation in Wyoming is always difficult. Stakeholders will have to work diligently to accomplish this solution, but finding a legislator to sponsor the bill and pre-filing it with the Legislative Service Office will improve its chances.

¹³ § N.C. 7B-3100; see <http://www.ncleg.net>.

(7) *Projected costs and resources required*

According to stakeholders, this solution would require minimal financial resources. On the other hand, it would require extensive research, work and commitment from all those stakeholders who identify this as an important goal.

(8) *Means for tracking, measuring, and reporting progress*

A consumer survey or opinion poll should be conducted and will help determine the likelihood of this bill passing. The Legislative Service Office (or other entity) will provide a basis to measure this solution's progress, and its development as a proposed bill for review by legislative committee and filed for consideration in the legislature.

(9) *Impact assessment*

This solution affects all stakeholder groups who deal with exchanging juvenile health information.

(10) *Feasibility*

Stakeholders were resolute in their belief that this piece of legislation could be enacted in this state to address these issues, increasing the quality of care delivered by Wyoming's health care professionals. According to one stakeholder, "political will" will be needed to accomplish legislation of this kind.

(11) *Potential barriers*

Time is obviously a barrier to the enactment of any legislation, but the more critical barrier is the ability to gain enough political support for the legislation to pass both chambers of the legislature. Wyoming's political process is very unforgiving.

Educational Solution 1 – Research and Policy Coordinating Center

(1) Summary of effective practice(s) to be instituted or barrier(s) to be mitigated or eliminated

There are serious privacy and security concerns encircling the exchange of health information. If widespread adoption of interoperable electronic health records is to be accomplished within the next ten years, stakeholders believe education and policy coordination must play an essential role. Both providers and consumers simply need to know the issues before any real progress can be made.

Stakeholders in Wyoming's variations and legal workgroups consistently noted conflicting interpretations of law as the primary challenge in exchanging health information among separate entities. When asked about potential solutions that mitigate these inconsistent understandings, stakeholders consistently—and overwhelmingly—suggested education and policy research as the ideal mechanisms for addressing these barriers. To implement these solutions, stakeholders proposed the creation of a research and policy coordinating center for Wyoming.

This center would have the responsibility of coordinating research and education to address barriers to health information exchange identified over the course of this project. A key problem facing health care professionals in this regard is conflicting interpretations of law. The center would act as a clearinghouse for education and training on laws (federal and state) affecting health information exchange, and provide clear and concise explanations of law in user-friendly formats. One stakeholder suggested using online or distance education to conduct trainings; others suggested on-site training. Almost all stakeholders agreed annual, multidisciplinary training conducted by local experts would be of the highest value. National HIPAA conferences were noted to be expensive and uncertain to address local issues affecting health information exchange.

In addition to a clearinghouse on HIE law, stakeholders stressed the need for a non-vendor advocate for health information technology. There is much confusion about the costs and benefits of HIT, and an entity capable of educating both providers and consumers about potential rewards in terms of privacy, security, costs, and quality of care by adopting interoperable electronic health records could be very beneficial. Patients need to know their rights and providers need to know how best to protect those rights. According to many stakeholders, widespread adoption of HIT will be consumer driven. The proposed center would provide on-site or distance education to consumers about critical aspects of HIE and HIT to establish greater trust in these systems.

The relationship between law enforcement and hospitals was also cited as a barrier to HIE, especially in terms of releasing information regarding blood alcohol levels. Several key stakeholders—attorneys, law enforcement officers, state legislators, and hospital medical records staff—believe this barrier could be resolved through the work of a policy center. Crafting scenarios and hosting workgroups for stakeholders will help to identify and clarify the role law enforcement plays in the process of exchanging health information with hospitals. The overall goal of this project would be to identify best practices. Once identified and vetted by representatives from all stakeholder groups, including the Wyoming Health Information Management Association (WHIMA), the center would have the responsibility to promote these best practices to the health care community. One stakeholder hospital has a manual that could be used as a model to begin the discussion. It is important to note several meetings have taken place and this solution has a great deal of stakeholder support, particularly from the Wyoming Law Enforcement Training Academy.

Stakeholders isolated a fundamental problem in the area of health information exchange: *fragmentation*. Nearly every aspect of the health information exchange process is disjointed. While many health care entities in Wyoming have electronic medical record systems, very few of them—if any—are interoperable. Not only are disparate entities lacking interoperability, many hospital departments, for example, cannot even communicate within their own organizational system. Technical shortcomings are not the only barrier to exchanging health information in Wyoming. Stakeholders continually told us about a “culture of medical records,” in which individuals are reluctant to adopt HIPAA provisions, do not re-disclose records that were created by other providers, have severely strained relationships with law enforcement, and are confused about policies for exchanging mental health and substance abuse records. In short, the cultural and business practices associated with health information exchange are as splintered as the technical developments.

Compounding this problem is the lack of collaborative and multi-disciplinary training in HIE. The division between pharmacists and physicians was specifically noted as an area that would benefit from collaborative training, especially regarding authorization, information release, costs, and timeliness and completeness of records. According to several pharmacists, over five percent of all pharmaceutical records are incomplete or incorrect, a problem which results in many hours spent on the phone or faxing to determine accurate information. As one stakeholder put it, “if all the players involved with the exchange of health information could sit down at a table and discuss our concerns and address our grievances, we could learn from one another and improve the quality of care provided.” The center would provide a single source for such information and training by, in essence, providing opportunities for professionals from a variety of disciplines to participate in sessions simultaneously.

(2) *Planning assumptions or decisions*

This solution assumes that outreach and distance education, coupled with policy coordination and research, will meaningfully address the privacy and security issues identified and shared by stakeholders as barriers to health information exchange.

(3) *Project ownership and responsibilities*

On June 29, 2005, the Wyoming Healthcare Commission recommended to Governor Dave Freudenthal and the Legislature’s Labor, Health and Social Services Committee that Wyoming form a self-sustaining regional health information organization (RHIO) to facilitate an intrastate, regional interstate and national federal partnership for the rapid deployment of Wyoming’s electronic health information infrastructure. In July 2005, more than 50 representatives of local, state, and federal government, businesses, medical care providers, and healthcare purchasers and payers gathered to discuss the development of a RHIO for Wyoming. On Aug. 11, 2005, a stakeholder group formalized this RHIO and registered it with the Wyoming Secretary of State’s Office. Pending approval from the Internal Revenue Service, this organization will be established as the nonprofit Wyoming Health Information Organization (WyHIO). The stakeholders also chose an interim board of directors representing a broad cross-section of interests in the state’s healthcare information system. Since that time, the WyHIO has been formalized into a non-profit organization, elected a board of directors, and is pursuing its goal to enable, share, promote and manage health information technology by serving as the catalyst for health information technology demonstration projects and fostering collaboration on electronic health records.

Stakeholders have recommended the WyHIO house and facilitate the establishment of an eHealth Research and Policy Coordinating Center (eHRPCC). The WyHIO, which has served as the steering committee for this HISPC project, is an ideal candidate for serving as an *umbrella organization* for such a center. This arrangement has many advantages, primarily avoiding the fragmented and duplicative efforts so common in this field. The WyHIO would have the responsibility to acquire funding for the purposes of creating, maintaining, and staffing the center. In addition, the WyHIO would be responsible for overseeing the activities of the center and to provide outreach to health care professionals and policy direction to state officials.

Of the many recommendations that came out of the statewide HIE symposium on March 26, 2007, the WyHIO's enthusiasm about undertaking a "virtual center for security, information, and training" was the most promising. The executive director of the WyHIO, as well as several other WyHIO board members, have been working with the WyoHISPC team to draft a proposal to present to the Wyoming Healthcare Commission for state funding to design a website, draft model policies and forms, and develop web trainings. The WyHIO appears motivated to take on the responsibility of being the HIT coordinating body for Wyoming.

(4) *Clearly defined project scope*

A research and policy coordinating center would address the privacy, security, and technical barriers related to health information exchange generally, and the barriers to the widespread adoption of interoperable electronic health information technology in particular. It would also carry out research on legal issues. Information gathered would be disseminated through reports, Web sites, and educational venues throughout the state. Stakeholders strongly support the development of an informational website—perhaps membership supported—that would provide health care professionals with consumer reviews, HIT FAQs, model policies, model forms, best-practices, trainings, repository of law affecting HIE, trends in the field, politics relating the HIE at the state, regional and national levels, technology advancements, and applied health research. The WyoHISPC team recently created an on-line survey for key Wyoming stakeholders to determine the website's initial priority areas.¹⁴

(5) *Tasks required*

The creation of a policy center will first require the appointment of an advisory board comprised of WyHIO Board members and other key Wyoming stakeholders. The board will determine the mission of the center and work collectively to obtain funding from various sources—both private and public. Stakeholders emphasized the need for a center to be sustainable. One stakeholder suggested the possibility of offering services based on membership, much like the services offered by the Utah Health Information Network (UHIN). Because the center and its activities hinge upon obtaining funding, the advisory board must answer these questions and work to create a *business plan* detailing the structure, mission statement, preliminary work plans, priorities, training curriculum, methods of dissemination timeframes, and budgets for the center. The business plan would stress the center's initial deliverables, such as multi-disciplinary training on HIPAA and HIT capabilities and limitations. Once the business plan was established, funding could be sought to staff the center and begin its operations.

¹⁴ <http://www.surveymonkey.com/s.asp?u=570243648872>.

(6) *Project timeline and milestones*

The WyHIO and the University of Wyoming's Center for Rural Health Research and Education (the subcontractor of the WyoHISPC project) are currently contacting stakeholders throughout Wyoming to vet the recommended focus of the virtual center. After this polling process is complete, the WyHIO will obtain cost estimates from website developers and draft a pilot project proposal for the Wyoming Healthcare Commission. The WyHIO plans to present their proposal to the Commission by June 2007.

(7) *Projected costs and resources required*

Funding for website development, research, subject experts, legal consultants and administrative personnel would be required. Office space and supplies would also be necessary. The WyHIO is currently in the process of obtaining cost estimates.

(8) *Means for tracking, measuring, and reporting progress*

The detailed business plan developed by the WyHIO advisory board would stand as the document against which progress of establishing and measuring the Center could be measured.

(9) *Impact assessment*

The Center has the potential to be a statewide resource for all health care practitioners and facilities, particularly if the Center is used for annual HIPAA training purposes.

(10) *Feasibility*

This project is dependent on funding, but otherwise is very feasible. The Center could build on the current WyoHISPC and WyHIO staffs for its initial efforts, as well as use consultants already involved in the project for legal, technical, and educational advice. This solution has broad stakeholder support, as professionals view lack of knowledge as the fundamental problem facing the private and secure transmission of health information. As mentioned above, there have been initial meetings to discuss the proposed center, and support has been established with legislators, law enforcement, several hospital medical records directors, and attorneys, among others. If funding can be obtained, stakeholders believe that this center can be formed.

There is definitely a wealth of resources the WyHIO could use to assist the Center's development. For example, the Community Health Center of Central Wyoming (CHCCW) is leading a collaborative effort to develop an electronic health record system. A major goal of the project is to analyze the CHCCW's baseline data with that of post-EHR implementation data, thereby providing evidence of the benefits of electronic health information exchange to spur further adoption of HIT in Wyoming. CHCCW has contacted the WyoHISPC about the potential for working collectively on this project, including partnering with the Wyoming Healthcare Commission, the Wyoming Health Information Organization, the State Department of Health, the Wyoming Medical Center, and private entities whose employees utilize the CHCCW's facilities.

(11) *Potential barriers*

Funding for staff positions is the most prominent issue. Initial support could come from the Legislature or the Wyoming Healthcare Commission, grant or foundation support might be possible. One stakeholder suggested contacting the Physician Foundation for Patient Safety for support. Sustaining the Center's operations will require diligent efforts.

Technical Solution 1 – HIE Demonstration project

(1) Summary of effective practice(s) to be instituted or barrier(s) to be mitigated or eliminated

As outlined in the interim solutions report, we are proposing the development of a demonstration health information exchange project to address several concerns presented by stakeholders, including interoperability, cost (return on investment), access controls, authentication, transmission security, and a general reluctance among providers to adopt HIT due to security fears. This project is intended to be a pilot for research purposes only, and not a prototype or first version of a fully functional HIE system. It would be of limited scope to allow rapid development.

(2) Planning assumptions or decisions

This project rests on the notion that a demonstration project will alleviate stakeholder concerns by illustrating that electronic HIE can be interoperable *and* secure. The goal is to take a decentralized approach to EHRs in order to develop trust among consumers and health practitioners.

(3) Project ownership and responsibilities

The development of an HIE project would be carried out with the leadership of the WyHIO. The actual implementation for the project would, however, need to be contracted out to an organization with the facilities to design, develop, and test the concept. A designated project manager associated with the WyHIO would have primary oversight of the contract and would be responsible for the completion of the project and dissemination of the outcomes.

(4) Clearly defined project scope

The main objectives of the project would be to (1) demonstrate to Wyoming health care providers and consumers the feasibility and reliability of an HIE system based on decentralized health records, and (2) explore the value and benefits of HIE to the state, in terms of both economics and quality of care. A secondary objective would be to provide a foundation for creating interest and, more importantly, trust in HIE systems among consumers and providers with the intent of gaining support for state or regional efforts in HIE.

For the purposes of the demonstration project, the scope of the HIE system would necessarily be limited to only a few types of information that were relevant to a particular application or scenario in health care. This approach is being used at the national level and should be applicable here as well.¹⁵ Some possible applications discussed in the workgroup were medication lists, trauma care, and secondary/specialty care. An important factor in selecting an application would be the clear identification of the events that initiate the exchange of information between facilities.

A secondary area of investigation would be into personal health record systems, such as personal data devices or Web sites as described in the solutions report. Research could be done regarding the feasibility and utility of such systems as part of the project, but the development of even a prototype for the system is probably beyond the scope of the project at this time.

¹⁵ <http://www.govhealthit.com/article97465-01-24-07-Web>

(5) *Tasks required*

The development of the system would involve design and implementation of the software and testing in a realistic networked environment. This would require the cooperation of facilities in the state that either have or are developing electronic health record systems to get input and data formats that could be used in the system. It would also require discussions among interested parties as to the application and scope in the early stages of the project. We would expect that the demonstration project would include three to five geographically distributed sites representing a variety of care settings (hospital, outpatient clinic, emergency room, rural health clinic, etc.). Once the project was completed, wide public dissemination of the results would be needed.

(6) *Project timeline and milestones*

This would be determined by the complexity of the demonstration project. However, a timeframe of 18-24 months would probably be reasonable to develop and test the system once the participants were identified.

(7) *Projected costs and resources required*

An agency with the resources to develop the demonstration project would need to be identified and appropriate contracts defined. Electronic health records are in use in several of Wyoming's health care facilities, but attempts to create infrastructure that would support interoperability among these and developing EHR systems have been stymied by lack of funding. The Wyoming Healthcare Commission (WHCC) sought state funding in 2005 to implement a statewide interoperable EHR. According to a 2005 study conducted by John Snow, Inc. to determine the costs of implementing a state-wide EHR in Wyoming, "the three year startup costs for a Wyoming EHR Network are estimated at \$77 million, with operational costs of approximately \$13 million per year thereafter."¹⁶ State legislation in 2006 to authorize funding for this project did not pass. The Senate Appropriations Committee cut the funding to \$1.5 million to support an e-prescribing initiative, which was defeated on the first reading in the Senate.¹⁷ More recently, a bill was offered in the 2007 legislative session to provide \$1 million to support EHR pilot projects administered through Wyoming's department of health, but again failed to pass into law. The bill was filed very late in the session and its sponsors did not actively seek the support of stakeholders to secure its passage. Many in the HIT community were caught unaware of this proposed legislation.

Medicine Bow Technologies, Inc., a division of Ivinson Memorial Hospital in Laramie, is carrying out a private-sector attempt to develop an interoperable EHR system. This is a combined effort of a private hospital and the University of Wyoming's Technology Business Center. Medicine Bow Technologies appears able to supply many hospitals with a hospital management-based electronic record system at a fairly low cost (estimated at \$5,000-\$6,000 per facility). However, most hospitals and medical practitioners in the state have consistently expressed a strong aversion to sharing their medical data. This can be especially true for hospitals that may see Medicine Bow's parent hospital as a competitor for patients.

¹⁶ "Final Report to the Wyoming Healthcare Commission, Information Technology Technical Management Subcommittee on Developing a Wyoming Health Records Network." *John Snow, Inc.*, p.10. For the report in its entirety see: http://www.wyominghealthcarecommission.org/_pdfs/EHR_study.pdf.

¹⁷ See the Wyoming Medical Society Web page for further analysis: http://www.wyomed.org/leg_reg.htm.

A rough estimate for costs of a moderately complex demonstration project would be \$750,000. Funding could be obtained from several sources: federal funds, including earmarks and competitive grant proposals; state funds through (re)introduction of legislation for a project; private funds from entities such as third party payers (industry and insurance), hospitals, or foundations (particularly those with interest in cost and/or medical error reduction).

(8) Means for tracking, measuring, and reporting progress

Standard project management measures can be used to track progress of the project against both time and cost goals. A more complex task would be measuring the outcomes. In a demonstration project, it is unlikely that good measures of the project's economic or quality-of-care effects could be achieved; however, some measure of user satisfaction with system properties such as ease of installation and use, security and privacy features, and accuracy of exchanged information could be gathered. In addition, research on the projected effects of the system (e.g., reduced travel time for patients or providers, decreased response time for requests, and enhanced protection of information) could be done in conjunction with the project.

(9) Impact assessment

Because this solution is a demonstration project intended solely for research purposes, it is difficult to gauge its impact on stakeholders. If successful, however, its significance could be far-reaching. Again, the goal is to demonstrate not only the feasibility of an HIE system, but its ability to protect information while improving access to that information. A successful demonstration would significantly increase acceptance of HIE and HIT among the state's providers.

(10) Feasibility

If funding can be arranged, this project is very feasible. There are a number of technologies already known that can support decentralized health information exchange, although there are as yet very few projects in this area, particularly those focusing on state and regional issues.

(11) Potential barriers

It is fairly clear that not all of the objectives that need to be demonstrated in regard to winning acceptance for HIE can be achieved with a project having limited scope. We would need to ensure that what is developed can demonstrate value and feasibility without unnecessary features and details. We would also need to ensure that the focus on the system is on secure, timely, and accurate exchange of information and not on peripheral issues like billing procedures.

Technical Solution 2 – Health Information Technology Commission

(1) Summary of effective practice(s) to be instituted or barrier(s) to be mitigated or eliminated

Providers face several burdens when it comes to the exchange of health information. Currently, providers are asked to understand multiple laws addressing HIE, determine which laws apply to a particular circumstance which itself, may be unclear and rely on providers who request information for a correct interpretation of facts that surround the applicable law. The relative newness of HIE, has brought these issues to the forefront, including the uncertainty of how liability for errors in HIE will be allocated. How ownership of protected health information

is determined and interpreted is also unclear. How non-covered entity third parties in possession of protected health information will be regulated and how long and in what form information will be retained are additional issues for consideration.

We are proposing the establishment of a statewide HIT Commission that would provide oversight for HIT activities in the state, as well as coordinate with regional and national efforts, to ensure interoperability and compatibility of Wyoming's HIT efforts. Wyoming stakeholders are clearly concerned about the development of HIT standards. The concern over standards is not limited to technical standards such as formats and language. Stakeholders were also troubled by inconsistent business practices and organization policies that undermine secure transmission and access control. Stakeholders stressed that the governor or legislature should establish and authorize this commission to govern HIT in Wyoming. The commission should consist of a broad range of professionals involved with HIT, including representatives from border states. Stakeholder collaboration on this topic will only work to increase the legitimacy of any recommendations proposed by the commission.

(2) *Planning assumptions or decisions*

Due to the current fragmented approach to HIT, stakeholders believe a commission with authority to govern HIT development in Wyoming is needed to promote interoperability while upholding privacy and security.

(3) *Project ownership and responsibilities*

A commission could be established by statute or by an executive order from the Governor, but this approach might be seen as a mandate and be resented by the health care community in the state. An alternative approach would be to follow the model of the Utah Health Information Network (UHIN)¹⁸, a voluntary coalition of health care and other organizations that currently encompasses nearly all the health care facilities in the state.

(4) *Clearly defined project scope*

The role of the state HIT Commission would be to provide governance over HIT activities in Wyoming, including such things as reviewing and setting standards for HIE, supporting conformance with regional and national efforts in HIT, and acting as a clearinghouse for HIT information. This governance could take the form of "accrediting" organizations for various HIT activities or by requiring acceptance of the standards and policies of the Commission in order to be included in its membership. It was suggested that the HIT Commission could be developed along the same lines as Wyoming's insurance commission.

(5) *Tasks required*

First steps include (1) establishing the Commission's structure, goals and authority to achieve those goals and (2) creating a business plan that fosters development and sustainability. This would probably require an advisory task force including representatives from the WyHIO, the health care community, and state government. An advisor from UHIN or a similar organization would be valuable in this process. The WyoHISPC team is planning to continue to reach out to the health care community and present their findings and recommendations.

¹⁸ <http://www.uhin.com>

(6) *Project timeline and milestones*

The first step would be for an “appointing entity,” potentially the WyHIO or the Wyoming Healthcare Commission, to address the question of governance, authority and Commission make-up. Following that, the Commission could be established and its first members named by the appointing entity.

(7) *Projected costs and resources required*

Recurring support would be needed for an Executive Director for the Commission, support staff, and office/meeting space. Members of the Commission would serve as volunteers, although travel costs should be reimbursable. UHIN may be able to provide some insight. Membership fees could be an option to help sustain the Commission if developed on a volunteer basis.

(8) *Means for tracking, measuring, and reporting progress*

The means for assessing the progress of the commission would be based upon the mission set forth in the business plan. Resources for measuring health care governance effectiveness are available; one source is the National Center for Healthcare Leadership.¹⁹

(9) *Impact assessment*

This solution would have a broad impact. Given the authority to govern HIT development in Wyoming, the Commission has the potential to influence the adoption of HIT standards, forms, interoperability, and chart the direction of HIT development in Wyoming.

(10) *Feasibility*

The UHIN model is probably more feasible than the statutory/executive order model, although it will require significant effort to get buy-in from the various stakeholders and establish the Commission’s value.

(11) *Potential barriers*

Funding for staff positions is clearly an issue, but grant or foundation support might be possible. Funding through user-membership is another option. Initial support could come from the Legislature. Again, getting buy-in will be crucial. Stakeholders expressed some concern about the legal implications of hospital collaboration, especially in relation to Medicare fraud and abuse laws.

¹⁹ <http://www.nchl.org>

Section Five – Multi-state Implementation Plans

Legal Solution 1 – Federal collaboration for HIT development

(1) Summary of effective practice(s) to be instituted or barrier(s) to be mitigated or eliminated

Fostering adoption of HIE in small rural states like Wyoming may be difficult, but could be bolstered by incentives. Perhaps buy-in would be facilitated by offering a “safe harbor” from liability, for providers adopting best practices in HIE exchange, as those become defined, or by engaging the participation of medical malpractice liability insurers in recognizing the implementation of best practices and offering a premium discount for adoption.

Currently federal law permits health care entities to donate HIT to providers when the software contains e-prescribing capabilities or the subsidization of software or HIT that has e-prescribing capabilities and is interoperable. Unfortunately, most EHRs at this time do not provide e-prescribing capability. Moreover, the current safe harbor provisions of federal law requires donated HIT to be fully interoperable or meet the requisite standards of interoperability determined by the Certification Commission for Health Information Technology. In short, the current regulations do not allow technology to be shared for purposes of a HIT demonstration project. We feel the modification of federal law in this area to permit cooperation on HIT development would greatly enhance HIT adoption in Wyoming.

(2) Planning assumptions or decisions

This solution rests on the assumption that allowing a certain level of collaboration and between hospitals, physicians, and health centers and incentives will quicken the adoption of interoperable HIT in Wyoming.

(3) Project ownership and responsibilities

The Wyoming HIT Commission would investigate methods to provide incentives for adoption of HIT, including analysis of federal laws. The HIT Commission would also look to other state models for guidance.

(4) Clearly defined project scope

The scope of this project will be determined by the task force appointed by the Wyoming HIT Commission, but would include investigation of law affecting HIT collaboration, such as CMS regulations (Stark) and OIG anti-kickback laws, and potential incentives for.

(5) Tasks required

An outcomes assessment should be conducted by a neutral entity to determine the feasibility and desirability of revising these laws.

(6) Project timeline and milestones

This has not been addressed yet.

(7) Projected costs and resources required

Stakeholders did not offer an estimate of the costs associated with these kinds of regulatory or statutory changes, but they did suggest that changing federal law is cumbersome process requiring extensive legal analysis.

(8) *Means for tracking, measuring, and reporting progress*
N/A

(9) *Impact assessment*

This barrier was a major concern for legal stakeholders who represent some of the largest hospitals in Wyoming. Stakeholders are concerned that current law does not provide enough flexibility for hospitals interested in collaborating on HIT development, and an exception to the current law would spur widespread cooperation to address secure, interoperable HIE in Wyoming.

(10) *Feasibility*

This solution requires coordination with other states. Project members will attend the Western States Symposium: Advancing Health IT & Interoperability on April 13, 2007 in Denver, CO. The meeting promises an opportunity to explore interest and methods for building capacity for HIT and HIE, as well as interoperability within the region. A look at models, definitions, systems challenges and state approaches, as well as the role of state legislatures in providing leadership on policy issues inherent in the creating and sustaining interstate HIE will be presented.

(11) *Potential barriers*

An extensive amount of time and money would be necessary to change federal law. Some stakeholders expressed opposition to this solution, because the Stark law affords rural hospitals a reason not to supply physician practices with HIT. There was a misconception among some hospital staff that this solution would be a blanket exception for HIT collaboration. It is important to note that this solution calls for HIT collaboration for only those hospitals that can and want to participate in it.