

The New Era of Healthcare Technology



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**Abstraction**

Healthcare informatics is the most pressing issue in regards to improving the quality of health care.  The health sector is extremely new in regards to technology and much research is still required before a knowledgeable understanding of how it all works is obtained.  Our research project’s overlying goal was to further and build upon prior research that has been completed.  We did this by sending out surveys, conducting interviews, and examining programs with intensive walk-through sessions.  It is our hope that health care one day is cost and time efficient, which enables doctors, nurses and medical personnel to provide a better quality of care for their patients.

Our initial hypothesis was that doctors are facing numerous technological difficulties because of three overlying issues.  The first is that doctors are not willing to change or adapt to new technology.  The second is that most doctors and nurses were not born within the era of computers and struggle to work alongside technology.  Lastly, we believed that hospital’s and doctor’s practices are failing to make the switch to health care technology because of sheer cost. The results of our research methodology proved that our hypothesis was flawed; however, our initial beliefs were partially correct and some of the major reasons for concern moving forward in this new era of healthcare technology.

The following research paper includes a detailed response to the prior works on the topic of health care informatics and the physician’s ability to operate computers, handle technology and other related devices in their workplace setting.

**Introduction**

The technology healthcare field is constantly changing; however, it is yet to be determined if the changes are for better or worse.  It is not uncommon to hear that medical professionals are taking sides and strongly voicing their beliefs on the topic of technology in hospitals and practices.  Health is one thing in life that should never be taken for granted. Nonetheless, this is why it is extremely important that doctors should be able to work how they want to so they can give the best professional expertise.  It is a known fact that to adapt technology into a sector of daily life it takes time, commitment, and above all mistakes. Mistakes or flaws in a program may be detrimental at the moment but in time we can learn and grow from these hiccups which are inevitable.  New updates to current programs are made daily but these changes are either very difficult to adapt to or sometimes cause more problems than they actually fix.  Our goal is to search for these common problems that doctors face while working with computers and technology in their workplace.  We want to explore all the possible solutions and bring forth the major complications that have arisen from this shift to computer-based technology.

Our motivation consists of several different factors.  The primary reason why we wanted to research health care informatics was to decipher the pros and cons that physicians have with their technology.   It was also one of our goals to contribute to research that was already available to help push the practice of healthcare as well as technology in healthcare forward.  In addition, we wanted to see if computers as well as portable technologies are saving time or causing more problems than they are actually worth.  We believe that Electronic Medical Records (EMR’s) should be geared towards doctors instead of computer programmers.  Doctors need to be able to complete their work as efficiently as possible so that they can give the care and time that each patient requires.  It is our belief that computers should save time for doctors; not make their lives more difficult.  Doctors cannot and will not change their modus operandi; doctors are programmed to follow protocol and not deviate from their daily routine.

 As technological progress unfolds in healthcare there is an increasing challenge to protect patient privacy, as patient privacy is a quintessential pillar in the doctor-patient relationship.  This is but one concern we have that with the switch to technology in hospitals. Will patient’s records be safely secure and untouched by all unwanted threats? Lastly, with the changing times and issue of “Going Green” very popular, the reduction of paperwork in hospitals has been one of the main reasons hospitals and practices are switching to computers rather than sticking with their paper backups.

Our research project has been an intensive study of healthcare informatics.  We thoroughly researched how doctors and nurses use state of the art technology in their work place. According to our review of the related work, health professionals either find it challenging to integrate information technology in their current practice or are simply unwilling and are resistant to adapt to it.  However, previous work shows that very little research has been done to understand the real issue which is that doctors spend more time struggling with computer issues than giving time to their patients.  Therefore, our goal is to discover the views, opinions, challenges, pros and cons of health professionals of all age groups and backgrounds.  We think this was an important part of our research to gain an understanding of how effective technology is in the medical field today.  It is our understanding that everyone will have their own problems with certain aspects of technology; however, we will have not only summarized the everyday problems, we have also found where the major complications arise from people using technology.  Our research has included interviews, questionnaires, and one on one walkthroughs with medical professionals.   The interviews that we conducted were with doctors of all ages.  We have found such it necessary that we interview doctors of different age groups because no two age groups relate to technology the same way.  Our group has met face to face with the doctors not only for interviews but walkthroughs.   Our one on one walkthroughs of current programs showed us many things, including the most common problems doctors face in regards to technology.

**Background and Related Works**

One of main concerns in using Electronic Medical Records is keeping patients’ personal identifiable information private.  According to the article Maintaining the Confidentiality of Patient Records by Professor Profacgillies of the University of Central Lancashire, “…the primary obligations of a doctor is respecting and protecting confidential information.”  Also, other professional groups such as registered nurses and midwifes are also charged to protect confidential data. The first issue that has been arising is the constitution for confidential information.  Profacgillies mentions that under data protection legislation, every piece of personal data is subject to protection and all people who use the identifiable information of patients as well as the organizations that hold those data have a responsibility to protect it.  They also have a duty to use as little identifiable information as possible.  Sometimes, non-identifiable data is used for the purpose of audit, research or financial management.  However, simply getting rid of a patient’s name and address from a record might not be enough to make data strictly anonymous. It still can be identifiable if it combines with other factors. For instance, it is hard to identify a patient from a diagnosis of asthma, but if that factor combines with other factors such as ethnicity or age, a unique profile of a patient may easily be revealed. For information that is required to be used in patient’s data, the patient’s consent is necessary for the information and the purpose of how it is used.  Nobody wants their personal information to be revealed that is provided to a doctor while having consultations on specific diseases or other ailments with other medical professionals during a forum such as a symposium.  That is highly personal information of a patient for the purpose of treatment.

As written in the article “What Are The Disadvantages of Electronic Medical Records” on Wisegeek.com, another “chief disadvantage [of] Electronic Medical Records is that start up costs are enormous.” The records themselves are fairly pricey, but one must also take into consideration the materials and equipment required to integrate EMR’s into the office. Hospitals and offices must purchase equipment to record and store patient charts —a task that cannot be solved with a mere filing cabinet— as well as equipment to be able to transfer all of these records from paper to file. Additional effort must be put into effect to accomplish this conversion. Furthermore, none of these steps take into account of whatever experience level with technology medical staff members and nurses possess. On top of that, when working with technology of any kind comes the dreaded m word: Malfunction. Freezing computer screens, slow processors and/or connections and bugs are just three mishaps that not only prolong the process of familiarization with EMR’s but they also eliminate precious doctor time that should be spent with patients. So another disadvantage of Electronic Medical Records is that they are expensive: in time, money and effort.

**Research Methodology**

Our methodology began with a Google search of “healthcare informatics technology” and a dive into the many articles and works we could find.  Immediately after this we accessed many different IU Library search engines and retrieved numerous accounts and documents of healthcare technology. Finding our Google website unsuitable for our purposes, we relocated to Facebook and created our I399 Healthcare Informatics Research group.  This is where our group collaborated and posted each of our relevant findings. We would post our findings on the group’s wall where we could comment, link, or access the document. We requested that every group member comment on all links so that we all had an understanding of each link and could have a conversation about the related work when we were at group meetings. This also left a reminder of what we read. Our team has read dozens of research paper’s, watched numerous videos and reviewed endless previous work and the comment section allowed us to quickly recall what an article or paper was about because of the comments we left. Thus, under the posts of each article or paper, each group member (and mentors as well) would post a comment, which would display a brief summary of the paper, or a reaction to a certain piece of information that provoked a thought.  The Facebook group serves us beyond sharing research as well.  We are also able to post documents of our own that would convey our schedules, mission statements, survey, proposals, speeches, YouTube video, and poster.  We put the documents such as timeline and purposes on Facebook so that both group members and mentors can see them in one place.  The Facebook page made it extremely easy to share and discuss each member’s ideas and thoughts.

Reading all of these papers and works served two separate, but equal purposes.  The first of which was to gain a background on what research is already available regarding portable technologies in hospitals as well as other matters relating to health care technologies.  The second of which was to provide inspiration for questions to ask professionals in the medical field which would provide answers that would be critical and essential to our research.  Some of these questions would be similar to questions asked in the research papers, but of course responses from undocumented professionals will never quite match the answers from the researchers.  This is not an effort to contradict the researchers we have studied but to either provide a point or counterpoint, as of course some professionals will agree and others won’t.  In fact, a very large part of our survey consisted of questions of the “strongly agree to strongly disagree” variety.  But of course, the primary method for doing this is not to ask professionals the same questions other researchers have answered, but as a springboard to inspire some of our own.  Once we created all the questions that will provide the answers we are looking for to complete our research, we collaborated and created the survey.

The survey is probably the most quintessential part of our research.  Even as the flow of information expands in availability to include 90% of answers available to the human mind, there is still something irreplaceable and authentic about finding information from local professionals to contribute to a research project.  The survey is split into three sections: a section asking professionals to comment on their knowledge of existing healthcare technologies; the second section asking various workplace related questions requiring professionals to answer in their own words; and lastly a section providing various work related statements and requiring the professionals to agree or disagree on an opinion.

The first section of the survey consisted of only three questions, but they were very in-depth questions asking not only the medical staff’s professional information, but what kind of hospital technology they are acquainted with as well as which technology their hospital or office uses.  The second section asked doctors more general questions about their technologies and consisted of five questions. The third and final section consisting of the strongly disagree to strongly agree choices consisted of fourteen separate questions.

The surveys are then taken to the field both electronically and personally.  As a team we interviewed six doctors and nurses in person.  In addition we also requested a personal walkthrough of hospital software in order to gain an understanding of not only how it operates, but its vitality to the hospital’s professional process.Our group was given two personal walkthroughs of softwares by a doctor. In addition to this, we also put to work the popular survey website Surveymonkey.com.  One such mechanism of the website is to enter a list of emails that the user wishes to send. As a group we were able to obtain around one hundred doctor’s email accounts from hospitals and practices that spread from the northwest suburbs of Chicago to Indianpolis to Lincoln, Nebraska. We tried to get a diverse study group so we would be able to have unique results that spanned across the central United States. This is but one method that the survey was put to work electronically. Once we have collected enough completed surveys to feel comfortable that we have a reliable population to draw our statistics from.  We begin combing the data and start searching for popular themes, trends and answers.

Our one on one interviews with doctors were not planned and had no real direction of where we wanted to go with the interview. This philosophy worked extremely well because all of the interviews were based on what the doctors wanted to talk about. The interview would start by the doctor telling us about their healthcare technology experiences. From there we would ask questions based on the information they just spoke. They then fielded our question and moved the interview along until they felt that they had hit on all the major aspects of concern in the field of healthcare. This proved a successful method of interviewing because we all of the interviews went in their own direction and provided us with great insight.

50% of our survey subjects said that healthcare technology takes up way too much of their office time. One of our interviewees responded “At [Berkshire Medical Center, our medical staff must] take classes before they go on to any of our computers. They have to sign a release that they will maintain confidentiality, protect patient HIPPA rights, and also that every entry they make into the EMR’s are true and accurate.”  This interviewee, a nurse working at a Hospital in Massachusetts, says that their HELP desks consist of IT workers referred to as “Super Users.”  “Any time there’s a new piece of technology, the hospital will take staff and train them on how to use it and these people will be relieved of some of their responsibilities as an employee, so that they have time to educate on an as needed basis.”  In other words, people actually have to stop doing their jobs in order to familiarize themselves when new healthcare technology enters the workplace.  But for 37.5% of medical staff who responded believed this was not an issue for them, at least conceding that healthcare technology didn’t take up too much of their time.

But I think what’s most relieving and assuring of all is that regardless of feelings on wasted time, 87.5% of our medical staff interviewed do trust their healthcare technology (and the other 12.5% are merely indecisive with their trust.)  Our tagline for out poster is “We Trust Doctors with Our Life but What About Our Computer?” so this is very reassuring information for our argument.

**Analysis**

After our research was completed we made some generalizations to create a few central themes that our research discovered. It is understood that for the most part doctors feel that the implementation of software programs should be required. The doctors believe that it is essential to start making the shift to technology in the healthcare world. Doctors enjoy using the software programs that they are using in today’s hospitals and practices. Although it may take some getting used to or a few training sessions, doctors are coming around to the idea of healthcare informatics. We cannot dwell in the past and keep reverting back to old habits. Not only do using computers in the healthcare workplace offer the opportunity for a doctor to complete their job much more efficiently, it also will help the environment by eliminating the use of paper documentation.

Another central theme that we developed was that programs do not interface with each other when they absolutely must. It needs to be known that to improve and grow the information technology world, programs need to run together seamlessly. This was a major claim that all of the doctors interviewed touched on because of its sheer importance. They believe that if this is possible they will be able to provide a better quality of care because they have all of the available resources and can access any data they need to because of the unified healthcare world.

All of the doctors that were surveyed and interviewed believe in one thing— one day this problem that doctors are facing in regards to technology in the workplace will be history. They believe that one day there will be a program that satisfies all of healthcare technologies problems. It will be easy to use, speedy, cost effective and efficient. This program will save the doctor’s time in order for them to provide a better quality of care for their patients. Our research has shown that doctors all believe that their time is very valuable and if they waste it on a computer rather than a patient that they are not fulfilling their duties. That is why it is imperative that we work towards the solution of piecing this ultimate program together and what better time to start is there then right now.

**Results**

Just to share a short overview of our methodologies, we received responses from 20 doctors, interviewed six doctors face to face, and received two walkthroughs of healthcare programs that are used in the medical workplace setting. We retrieved a broad range of responses from doctors and nurses from different areas of medicine. Overall, doctors feel that the implementation of software programs should be a requirement since those programs are easy to be accessed from any places and required a simple way to use. According to the survey questions, there are a total five out of nine software programs which were mainly used at many hospitals, those of which were Allscipts, Cerner, Ecllipsis, GE, and McKesson. However, 40 percent of all responses show that the most popular medical softwares that are currently being used by most doctors were products from Cerner and GE. Cerner and GE are two of the largest healthcare program producing companies and have had great success in this area in past years.

One of our questions asked if the doctor’s hospital has appropriate software programs in place for CAT scan, Electronic Medical Records (EMR), communicating with consultants, MRI, X-rays, and other tech support, 87.5 percent of responses show that hospitals possess software programs in place for EMR, which means that converting from paper chart to EMR is a trend for most hospitals. In sequence, with 62.5, 50 and 50 percent of responses respectively, X-rays, MRI, and CAT scan capabilities were embedded in software programs. Besides for those places, appropriate software programs are inadequate for technology support or communicating with consultants.

Doctors and nurses answered on the survey that healthcare technology such as EMR has been beneficial to their work because it is easily accessible from anywhere all the time by other health care providers once a data entry is created on the system. It results in reducing medication and transcription errors since all providers are able to what relevant data is needed. In addition, another advantage of using EMR is that healthcare providers are able to access some patient clinical information such as immunizations given over past years, or searchs for lists of patients by type of vaccine given.

The first walkthrough that we were granted was with the company Cerner at Advocate Good Shepard Hospital in Barrington, IL. The name of the electronic medical record program that Cerner provides is titled CareConnection. It is the hospital’s main EMR system and integrates very well with doctor’s practices around the area. Dr. Kapoor gave the group the walkthrough and also gave us a few wise words before we started the walkthrough. Dr. Kapoor believes that healthcare is twenty-five to fifty years behind all other areas in the world. There is no reason for this except that doctors have not wanted to change, but with the tide favoring the young computer savvy generations it is inevitable that we will one day get to a modernized healthcare world. This statement by Dr. Kapoor, “There is no solution that will please anyone, everyone has different wants, people are different, it’s as simple as that, but what’s not simple is a solution that will solve all of the problems that are here today” shows that healthcare technology is a work in progress and needs people to start focusing on it so we can move forward with healthcare.

Dr. Kapoor showed us the entirety of the CareConnection program. Dr. Kapoor has worked on several different systems but believes that Cerner’s CareConnection is the best he’s worked with because of its usability. That is obviously one of Cerner’s selling points because within thirty minutes of working with the program we were able to navigate through it and find the patient information that was required. It was organized well but sometimes became confusing when you opened too many patient records at once. The program isn’t too flashy and tries to mind the small, which is a good thing because sometimes a busy doctor overlooks the small things. During our walkthrough we did not encounter any error messages or problems. We were easily able to learn the program and play around in the training portion of the program with patient information and see how it affects all parts of the EMR. We did not like how the program had way too much white space. The program could have filled this is in with larger text or more efficient task bars and windows. We would recommend that doctors are able to set preferences and should be able to interact with the EMR’s from their smart phones and tablets which currently are unavailable. Dr. Kapoor recommended that since doctors are monitored on their spending that there would be a protocol for the system to run checks on an order and assure the doctor that in fact a certain test is needed. Overall this program was a very well put together piece of software. It was easy to learn, fast and designed in a way for the user to easily navigate through it. The only downside is that CareConnection is among the most expensive EMR, but you do get what you pay for and it is a great program that saves time along with organized patient records.

The second walkthrough was Epic-Care, done at Alpine Family Physician’s Office in Lake Zurich, IL. Dr. Wool provided the walkthrough but was extremely busy and was only able to give us a brief one. Epic-care is an EMR that is considered one of the best available. The system makes physicians more productive by simplifying the important patient-facing elements of care delivery. Epic-Care started up faster than Cerner and was very user friendly; however, it was hard to get an understanding of where all the necessary information that doctor needed to get was located. The program lacked time saving abilities by having all the charts and documents that were opened within the program B lists with scroll bars. This was a headache because you had to scroll to find the results you wanted. Dr. Wool loves EPIC and recommends their products to everyone he can. He hopes that in the future all office notes will be electronic and on smartphones and tablets. Overall, Epic was an extremely pleasant program to work with, and since its cost is not as expensive as the other competitors in the field it makes it a very cost-effective and cost- appealing system for all practice or office settings for doctors.

Based on the survey, the main drawback of current software program that came up with doctors and nurses were its lack of incompatibility that causes from one to another system. It does not communicate with other programs in other department of the hospital or doctor’s office. In addition, if two or more programs are used in one place that is created by different company, they are usually not compatible with each other, and one program will not integrated with another. According to Anne Goshgarian, a student of Creighton University School of Medicine, the software program from McKesson at her work place is not integrated with the radiology system or the system containing past medical records. Another problem of current software is its lack of availability. A few technology devices can be used rather than a computer such as a tablet or a smart phone. However, most software programs cannot be optimized by use of those devices. Information can only be accessed by a computer that is linked it to the hospital or practice’s system. Thus, it results in gathering insufficient information in one’s hands. They must log in through both security screens and the individual programs every time. Sometimes, all the stations are full as well.

Lastly, the price of software programs is a major concern. Most programs are very expensive and hospitals want to reduce the price burden. In the event of blackout, most surveyed responded that they have paper charts as back up. They would go to recording on paper until system back up running. After a blackout, staff would stay behind and enter pen and paper data back into computers when they start back up.

Some people at a hospital use smart phone applications for their profession, but they do not interface with any other software programs.  So it is highly likely that they use these for text documents to take patient notes during checkups or surgeries.  They also use smartphone applications for matters such as electronic detailing, answering online surveys regarding their profession and research, and shopping for other medical applications.  
 We discovered that the biggest complaint from doctors in regards to their software is that all programs do not interface with each other. Only Cerner product integrates data into GE product while other software’s do not.   This is a sad case of economics and companies competing with each other and trying to become the number one brand of medical software technology.  While of course we recognize this as the basis of capitalism, the measure of importance for certain facets of society transcend capitalism, and healthcare and medicine are such facets.  We are not implying that all healthcare technology should be government controlled, or even that there should be only one software company, but software companies need to realize that despite their business, healthcare is national.  For example hospitals on the east coast don’t use the same software as those in the Midwest and everywhere else in America.  So if someone who used to live on the east coast were to move out to the west coast and need their medical information transferred to their local hospital, or if a resident of Georgia were to have a skiing accident in the Rocky Mountains that required a trip to the emergency room, there exists a large possibility of software incompatibility between the two medical centers which would lead to a quandary involving the patient being unable to receive full medical treatment as a result.  Software companies are trying to make software programs interface with each other or government bills electing to say that all hospitals should be required to use a single software program. There is a talk of a program that will one day fulfill all of healthcare technology problems, but from a realistic point of view, there just isn’t any form of technology that can solve the problems of any endeavor in the world.  At best innovation will be able to provide us with a program that could solve 90-95% of healthcare technology problems, but not 100%.

**Recommendations**

After completion of our research we have developed five recommendations that will enable future researchers to get an even better understanding of the healthcare technology world. Our first recommendation is that companies focus their work efforts on EMR’s. These are the most frequently used healthcare technology programs in use and need to be implemented into every doctor’s practice world-wide. EMR’s allow patients’ records to be readily viewable, editable, and secure. Everyone deserves the peace of mind that their health is in order and that their medical records are protected. That is why it is of the utmost importance that we work extremely hard to create an EMR that will surpass all common problems and be unifying healthcare records. This will not happen overnight which is understandable because of the broad scope of people that must be reached in order to successfully implement this into the global healthcare market. Even though this is not a quick fix it is imperative that we start making decisions that will put us on the correct path to obtaining an EMR program that can fulfill all of the required tasks.

The second recommendation that we have to offer is for the government. If there is going to be a push for healthcare technology then there has to be incentive for hospitals and practices to go out and spend their money on good quality products. There should also be incentive for competing software companies to integrate their programs with each other. As of today there are few programs that completely sync with each other and provide doctors the ability to have all of their patients information organized and working properly at all of their workplace settings. It truly is a must that healthcare programs integrate with each other. Our opinion of a perfect healthcare world is one where all of a patient’s medical information is secured and available anywhere in the world. The only way for this to be done is for healthcare programs to integrate with each other. That is why we must incentivize or mandate healthcare companies to make their software operate and interact with all software even if it will affect the total net profit of a company. It is a price that must be paid in order for healthcare to make advances and become unified. If this integration of software worked properly and allowed a patient to have their information wherever they are, the quality of care that can be provided will increase in all facets of healthcare.

The programs that are being created today all have one thing in common. They are all written by computer programmers and not doctors. The doctors are the ones who are using the products and need the programs to operate how a doctor would, not how a computer programmer would. This is a hard topic because there are few —if any— doctors who are also computer programmers. However, the computer programmers need to understand how doctors work and operate so they can make the best and most efficient program that will utilize all of a doctor’s skills and abilities. That is why we recommend that healthcare companies search for people who have a professional medical history background that can provide insight into creating programs with doctors rather than for them.

We believe that in order for a doctor to completely utilize their programs, they have to know all the ins and outs of the finer-details of a program. This means that a doctor will be able to open a program and successfully navigate through it until they have retrieved all the necessary information. If they encounter an error they will be able to fix it on their own and move on with their work instead of waiting for tech support to assist them. In order for this to be achieved doctors must be willing to: one, put the time into the programs so that they can learn the program the first few times they use it: two, relearn the program when new updates are released. As of now, there is little or no retraining of physicians after their initial training session. It is very understandable that most doctors and nurses do not have enough time in the day to relearn a program but it is necessary for them to be retrained in these programs so they can be efficient and able to handle all software related problems as they occur.

Our last recommendation is for all companies, hospitals, practices that deal with healthcare on a daily basis. Everyone needs to focus their time, money, effort, and energy into making healthcare better for the present rather than the future. There needs to be a universal push to better our healthcare economy and modernize a vital sector of life. A shift can occur only if everyone is working towards the same goal. That goal has to be modernizing and improving the healthcare world as it is today. We cannot stall any longer. A new era of healthcare technology is upon us and we must accept it rather than follow our history and resist it.

**Conclusion**

This brief in depth overview of healthcare informatics allows one to see that there are many issues that are to be undertaken in the process of modernizing healthcare. We believe that we have fulfilled our goal of trying to understand and explain the current problems in the sector of healthcare informatics. However, another goal was to enhance the research done previously along with adding on our own ideas and beliefs about this new technology era of healthcare.

We have tried to explain the importance and magnitude of how healthcare technology is a shift to a better and much more efficient future. The use of new technology has numerous business benefits mainly outlined by improving productivity; it also benefits individuals by providing exciting options to complete personal projects. Generally, technology has improved the quality of life for people as well as all patients and the entire medical community. The computerization of medical records has affected the use of medicine positively. Healthcare technology has made information more accessible and accurate. Physicians and nurses simply are more able to identify patient information using an electronic database, as well as reduce wasted time searching for patient information in an emergency. This is the importance of technology health care system.

Our goal of gaining an understanding of the programs that professionals use today along with their comments and personal beliefs on whether or not the program fully satisfies healthcare informatics has been completed and was a great success.  By learning about the programs that are in use we were able to better understand other programs that are in use in every facet of the healthcare world.  It is our belief that our questionnaire has thoroughly examined doctor’s beliefs, opinions, and ideas to improve healthcare informatics.   We have used our recent acquired knowledge from the questionnaires and doctor interviews to create a very visual and enticing poster.  We believe that our YouTube video is creative and is the right way to present how doctors truly feel about the technology in their workplace.  We are now equipped and well-versed with information and major concerns that will be critical in the future of healthcare from all areas of the medical field.

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