MedAttune

*Software for increasing hospital efficiency while
reducing costly errors in patient care!*

*Business Plan
October 2009*

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Executive Summary

Introduction

Human beings make mistakes. In health care, errors can be tragic. Based on discussions with doctors and administrators at several leading research and community hospitals, changes are needed that extend beyond digitizing medical records. Doctors are seeking tools to make their departments more efficient and less error prone so staff can spend more time with patients. Administrators continue seeking ways to reduce costs and eliminate potential malpractice claims.

Based on years of working with hospitals and government agencies on projects to improve analytic and planning processes, MedAttune has developed an intuitive software solution to reduce the most common cause of errors in hospital care: flawed handovers. Our *Healthcare Associate™* also helps improve problem-solving, enhance coordination and leverage hospitals' IT investments.

We seek to raise $2.5 million for our Series A financing. This capital will be used to successfully implement our first module at Stanford affiliate Lucile Packard Children's Hospital and University Health System (Texas), secure contracts with our next four hospitals, and execute on our strategic sales plan.

Market Opportunity

There is an urgent need to improve handovers and reduce errors in medical care. Consider these statistics:
- Medical mistakes kill between 44,000 and 98,000 patients per year in the United States.
- 80% of all medical errors involve miscommunication.
- 43% of communication breakdowns associated with handovers lead to malpractice claims.
- 43% of surgical errors are associated with communication breakdowns, mostly from handovers.
- The total cost to the healthcare industry of preventable medical errors is $17 billion per year, of which $6.8 billion is estimated to occur from poor handovers (an average of $2.2 million/hospital).
- The average increase in hospital stay due to errors is 4 days, at a cost per error, per day of $1,450.

In addition, hospitals desperately need efficiency gains to get through today's challenging times:
- Hospitals face workforce shortages that are affecting patient care. For example, as of December 2005 hospitals had an estimated 118,000 registered nurse vacancies.
- Half of all emergency care departments are at or over capacity.
- The medical community reports than an overcrowded hospital must be regarded as unsafe.
- From 1975 to 2003, US hospitals declined nearly 20%, while the population increased by 35%.
- With aging baby boomers requiring additional patient care, the situation will only worsen.

Tools that improve handover quality will transform the caregiving process by enabling the industry to: reduce costs, right-size length of stay, limit medication errors, minimize redundant tests, improve staff utilization and increase patient safety.

Technology and Product Offerings

The Healthcare Associate (H-A) is a hardware agnostic, patent-pending knowledge-based software application built on thousands of hours of work with doctors, nurses and administrators. It helps medical professionals more efficiently grasp a patient's medical condition, identify and choose options for treatment, and plan and coordinate the delivery of care. With accurate, up to date and thorough representations of patient progress and care giving processes, the H-A ensures consistent, predictable handovers as patients are diagnosed, monitored and treated.

More than $8 million has been invested in the development of the technology underlying the H-A. Interfacing with hospital EMR systems, the H-A will roll out in several modules:

Admissions Associate (Q4 2009): enables the production of a superior H&P linked to evidence.
Progression Associate (Q4 2011): supports all intermediate care milestones, including transfers.
Discharge Associate (Q4 2012): creates guidelines during a patient's stay for post-discharge management.
PHR Associate (Q4 2013): stand-alone system focusing on handovers before and after hospital admissions.

Target Market and ROI

The H-A provides cost savings and process efficiencies to medical care facilities of all sizes. As such, our target market ranges from the largest public hospitals to the smallest medical clinics. Initially we will pursue hospitals in the United States, as there are 5,708 representing a market opportunity (TAM) of $3 billion for MedAttune. Longer term, we will expand to international hospitals followed by medical clinics.

Based on customer data and industry metrics, hospital ROI is impressive. Benefit is derived from (a) increased revenue due to LOS reductions and (b) cost reductions from lower medication errors and malpractice claims. Depending on hospital size and patient mix, ROI range is 300% to 3000% with payback starting in month two:

No. Beds	Annual Financial Benefit ($M)			MedAttune Cost ($M)	Annual ROI		
	Low	Medium	High		Low	Medium	High
165	$ 3.4	$ 10.3	$ 17.2	$ 0.8	316%	1163%	2013%
350	$ 6.5	$ 19.8	$ 33.2	$ 1.2	436%	1526%	2620%
600	$ 10.6	$ 32.0	$ 53.5	$ 1.6	559%	1901%	3246%

Go To Market Plan

To secure business with the various hospitals that have expressed interest in our solution, MedAttune is hiring its own direct sales force. In addition, to broaden our sales reach we plan to partner with firms entrenched in healthcare IT: consulting firms (e.g. Accenture, IBM Global Services), technology suppliers (e.g. HP, SAP), EMR vendors and systems integrators.

As our pricing is subscription based, there is no upfront charge for our software. Our pricing is structured so hospitals can immediately see the financial gains from using our solution. In addition, our pricing model eliminates implementation delays, as we avoid the lengthy capital expenditure approval cycle. Revenue is generated from the following sources:

Subscriptions & Upgrades: Fee based on number of patients per hospital (per module implemented).
Consulting & Professional Services: One-time configuration, customization and implementation services.

Management

Dr. xxx, a former member of the Stanford University faculty, has been a pioneer in the fields of Artificial Intelligence as well as Cognitive and Social Science. Having worked extensively with the healthcare industry, his interdisciplinary work is providing improved methods and technology to enhance collaboration in human activities such as planning, decision-making and management of operations.

Dr. xxx, a faculty member at the University of Texas Health Science Center, is an expert in handover (healthcare, U.S. Embassies, U.S. Navy, Space Station). He identifies cognitive and organizational syndromes implicated in flawed handovers, and quantifies associated organizational risks.

Mr. xxx is a successful serial entrepreneur whose first company, _____, helped kick-off the wireless PDA market by developing the CDMA module in the Handspring Treo lines. _____ was later sold to Sierra Wireless. His second, _____, became the market leader in providing biometrics to the wireless market by developing algorithms that turned the sensor into a full-featured navigation device.

Ms. xxx was formerly at Sun Microsystems in both the IT department and the software development group. As Principal IT Manager, Helaine was responsible for development and deployment of complex IT infrastructure, while as Senior Software Manager she was responsible for development and release of both operating systems and application products.

Summary Financials

Annual subscription cost for our software ranges from $800K to $2M based on hospital size. Depending on patient population, ROI range is 300% to 3000%. Positive ROI is achieved by the second month. The company is working with two leading hospitals to implement the H-A in 2010: Lucile Packard Children's Hospital in Palo Alto, and University Health System in San Antonio. We are actively engaged with other hospitals, but have forecasted zero additional hospitals in 2010 and only four for 2011.

Revenue is forecasted to grow from $1.7 million in 2010 to $50 million in 2013. Headcount will grow from 10 in 2009 to 72 in 2013. As there are just a handful of EMR systems, our cost steadily goes down as we implement additional hospitals. With an efficient, scalable business model, MedAttune expects to be profitable in Q3 2011 and cash flow positive as of Q4 2011. The company plans to achieve profitability with only 6 hospitals implementations.

Five Year Financial Summary

rev/cash figures in thousands (000)	FY 2009 Total	FY 2010 Total	FY 2011 Total	FY 2012 Total	FY 2013 Total
CUMULATIVE HOSPITAL INSTALLS	-	2	6	30	66
SALES REVENUE	-	1,760	6,857	23,625	49,280
GROSS MARGIN	-	1,552	6,029	20,812	43,902
HEADCOUNT	*10*	*22*	*35*	*55*	*72*
RESEARCH & DEVELOPMENT	279	2,107	3,456	5,852	11,343
SALES & MARKETING	19	674	1,897	4,577	10,187
GENERAL & ADMINISTRATIVE	122	768	972	3,165	6,700
TOTAL OPERATING EXPENSES	420	3,549	6,324	13,594	28,230
OPERATING INCOME	(420)	(1,997)	(295)	7,218	15,672
BEGINNING CASH	-	2,158	27	1,949	6,126
Operating Activities	*(300)*	*(2,114)*	*(552)*	*4,212*	*8,205*
Financing Activities	*2,500*	*-*	*2,500*	*-*	*-*
ENDING CASH	2,158	27	1,949	6,126	14,280

Our financial summary excludes the upside from our planned sales partnerships. Implementing these will greatly increase our market penetration and can provide a revenue boost of 3 – 10X in 2012 and 2013.

Why Invest in MedAttune

MedAttune is uniquely positioned to succeed. Our annual market potential is $3B per year (US only), we have a strong IP position and a unique process oriented approach. The H-A solves a critical problem that exists today and is seen as a "must have" by hospitals due to: (a) an extremely attractive ROI of 300 – 3000%; (b) it provides a far more cost effective use of EMR content; (c) it increases patient safety; and (d) it provides efficiency gains in both staff and fixed resources. We currently have two prominent hospitals implementing our solution. In total, MedAttune will require $5 million to reach cash flow break even and is in a market segment (healthcare information services) that is valued by Wall Street at 3X the overall technology market.

Customer Need and Market Opportunity

Introduction

Human beings, in all lines of work, make mistakes. Many factors can cause errors including carelessness, fatigue and distraction. In fields such as health care, these errors can be tragic. To make matters worse, as health care and the system that delivers it becomes more complex, the opportunities for errors abound. Mistakes can be prevented by designing systems that make it hard for people to do the wrong thing and easy for people to do the right thing.

In healthcare, building a safer system means designing processes of care to ensure that patients are safe from accidental injury. When agreement has been reached to pursue a course of medical treatment, patients should have the assurance that it will proceed correctly and safely so they have the best chance possible of achieving the desired outcome. With all the discussions about health care reform one thing is certain: we must systematically design safety into processes of care. While safety is needed throughout the care process, safety design must start with the process of admitting a patient into the hospital and extend into the many handoffs that occur during a patient's hospital stay. In fact, according to the World Health Organization's Action on Patient Safety Initiative, improving communications during patient care handovers is one of the top five widespread patient problems in healthcare.

Customer Need

When a patient is admitted to a hospital, a History and Physical report is produced. This H&P report, the endpoint of the admissions process, contains detailed patient information, as well as preliminary conclusions and recommendations. Because of its impact on patient safety, treatment effectiveness, and efficiency, it is critical that this report be as complete and accurate as possible.

Today, production of the H&P is an inefficient, manual process fraught with opportunities for error and omission. The major challenges hospitals face with the H&P process include:

- **Incorporating large amounts of data:** The H&P includes information drawn from many sources, in multiple digital and paper formats. It is typical for complex cases, and for the 60% of patients with chronic conditions, to have 100 or more pages of data, often including duplicate and/or irrelevant documents.

- **Quality is impacted by high volume of data, individual differences, and time constraints:** Physicians must review the patient data, find critical items, and develop an understanding of the patient's situation. The unmanageable volume of data ensures that little historical information is really mastered, and quality of the H&P is very sensitive to the skills and attention paid by the admitting physician who has limited amount of time available.

- **Gaps and Errors in H&P Reports:** Gaps and errors in the H&P result in additional expense and inefficiency as care givers need to 'back track' to obtain a complete picture of the patient.

- **Fears of increased risk and liability:** When the H&P fails to capture important information that is critical to the current hospital stay, patient safety risks – and hospital liabilities – increase substantially.

- **Costly Duplicate Effort:** The liability for the accuracy of the H&P report rests with the senior physicians. Consequently, in order to establish its completeness and correctness, approving physicians often duplicate much of the work already processed for producing the H&P.

Based on discussions with doctors and administrators at several of the leading research hospitals in the United States, a change is needed that extends beyond digitizing medical records. Doctors are seeking tools to make their departments more efficient and less error prone. While they are reluctant to be forced into different processes and methods, they are eager to embrace applications that can be tailored to their way of working. Greater efficiency in the paperwork part of their job enables them to spend more time with their patients.

Hospital administrators continue seeking ways to reduce costs and eliminate potential malpractice claims. They are under constant pressure to bring down costs of quality medical care as the cost of hospital care continues to rise at nearly three times the overall inflation rate. Moreover, with today's connected society, any errors in care can be broadcast worldwide in near real-time as consumers can blog, twitter and post comments on social network 'walls' right from the hospital lobby. Tools that bring down the cost of proving health care and reduce the possibility of errors are highly sought after.

Finally, there is an urgent need to reduce the number of errors in medical care. Consider the following alarming statistics:
- Medical mistakes kill between 44,000 and 98,000 patients per year in the United States[1]
- 80% of all medical errors involve miscommunication[2]
- 43% of communication breakdowns associated with handoffs lead to malpractice claims[3]
- 43% of surgical errors are associated with communication breakdowns, mostly from handoffs[4]
- The total cost to the healthcare industry of preventable medical errors is $17 billion per year[5], of which $6.8 billion is estimated to occur from poor handoffs (at an average cost of $2.2 million per hospital)
- The average increase in length of stay at a hospital due to preventable errors is four days[6], with an average cost to the hospital per error, per day being $1,450[7]

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[1] "To Err Is Human", Institute of Medicine (2004)
[2] The Handoff: A critical point of vulnerability, by Landrigan (2007)
[3] Patterns of communication breakdowns resulting in injury to surgical patients, by Greenberg et al (2007)
[4] Analysis of errors reported by surgeons at three teaching hospitals, by Gawande et al (2003)
[5] "To Err Is Human", Institute of Medicine (2004)
[6] "To Err Is Human", Institute of Medicine (2004)
[7] Health Forum, US census track

Market Opportunity

American Recovery and Reinvestment Act of 2009

On February 17, 2009, the American Recovery and Reinvestment Act of 2009 (ARRA) became law. The Health Information Technology for Economic and Clinical Health (HITECH) provisions of this act represent the largest opportunity in the history of healthcare IT. Key provisions of the ARRA designate an investment of approximately $20 billion to advance the adoption of healthcare IT. Specifically, incentive payments will be provided to hospitals and physicians who adopt qualified electronic health record technology.

To qualify for incentive payments, healthcare providers, physician practices and hospitals must meet eligibility requirements and demonstrate actual use of certified systems. Initially these requirements are defined as including the use of e-prescriptions, the reporting of clinical quality measures and the use of the use of electronic systems to improve quality of care through care coordination. Additionally, the legislation clarifies that a qualifying system must have the capacity to capture demographic information about the patient, record a medical history, provide clinical decision support, allow for physician order entry, facilitate quality reporting and be interoperable.

Hospitals and eligible professionals can qualify for incentive payments starting in 2011. Eligible physicians must qualify by 2012 and hospitals by 2013 to receive the maximum incentive payments over a four-year period. The incentive payments are meant to fund a meaningful portion of the upfront investment by hospitals and physician practices. These payments are estimated at $4 million per hospital and $44,000 per eligible professional. The amount of incentive declines if they are not fully qualified by 2013. To stress the urgency of this requirement, hospitals and physician practices will be penalized with lower Medicare reimbursements starting in 2015 if they are not yet meaningful users of certified electronic health record systems.

Analysts currently estimate that less than 10% of hospitals and physicians currently meet the standards necessary to receive these incentives and avoid the financial penalties. As there are approximately 5,700 hospitals in the United States, this means over 5,100 will be aggressively looking to deploy new systems within the next two to three years. Outside the US, there opportunity grows by orders of magnitude.

Overcrowded, Understaffed Hospitals

As with most industries, hospitals are going through challenging times. Many of these issues have been brewing for years. Some of the challenges US hospitals face today include[8]:

- Hospitals face workforce shortages that are affecting patient care. As of December 2005, hospitals had an estimated 118,000 registered nurse vacancies.
- Half of all emergency care departments are "at" or "over" capacity, with the most common reason for diversion being lack of staffed critical care beds.
- 42% of hospitals experienced gaps in specialty coverage in the emergency departments in 2005, with more than a third of hospitals now paying physicians for specialty coverage.

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[8] American Hospital Association, March 2005

- Hospitals continue to face significant increases in the costs of pharmaceuticals and other supplies.
- The majority of hospitals face double digit increases in costs for medical liability coverage.
- From 1975 to 2003, the number of hospitals in the United States declined from 7,156 to 5,794.[9] Over this same time period, the US population has grown from 216 million people to 290 million. So while the number of hospitals in the country has declined by nearly 20%, the population has increased by nearly 35%. Despite improvements in medical care and technology, the amount of hospital admissions mirrors the country's population growth:

Inpatient Admissions and Outpatient Visits
1990 - 2004
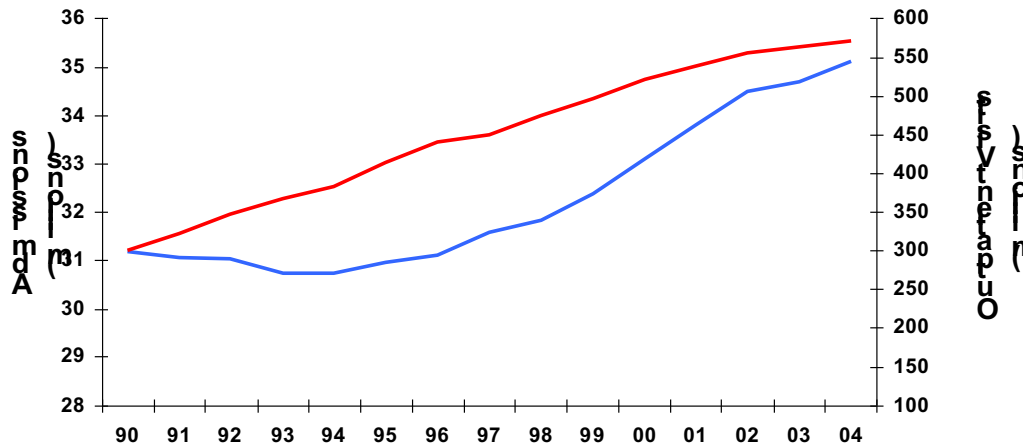
The environment of overcrowded, understaffed hospitals is not going to change anytime soon. Cost and resource pressures will continue while the aging baby boomer population will require additional patient care. In order to thrive, hospitals must redefine their processes. So it is imperative that hospital administrators find ways to improve operational efficiencies – whether mandated by the government or not.

[9] American Hospital Association, March 2005

Technology, Product Offering and Roadmap

Technology Differentiation

The uniqueness of our technology is based on our novel data functions and algorithms. The core functions result from implementation of these data structures and algorithms to enable identification, organization, maintenance, and coordination of two essential views of health care. One view, evolving in real time, captures *patient progress.* This narrative records and interprets the past, present, and possible future medical condition of the patient. The second view, also evolving in real time, portrays the *care giving process.* This records the past, present and possible future decisions and processes engaged in by the various, and changing, members of the care-giving team. Intelligent, real time coordination of patient progress and the care-giving process is achieved by creation of algorithms and data structures that produce (a) knowledge-based interpretation and organization of user inputs, and (b) automated software services (i.e., often called software agents) that conduct information gathering, context sensitive search and data mining, and interpretation of acquired data on behalf of the care-giving team and its members.

Product Offering: The Healthcare Associate

The Healthcare Associate (H-A) is a software technology that helps medical professionals come to clarity about a patient's medical condition, identify and choose among options for treatment, and plan and coordinate the delivery of care. By providing an accurate, up to date and thorough representation of the patient, the H-A ensures consistent and predictable handoffs as patients are administered care.

Coming to clarity about the patient's condition is not just producing a summary of the current clinical state of the patient. It is developing an effective view of the patient's past history, present state, and decision-relevant future prospects – all of which are in service to deciding upon, planning for, and managing the care of the patient. Available clinical data and other relevant information are always growing, encoded in many different formats, and often incomplete and contradictory – more so as the complexity of the patient's conditions increase. This means that discovery, interpretation, and judgment are features of coming to clarity (about conditions, decisions, plans, and implementation).

Access to and Entry of Information

The H-A gives access to an information set that subsumes and extends the data typically found in healthcare information technology (i.e., electronic medical record, physician order entry, etc.). In addition to clinical conditions/maladies, the patient's "condition" includes
- non-clinical but decision-relevant information (e.g., preferences for when/how to treat)
- information not specifically tied to the particular patient (e.g., research literature)
- organizational arrangements (e.g., establish communication and decision-making protocols to support real-time coordination).

For purposes of developing a more comprehensive and valid understanding of the patient, the H-A enables electronic medical records systems data to be accessed through the H-A interface. The H-A can also integrate with various input devices, allowing data to be entered via keyboard, voice, or preferred hand-held device.

Finally, the H-A supports scanning in paper documents (e.g., that the family brings in, with the patient) and translates the content into electronic form if needed (e.g., voice recognition, optical character recognition).

The Story of the Patient: Past, Present, and Possible Futures

Data within an electronic medical record (EMR) system is encoded to support a database discipline, and so is organized by the kind of data. Thus an EMR is best understood as a repository; even what are called summary views in EMR systems are really just subsets of the data. In contrast, the H-A enables users to create a past-present-future characterization of the patient's condition(s) – a true summary. This is the H-A's realization of what is sometimes called "the story of the patient." Descriptive, form-based, and graphical options exist for developing and presenting this view.

The H-A provides a depiction of the patient's present condition not only as a collection of current measurements, but also in light of past conditions, diagnoses, procedures, etc. Moreover, it represent future prospects – alternative ways that clinical conditions can develop, as a function of the patient's history, clinical maladies, candidate courses of treatment, and patient-specific factors (e.g., genetic predispositions). These future prospects can be annotated for their degree of plausibility, as well as desirability.

The H-A offers special support for developing the decision-relevant prospects – those that are important for monitoring the patient's progress to confirm hypotheses and adjust treatment. Typically, decision-relevant prospects are those that are most likely to entail important choices or significant consequences (good or bad). These are the prospects that deserve special monitoring (e.g., to detect the emergence of complications).

Patient-Specific Vocabulary for Search, Organizing Data Resources, Highlighting, and Automated Link to Relevant Resources

The H-A includes mechanisms to create and refine a vocabulary of terms, used for search and other purposes. This vocabulary names such things as all conditions/diagnoses and procedures experienced by the patient. These names for diagnoses and procedures are automatically generated by the H-A from the data in the electronic medical record. Once these terms are developed, they are automatically extended with terms mentioned in the research literature that are correlated with the patient's underlying clinical conditions. A review of this vocabulary enables the user (e.g., admitting MD) to quickly gain a sense for the history and conditions of the patient.

In addition, terms can be added to the vocabulary. For example, patients can add any terms of interest, such as family conditions that the patient may want to track. Similarly, the caregiving organization might add names of all providers associated with this patient.

The H-A uses this patient-specific vocabulary to derive and display a model of the data resources (i.e., a picture of what data exists, organized in terms of the patient-specific vocabulary). Providers use this model to browse the data resources and access specific information.

Furthermore, the H-A provides a range of facilities to access and make use of information relevant to the patient's conditions and possible care. The volume of data on the patient's health is always growing and can be tremendous – complex patients with chronic conditions often have hundreds of pages of data on tests, procedures, etc. The H-A provides facilities to search various data repositories (including but not limited to the electronic medical record for the patient). Search in the H-A is comprised of any method/technology that gathers data in response to an explicit or implicit query – including keyword search, concept-based and document-based search, and data mining and other statistical techniques.

When documents are retrieved for review, the H-A pre-highlights any mention in the document of terms that appear in the patient-specific vocabulary. Users have control over highlighting – e.g., just past diagnoses and procedures, or just terms mentioned in the research literature. These facilities enable the user to quickly focus only on those relevant passages. For any terms mentioned in the research literature (that is relevant to the specific patient), the H-A attaches key reference articles, as well as any hospital-specific guidelines on treatment of that malady.

Creating Commentaries to Capture Understanding and its Dependence on Data

The H-A includes facilities for creating comments that summarize selected elements of the information relevant to a patient's conditions and care. A comment is a record of an inference from, summary of, or simply a copy that calls attention to, some information. One comment can be based on various elements of information located in different sources. Further, comments can refer to and include part or all of other comments. In this way the user develops and authors a perspective on some information – what's understood, committed to, etc. For example, a formal document, such as the History and Physical produced upon admissions to a hospital, can be built as a collection of comments on patient records. Comments are an important way to capture understanding for oneself and others, and so are significant aids in managing the complexity of the information associated with a patient.

Comments may be revised as new data or new interpretations of data are created. This is typical in healthcare, where uncertainties are such that it is sometimes necessary to let conditions evolve and emerge in order to understand past symptoms and processes – conditions are not always understood at the time the first indications appear. This also means that at each point in time, any element of the "story of the patient" may be revised – including not only the present, or future-prospects, but also the past.

 At the simplest level, when the user creates a comment the H-A ensures that it is automatically linked to the data on which the comment is based. The data is in this simple sense "evidence" for the conclusion. Thereafter, the H-A enables users to navigate from data (i.e., evidence) to comments (i.e., conclusions) and vice versa. However, conclusions are not always "obvious to all, once given the data." In this case, H-A users may structure their comments as arguments. Arguments depict how conclusions are based on combining, weighing, and inferring from elements within a data collection.

Managing Workflow: Task Management, Plans and Choices, and General Coordination Support

In some cases, healthcare delivery has the form of a well-circumscribed action in response to a well-understood condition. But the majority of healthcare delivery has the form of a procedure (or process, protocol, or workflow) with the following elements: monitor for the state of the patient's conditions, test

and improve understanding of the conditions, and manage/treat the conditions. The H-A provides three capabilities to define and manage procedures or workflows. These are: task management, plan and choice representation, and coordination support.

The H-A can develop collections of tasks that are pertinent to a given process, at any level of the process, within an overall delivery cycle. Provider organizations can create and approve such task lists, and make them the default task framework for users. Users can then organize these as tasks and subtasks, associate them with data that motivates the task, mark them complete, and associate them with comments that represent the satisfaction or completion of the task. Tasks can be about anything pertinent to caregiving – things to figure out, research to consult, reports to author, communication or other coordinative activity, approvals to seek, validation steps to undertake, etc.

As part of its support for care coordination, the H-A enables embedding clinical orders for conducting or managing task collection. In this way the user may associate problem-solving, choice, and planning activities with orders. However, the EMR system remains the "system of record" for orders regarding patient care. Therefore, an order in the H-A is a copy of the "actual" order in the electronic medical record system. The H-A integrates with the EMR system so that with one action the user signifies a task is complete, both in the EMR, and within the H-A.

A report can be automatically composed by collecting documents associated with the completion of tasks in the task list. This report can be generated for the overall set of tasks, or for any subset of the tasks. Among other things, discharge guidance can be crafted to summarize the course of care in a hospital or other setting, and to call for follow-on monitoring, record-keeping, and other actions. The H-A, or a "lightweight form" of the H-A, can directly support this follow-on activity by patients, family, and/or allied caregivers such as primary care physicians.

Users may create a special type of commentary that represents an adaptive treatment protocol – that is, an adaptive plan. These commentaries can be rendered as simple descriptions, or in a graphical form to exhibit sequences and dependencies among actions and outcomes. Plans have the following four components: events (antecedent or consequent conditions surrounding actions), diagnostic or treatment actions, choice points (selection rules that determine which of a set of follow-on actions should occur, as a function of then-current conditions), and value annotations (remarks and dimensions and quantities of value to preserve/seek/avoid). Goals associated with the plan are depicted either as endpoints (outcome states) or as differences between starting and outcome states (changes to effect). Note that, unlike typical workflow technologies which tend to presume fixed/static action designs, plans in the H-A are highly adaptive. The presence of (an arbitrary number of) choice points within plans enables execution to be guided in real time by localized choice policies to apply in then-current conditions. This provides for monitoring and contingent response, e.g., to emergent complications. Further, control points can advise later control points, so that the choices made later in the plan are sensitive to features of earlier choices.

Plans and parts of plans can be exported to the H-A's embedded choice modeling and analysis technology – plans become optional actions within choices. Choices express how the various plans might 'work out' as a function of differing contexts and fundamental uncertainties, as well as how various possible outcomes would be scored for costs and benefits. The user has tools to expand events mentioned in the adaptive plan into full event spaces (uncertain variables), and to formalize and quantify both uncertainty and value. In

addition, the H-A's choice technology includes a proprietary method, called VOICE, to identify key variables within a choice, and to quantify the impact of improved or degraded control over these key variables. In this way the H-A embodies a normatively-grounded principle for risk-advised action design. This choice technology would likely be used by experts in a hospital to define and optimize new treatment protocols, as they better understand a disease process as resident in their patient population, statistics on outcomes in their hospital and similar ones, what the literature offers, etc.

The H-A integrates all of the foregoing types of support within a coordination architecture. Users are associated with roles – user types that are defined within the H-A. As a function of their role, users are given permission to access and comment on given parts of patient data. Roles can include constraints on the organizational affiliation of users (e.g., admitting MD in the Emergency Dept.) and/or on a specific patient population (e.g., just the cardiac patients).

Consensus formation and organizational decision-making processes are supported by the H-A's coordination mechanisms. With roles in place, users with the right permissions can define policies for who may review documents of given types, who may review and critique products of others, and who may approve products. The argument formation technology can be used here to structure the contributions of various participants (e.g., attending vs. consulting specialist) and to enable the critical exploration of conflicting positions. The H-A enables explicitly-devised coordination acts, as a function of orders or adaptive treatment plans. The H-A can produce a "caregiver map" at any point in time. The caregiver map names the specific individuals or roles that are responsible for orders (associated with a patient). Then users with the right permissions can annotate this map to direct that particular kinds of coordination occurs, such as directing providers to synchronize on or sequence their tasks in a given way, or to give a caregiver a ready-built communication protocol for who to contact if a particular condition arises. MDs also use this facility to communicate to the current or future caregiving team any special or context-specific information about their tasks (e.g., "increase vigilance for this symptom," or, "consider this risk for all future prescriptions of medications").

As a special case of explicitly-devised coordination, users with the right permissions can assemble and activate autonomous agents that monitor for key conditions that may appear in the electronic medical record. These agents are given a monitoring protocol (sources to monitor, inferences to form over the source information) and a reporting protocol (thresholds or other conditions that mandate an alert, who in the caregiver map to alert, priority of the alert). Often, these agents are monitoring for the occurrence of one of the decision-relevant prospects (e.g., a less-likely but significant patient risk suddenly manifests).

By selecting from previous conditions and medical responses in the patient's records, the H-A also enables users to form plans. In this way the user caches a plan, in the event that it is needed later in the patient's care. Transitory but significant conditions arise for many complex patients, and so it helps to have a pre-existing and pre-approved plan that is readily available and known to work for the given patient (i.e., saves time, unnecessary testing, etc.). These plans can be associated with an autonomous agent, which monitors for the emergence of the inciting conditions.

Roadmap

The Healthcare Associate will be rolled out in several modules that will track a patient from admissions to discharge. In time, we will also provide a module that can manage the handoffs before and after hospital admissions. The major modules planned are:

Admissions Associate: ensuring a much more complete and correct H&P, the Admissions Associate will save doctors time so they can focus on mastering each patient case. The Admissions Associate results in lower healthcare costs due to efficiency and risk, enhanced treatment effectiveness and increased patient safety and satisfaction.

Progression Associate: expanding on the capabilities of the Admissions Associate and the Discharge Associate, the Progression Associate provides a complete patient care system for the entire hospital stay. The Progression Associate will provide full lifecycle management capability for hospitals. It will also provide the capability for the current MD to create "heads-up" notes that future caregivers can access for post discharge care.

Discharge Associate: the Discharge Associate enables MDs to create a guidance system during the course of a patient's stay in the hospital. They create this guidance as clarity emerges about the patient's conditions and the likely development of these conditions post-discharge. The guidance is a description of what the patient and perhaps the primary care MDs need to understand about the current admission, as well as what they need to monitor post-discharge. It may include information the family should collect and record, post-discharge. This guidance is coupled to a description of when and how to contact the hospital for questions, to consider or prepare for readmission, and to access other types of help.

PHR Associate: The PHR Associate will take MedAttune's technology beyond the hospital to clinics, primary care physicians and even patients. Unlike the Associates offerings, PHR will not rely on the hospital's EMR system. Instead, it will be a stand-alone system that will focus on patient care before and after hospital admissions. PHR Associate will be a web-based offering (SaaS) that medical professionals and patients can access to view and enter medical information. Like the other offerings, PHR will focus on the various handovers that occur with patient care – but outside the hospital. Once a patient is admitted into a hospital, PHR will integrate with the other MedAttune Associate offerings to provide a complete, comprehensive tool for doctors, hospital staff and patients.

From a timing perspective, our roll-out schedule is as follows:

The Healthcare Associate Roadmap

	2009	2010	2011	2012	2013	2014
	Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4
Admissions Associate	beta	rel 1	rel 2		rel 3	
Progression Associate		beta	rel 1		rel 2	
Discharge Associate			beta	rel 1		
PHR Associate				beta	rel 1	
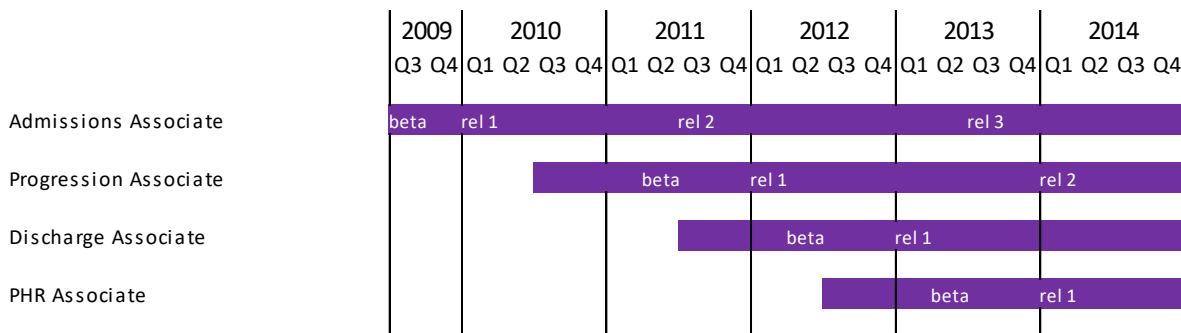
Target Markets

The Healthcare Associate will provide cost savings and process efficiencies to medical care facilities of all sizes. As such, our target markets for these products range from the largest public hospitals to the smaller medical clinics. Initially we will pursue hospitals in the United States, but once we generate traction we will expand to international hospitals and then medical clinics (first domestically and then globally).

Hospitals

In the United States there are 5,708 registered hospitals comprising 945,199 hospital beds.[10] The bed distribution for these hospitals is as follows[11]:

Number of Beds	Percent of Hospitals
Less than 50	23.5%
50 – 99	23.7%
100 – 199	24.8%
200 – 299	12.2%
300 +	15.8%

Looking at global data, according to the International Healthcare Foundation (IHF), there are approximately 55,000 hospitals worldwide.

Clinics and Doctor Offices

According to the American Medical Association, there are 853,187 licensed physicians in the United States.[12] Globally, there are 9.36 million physicians.[13] While doctors have independent practices, most are part of larger networks tied to a hospital. Some are part of clinics where doctors pool their resources and work together.

As hospitals deploy EMR (Electronic Medical Record) systems, doctors will also be looking to utilize similar tools in their private practices. In addition to remote access to hospital systems via a web interface, physicians will seek tools that can be integrated into their private practices. Two features required for clinics and doctor offices are: a common user interface with hospital EMR systems and the ability to access patient data from the hospital databases.

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[10] American Hospital Association (AHA) Hospital Statistics, 2009
[11] American Hospital Association (AHA) Hospital Statistics, 2002
[12] American Medical Association, 2002
[13] World Health Organization, 2004

Competitive Analysis

While the healthcare IT market is crowded, the handoff process is one that is often neglected. Many companies today are focused on the process of converting medical records to electronic format. Others provide software for healthcare management or patient tracking. Our solution will interface with many of the existing solutions (primarily EMR) to provide physicians an easier way to create the H&P report and minimize errors. Here is a summary matrix of how the Healthcare Associate stacks up to other types of healthcare IT systems:

	Healthcare Associate	EMR	Patient Flow/ Logistics	Incident Reporting	Information Exchange/ Aggregation	Handoff
Easy access to patient and treatment histories	●	◉	○	◉	◉	●
Support diagnostic and problem-solving process	●	◉	○	◉	●	●
Facilitates sharing and coordinating treatment plans	●	◉	○	◉	●	●
Provides contextual access to supporting documents	●	◉	○	◉	◉	◉
Pulls in documentation from multiple sources	●	◉	◉	◉	●	●
Enables simple annotation entry	●	◉	◉	◉	◉	◉
Ease of use	●	○	●	●	◉	●

○ ◉ ◎ ●
worst ──────────────► best

Electronic Medical Record Systems

The major companies in the healthcare IT market provide Electronic Medical Record (EMR) systems. These solutions are basically electronic databases where all patient medical records are stored. As implementations are lengthy, they are often major projects for the hospitals.

Similar to an enterprise implementation of SAP or Oracle, EMR systems implementations are typically the first step in organizational automation. Once the core system is implemented, custom programming, add-in software modules and new I/O devices are needed for the organization to garner the value of the system.

MedAttune provides a very valuable add-in software module that is critical for minimizing hospital errors and increasing the efficiency of the hospital staff. Our solution is not in competition with the EMR systems. Rather, we rely on these systems to provide the information that we will integrate into a user friendly,

thorough interface for the hospital staff. Our solution not only pulls records from the EMR system, but also enables hospital staff to input data through our interface that becomes part of the EMR patient records.

While EMR system vendors have staff that can try to duplicate what we do, they lack the expertise and financial incentive to do so:

- EMR system vendors are database providers. They are not familiar with user interface or experienced in client process optimizations. MedAttune's core competency is in analyzing and understanding the workflow processes of hospitals and designing systems that improve workflow and minimize the risk of errors.
- With the mandates defined in ARRA, there is a 'land grab' for EMR implementations as hospitals rush to install systems in order to avoid financial penalties. With over 5000 hospitals needed to implement EMR systems at total costs that can exceed $100 million, ERM system vendors will not concern themselves with designing Healthcare Associate-type systems that may only generate $2 to $3 million per hospital.

We see the EMR system vendors are complementary and potential partners for MedAttune. Our solution makes the use of EMR systems more desirable. As the EMR market matures and vendors look to expand beyond databases, we become an attractive acquisition target.

We will be proactive in establishing partnerships with the major EMR suppliers. On the technical side we will need to interface with their systems. On the sales and marketing side, we can work together to expedite the desire of hospitals to implement a full system. The key suppliers in this market are:

- Cerner
- Eclipsys
- Epic
- GE Medical Systems (through their acquisition of IDX)
- McKesson
- Meditech
- Siemens

In addition, MedConnect offers a web-based EMR-lite system targeted at clinics.

Patient Flow/Logistics

Several companies have created software solutions that interface with EMR systems to enable hospitals to manage certain aspects of the patient process. This is significant because it sets precedence and provides a proof-point that EMR suppliers are willing to work with third parties in allowing their software to interface to the EMR database.

Patient flow and logistics solutions help a hospital keep track of patients and help manage allocation of hospital beds. Many of these systems function as real-time dashboards that enable the house staff to see all aspects of bed availability -- so projected time of patient discharge, contention for beds given pending transfers, beds available to turn, etc. They also have alerts and views of tasks remaining to turn a bed, presented in a way that prompts the right reactions by the staff.

There are a number of contrasts between patient flow logistics systems and the Healthcare Associate. The

most important derives from the fact that our system supports a very different task. Rather than focusing on a critical resource, the bed, we are focused on the H&P as a summary of past history, current state, and plans and contingencies for future clinical care during this stay. In short, we are focused not on a physical asset, but rather, on creating the best understanding of the patient's situation (in less time than currently), so that the patient's care is more efficient, safer, and more satisfying.

Some of the key vendors in this segment include:
- LiveData: Display technology that helps provide more information on one screen for ER
- MedVentive: Patient flow and workflow tool.
- Statcom: Patient flow logistics
- Versus Technology: Patient logistics system incorporating RDIF tags

Incident Management

Incident Management systems focus on managing 'exception cases' instead of trying to avoid these cases from even occurring. Once implemented, the Healthcare Associate will help hospitals reduce the number of exception cases. RadicalLogic is a company in this segment that provides a web-based incident and adverse event management.

Information Exchange/Aggregation

Information exchange and aggregation systems enable information from multiple sources to be viewed together. This allows doctors to access patient data from different EMR systems or other software applications. These products do not provide problem-solving assistance nor do they use agents to mine for information. Two leading companies in this segment are CareFX and Medicity.

Handoff

The only handoff tool we have run across is the VA tool which has a subset of the Healthcare Associate. More importantly, this is an internally developed, proprietary application that is not offered to other healthcare facilities.

Key Points of Differentiation

MedAttune's approach to the market is unique. We use our own method called Critical Practice Management (CPM) to map out each hospital's workflow and then design our software systems to optimize the efficiency of hospital staff and implement processes to reduce the risk of errors. Unlike others in the healthcare IT space, MedAttune is the only company that:
- Doesn't start with software design. Our founders' unique backgrounds in Artificial Intelligence, Engineering, Cognitive Psychology and Mathematics ensure that we tackle our customers' problems from a multi-disciplinary perspective.
- Focuses on the most critical risk item in patient healthcare, the handoffs. As hospitals are understaffed, the risk for errors has increased. The Healthcare Associate is the only application that takes a time burden away from doctors and nurses.

Marketing and Sales Plan

Company Positioning

MedAttune will be positioned as a provider of solutions that increases hospital efficiency while reducing costly errors in patient care. Through our Critical Practice Management methodology, we will map out each hospital's the patient process from admissions through discharge, focusing on the many handoffs that occur. Our software solution is not a one-size fits all, rather it is tailored to the needs of each client.

Marketing

Branding

Throughout all our marketing efforts, we will work to build a strong brand that hospitals and clinics can learn to trust. Our solutions will be marketed under the umbrella of "The Hospital Associate." Various modules may have sub-brands, such as "The Hospital Admissions Associate" for the admissions process.

Marketing Communications

Initially, our marketing communications plan will be through press releases and reaching out to industry analysts. We will also develop case studies with our initial hospitals and use these white papers as a way to quantify the benefits that the Hospital Associate will provide to prospective customers. Longer-term, we will participate in industry tradeshows and advertise in industry specific publications and websites.

To generate sales lead we will also use our website and investigate social media outlets. Our website will contain product information, case studies and an overview of our proprietary methodology. We will keep our website up to date with the latest product information and customer testimonials.

Distribution Channels

Initially, we will focus on the US market and approach hospitals directly. Over time we will expand our distribution through partnerships such as EMR vendors, consulting firms, technology providers and systems integrators. Our international expansion strategy is outlined later in this section.

Business Development and Partnerships

In order to expand our reach, we plan to partner with other companies within the healthcare IT ecosystem. Primary focus is consulting firms (such as Accenture and IBM Global Services), technology suppliers to the healthcare industry (such as HP, Oracle and SAP), EMR vendors (such as Cerner, Eclipsys and Epic), and healthcare IT systems integrators.

We will also work closely with the most influential hospitals such as Lucile Packard to showcase the benefits of our solution. These hospitals are respected within the industry as the trend setters that many

other hospitals look at when deciding on their own plans. Having prospective customers see a live implementation at such institutions will greatly assist our sales efforts.

Finally, we will offer the services of Dr. Fehling and Dr. Courand to speak at industry conference and MedAttune will create training workshops specifically attacking the problems associated with handoffs. All of these activities will promote the benefits of our solution.

Pricing

Strategy

Hospitals allocate funding from two different sources: capital budgets and operational budgets. Capital budgets are used for larger, longer-term spending initiatives and are typically set once per year. In order to be included within the capital budget you need to make sure your proposal gets accepted by the annual capital budget setting. Otherwise, it is possible that you could wait one year before a customer will commit to implement your solution. EMR implementations are capital budget items.

On the other hand, operational budgets are for smaller, shorter-time commitment expenses. While hospitals set operational budgets yearly, they do not fully dedicate those expenses so far in advance. They have a lot of flexibility in deciding where to spend those funds as the year goes on. More importantly, hospitals have the ability to reset their operating expense targets as the year progresses.

MedAttune has structured its pricing so that we fall under the hospital's operating budget. This will enable hospitals to commit and implement our system faster. In addition, as the Hospital Associate will provide quantifiable savings, our software costs will be offset by a reduction of other operating expenses at the hospitals.

Revenue Sources

There will be no upfront charge for our software. Instead, the company will generate revenue from the following sources:

Subscriptions: We will charge hospitals an annual fee for our software. Our fee will be based on the number of patients at a site. We will distinguish among emergency room, short stay and full admission patients. This annual fee will be based on a pricing table (see below). We will provide discounts if the customer commits to a two-year or longer contract.

Software Upgrades: As we develop new modules, we will offer them as upgrade options. The upgrades will be priced as an additional per patient fee.

Consulting Services: Once a hospital commits to an implementation, we will provide consulting services in order to map out the hospital's processes and determine the most efficient configuration of our software. We expect the consulting process to last two to three months.

Professional Services: Professional services are supplied during the implementation and pilot phases. This is when we actually interface with the EMR systems and implement the software at the hospitals. This implementation phase is expected to last two to three months per hospital.

We will offer hospitals the option of signing multi-year agreements. The longer the agreement, the lower the per patient rate. For multi-year agreements we will reset the pricing annually based on the hospital's latest annual number of patients. We will bill and collect quarterly (each quarter in advance). Our standard collection terms will be net 30 days.

Pricing Table

Following is our subscription pricing table, per patient type:

Hospital Size (patients/year)	ED Visit	Short Stay	Full Admission	Upgrade
< 20,000	$20	$40	$80	$20
20,000 – 39,999	$18	$36	$72	$18
40,000 – 59,999	$16	$32	$64	$16
60,000 – 79,999	$14	$28	$56	$14
80,000 +	$12	$24	$48	$12

Following is our monthly rates for services:

Pricing Item	Monthly Rate
Consulting Services	$50,000
Professional Services	$75,000

Subscription pricing will be approximately 10% lower for two-year agreements.

Sales

Sales Force

To prove our solution in the market, we will build up our own sales force to interface directly with hospital staff. Initially we will start with one sales person and grow that as we start selling to additional hospitals. Ultimately we will have a structure of a worldwide sales vice president and regional sales directors for the various markets. In the US, we will breakdown the sales territories into three regions each with its own sales director: Eastern, Central and Western. We will hire sales personnel experienced in selling enterprise software solutions, ideally into the healthcare industry.

Once our first two hospitals are implemented, we will strategically partner with third parties to rapidly expand our sales reach. These partnerships will be in addition to our sales people who will remain on staff to

both work with our distribution partners on new sales activities as well as continue 'hunting' for new opportunities. See our Business Development and Partnership section for more details.

Sales Activities

The sales team will be responsible for lead generation and day-to-day account management. They will be on the road all the time either 'hunting' for new customers or 'farming' existing ones. Over time we will have sales staff that is specialized in either hunting (finding new customers) or farming (maintain relationships with existing customers).

As our business grows, we will start have forums for customers to meet and discuss how we can further improve our products. We will also work closely with industry partners and universities to create educational conferences.

Customer Support

The company will provide customer support via the following methods:
- E-mail support with 24 hour guaranteed response time
- Web based Q&A and knowledge databases that will grow over time.

In addition, the company will investigate if outsourced phone support should be provided. Initially all support will be provided in English but over time we will add support for additional languages based on our international expansion plans.

International Expansion Plans

Once we have successfully implemented the first hospital, we will start evaluating international opportunities. Initially, we will seek partnerships with local 'representative agents' or 'distributors' focused on healthcare IT. For key markets such as Western Europe, Japan and China, we will develop marketing plans to attack each market. Within these plans we will outline resource requirements.
At this time, our priority for expansion is as follows:
1. Western Europe
2. Canada
3. Japan
4. China
5. Latin America
6. Rest of Asia

Company Operations

Founders

The company's is co-founded by four individuals who are seasoned veterans in their respective functional areas. Each contributes a wealth of knowledge and experience that will ensure the company achieves it greatest potential:

(redacted)

The company will take pride in running a very efficient business. Based on our experience, we understand the need to get to market with our first offerings utilizing as few resources as possible. Only as our business prospers will we look at expansions into tangential markets.

Organization

The company will initially focus on building out the development team along with the marketing team (including business development). Other functions such as finance and legal will be outsourced until it makes financial sense to bring in house. Our projected quarterly headcount plan is as follows:

	Q4 2009	Q1 2010	Q2 2010	Q3 2010	Q4 2010	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013
Executive																	
CEO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CTO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chief Methodologist	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VP Operations	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VP Marketing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VP Sales								1	1	1	1	1	1	1	1	1	1
CFO										1	1	1	1	1	1	1	1
Total Executive	5	5	5	5	5	5	5	6	6	7	7	7	7	7	7	7	7
Development																	
Director	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Senior Engineer	2	2	2	2	3	3	3	3	4	4	4	5	6	7	7	8	8
Engineer			1	2	2	2	3	4	4	4	5	6	7	7	8	8	9
Quality Assurance/CS		1	1	1	2	3	4	4	5	5	5	6	6	6	7	7	8
Total Development	3	4	5	6	8	9	11	12	14	14	15	18	20	21	23	24	26
Operations																	
Systems Engineer	1	1	1	1	2	2	3	3	3	3	4	5	5	6	6	7	7
Project Manager	1	1	1	1	1	1	2	2	3	3	3	4	5	5	6	6	7
Total Operations	2	2	2	2	3	3	5	5	6	6	7	9	10	11	12	13	14
Marketing																	
Marketing Manager					1	1	1	1	1	1	1	1	1	1	1	1	1
Product Management						1	1	1	1	1	1	2	2	2	3	3	3
Marcom											1	1	1	1	1	1	1
Business Development													1	1	2	3	3
Total Marketing			0	0	1	2	2	2	2	3	3	4	5	5	7	8	8
Sales																	
Sales Manager			1	2	3	4	4	4	4	4	4	5	5	6	6	6	6
Sales Director												1	1	1	1	2	2
Total Sales			1	2	3	4	4	4	4	4	4	6	6	7	7	8	8
Administrative																	
Finance & Accounting		1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	3
IT & Infrastructure										1	1	1	1	2	2	2	2
HR													1	1	1	1	1
Administrative		1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
Legal															1	1	1
Total Administrative		2	2	2	2	3	3	3	3	4	5	6	7	8	9	9	9
Grand Total	10	13	15	17	22	26	30	32	35	38	41	50	55	59	65	69	72

All employees will have the following elements for their incentive and compensation plan:
- Base salary
- Standard benefits including medical and dental
- Stock options
- Bonus plan (details to be defined)

Company Culture

A company will only be as strong as the ability of its employees – both in terms of personal abilities as well as the ability of the individuals to function as part of a collaborative team. Thus, having a collaborative, open communication culture will be critical to our success. We will maintain as flat an organization as

possible, and have an open door policy where anyone can interface with anyone else, regardless of title or function. Activities that strengthen the team, such as social gatherings and pot lucks, will be done regularly to solidify team bonds.

Facilities and IT Infrastructure

The company will be based in Silicon Valley, California. Facility will be selected focusing on both costs and employee convenience (critical for recruiting and maintaining top talent). The plan is to keep the group in one facility. From an IT perspective, we will have standard IT infrastructure including internal servers for development and safekeeping of confidential company information.

Legal and Intellectual Property

Owning and protecting our core IP will be very important. As such, we will be aggressive in filing for patents on our inventions. In certain cases where we would need to disclose too much technical know-how, we will bypass the patent process and keep that technology as trade secret. To date we have filed a provisional patent on the inventions in our Healthcare Associate software invention.

From a legal perspective, we will utilize external general counsel and patent counsel. Initially, we will utilize the following firms: White & Lee (general) and Haverstock & Owens (patent).

Administration

The company plans to implement the following:
- Incorporation in California
- Outsource CFO and finance function to a firm (such as David Powell, Inc.)
- Utilize a smaller accounting firm for audits over the first two years
- Work through a broker, such as Sequoia Benefits, for employee benefits

As the company grows, we will continually evaluate our suppliers and 'upgrade' to larger firms at the appropriate times.

Financial Plan

Financial Highlights

- Revenue growth from $1.7 million in 2010 to $49.3 million in 2013
- Profitability starting in Q3 2011
- Positive cash flow starting Q4 2011
- First hospital online in Q2 2010
- Profitable with only 6 hospital implementations
- Headcount at 10 at end of 2009 growing to 72 by end of 2013
- Seeking $2.5 million investment

Sales Forecast

In the US alone, there are 5,708 hospitals and they can all benefit from our solution. These hospitals have in aggregate nearly 1,000,000 beds. We do not need a high penetration rate in order to have a very profitable business:

|	2010	2011	2012	2013
Total US Hospitals	5,708	5,708	5,708	5,708
Our EOY Implementations	2	6	30	66
Penetration Rate	0.04%	0.11%	0.53%	1.16%
Total US Hospital Beds	945,199	945,199	945,199	945,199
Our EOY Implementations	876	1,926	5,576	14,176
Penetration Rate	0.09%	0.20%	0.59%	1.50%

The company is actively engaged with two leading hospitals to implement the H-A: Lucile Packard Children's Hospital in Palo Alto, California, and University Health System from the University of Texas Hospital System in San Antonio. These two hospitals are forecasted as our 2010 implementations. We are actively engaged with other hospitals some of which could implement as early as 2010, but in our financial model we have forecasted zero additional in 2010 and only four for 2011 implementations.

Our strategy for expanding from 6 to 30 and then 66 hospital implementations is as follows:
  (a) Generate initial sales through a few prominent, flagship hospitals. We have verbal commitment and are defining agreements with the first two. Several others have already expressed interest.
  (b) Many hospitals are part of larger medical centers, including those mentioned above. Once we implement at one hospital within the center, we can more easily expand within the larger group.
  (c) Utilize introductions from our existing hospital customers to their affiliate hospitals. As these hospitals transfer patients amongst each other, they seek similar systems and processes.
  (d) Based on the EMR systems deployed by our existing hospital customers, proactively market to other hospitals with the same system implementation.
  (e) Pursue hospitals that seek to improve or innovate in their admissions process, or are leaders in deploying EMR technology (level 4 or higher per HIMSS Analytics).

Our revenue forecast for the next five years is:

	2009	2010	2011	2012	2013
TOTAL REVENUE	$ -	$ 1,760,000	$ 6,857,167	$ 23,624,750	$ 49,280,000

Sales/Headcount
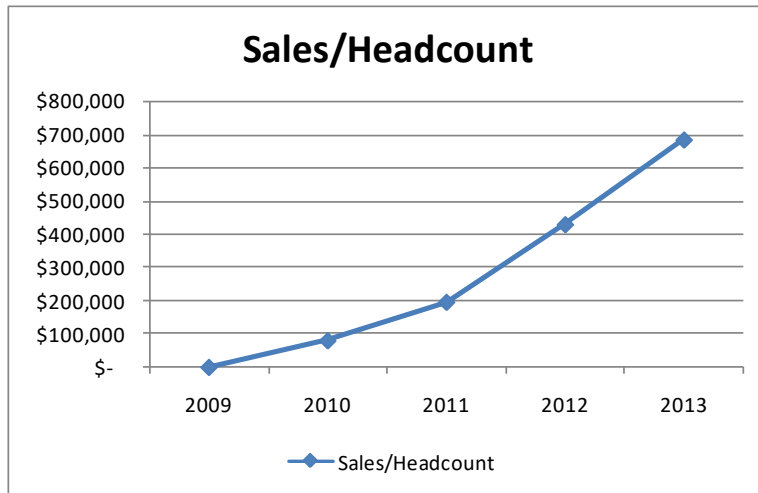
Note that implementing our strategic sales partnerships can increase our revenue starting in 2012 by a factor of three to ten.

Most of our revenue will be product revenue based on monthly subscriptions and upgrades. In addition, we will generate a smaller portion of revenue from our consulting and professional services. Our breakdown is depicted in the following chart:

Revenue Breakdown
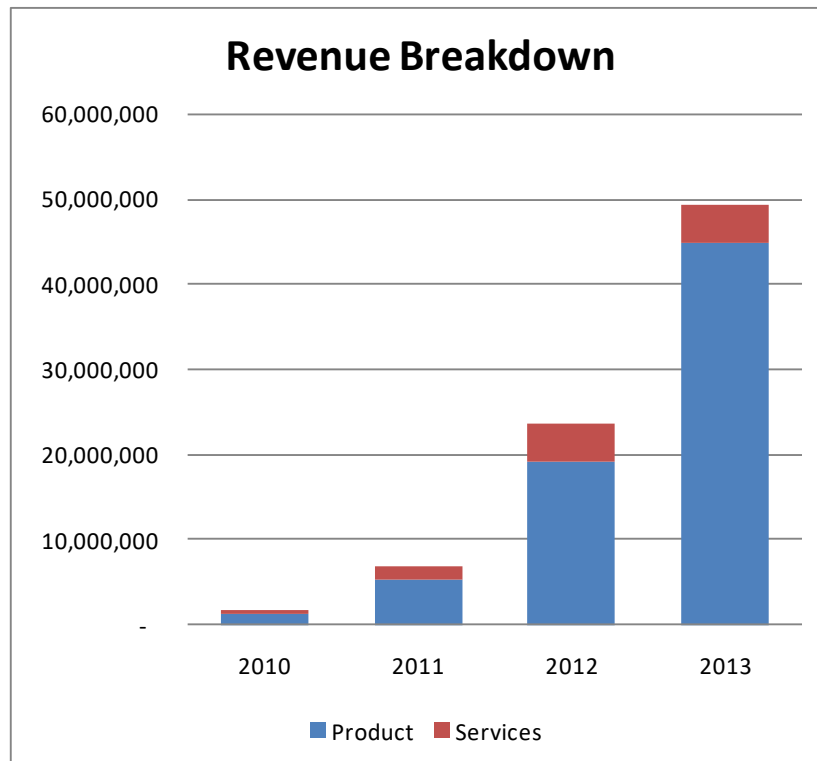
Five Year Forecasts

Five Year Financial Summary

rev/cash figures in thousands (000)	FY 2009 Total	FY 2010 Total	FY 2011 Total	FY 2012 Total	FY 2013 Total
CUMULATIVE HOSPITAL INSTALLS	-	2	6	30	66
SALES REVENUE	-	1,760	6,857	23,625	49,280
GROSS MARGIN	-	1,552	6,029	20,812	43,902
HEADCOUNT	*10*	*22*	*35*	*55*	*72*
RESEARCH & DEVELOPMENT	279	2,107	3,456	5,852	11,343
SALES & MARKETING	19	674	1,897	4,577	10,187
GENERAL & ADMINISTRATIVE	122	768	972	3,165	6,700
TOTAL OPERATING EXPENSES	420	3,549	6,324	13,594	28,230
OPERATING INCOME	(420)	(1,997)	(295)	7,218	15,672
BEGINNING CASH	-	2,158	27	1,949	6,126
Operating Activities	*(300)*	*(2,114)*	*(552)*	*4,212*	*8,205*
Financing Activities	*2,500*	*-*	*2,500*	*-*	*-*
ENDING CASH	2,158	27	1,949	6,126	14,280

Revenue and Margin Summary

Income Statement

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
	Total	Total	Total	Total	Total
Total Headcount	10	22	35	55	72
Revenues					
Subscriptions	-	1,435,000	3,994,667	13,531,000	30,905,000
Consulting Services	-	100,000	600,000	1,800,000	1,800,000
Professional Services	-	225,000	825,000	2,700,000	2,700,000
Upgrades	-	-	1,437,500	5,593,750	13,875,000
Total Revenues	-	**1,760,000**	**6,857,167**	**23,624,750**	**49,280,000**
Cost of Goods Sold					
Subscriptions	-	143,500	543,217	1,912,475	4,478,000
Consulting Services	-	20,000	120,000	360,000	360,000
Professional Services	-	45,000	165,000	540,000	540,000
Total COGS	-	208,500	828,217	2,812,475	5,378,000
Gross Margin	-	**1,551,500**	**6,028,950**	**20,812,275**	**43,902,000**
Operating Expenses					
Research & Development	279,104	2,107,153	3,455,647	5,851,588	11,342,938
SG&A					
Sales & Marketing	19,132	673,722	1,897,097	4,577,293	10,187,200
General & Administrative	122,244	767,899	971,695	3,164,901	6,699,888
Total SG&A	141,376	1,441,621	2,868,791	7,742,194	16,887,088
Total Operating Expenses	**420,479**	**3,548,774**	**6,324,438**	**13,593,782**	**28,230,026**
Income (Loss) from Operations	**(420,479)**	**(1,997,274)**	**(295,488)**	**7,218,493**	**15,671,974**
Other Income/(Expense)	-	-	-	-	-
Income (Loss) before Taxes	**(420,479)**	**(1,997,274)**	**(295,488)**	**7,218,493**	**15,671,974**
Income Taxes (40%)	-	-	-	1,848,264	6,268,790
Net Income (Loss)	**(420,479)**	**(1,997,274)**	**(295,488)**	**5,370,228**	**9,403,184**

Balance Sheet

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
	Total	Total	Total	Total	Total
Assets					
Current Assets					
Cash & Investments	2,158,368	26,564	1,949,362	6,125,586	14,279,597
Accounts Receivable	-	278,000	758,167	2,709,333	5,158,000
Prepaid Expenses & Other ST Assets	10,400	16,651	26,658	42,681	68,333
Total Current Assets	2,168,768	321,215	2,734,187	8,877,600	19,505,930
Gross PP&E (cost)					
Furniture & Fixtures	10,300	14,685	20,938	29,852	42,562
Office Equipment	5,150	7,343	10,469	14,926	21,281
Computer Hardware	10,300	14,685	20,938	29,852	42,562
Computer Software	5,150	7,343	10,469	14,926	21,281
Other PP&E	10,300	14,685	20,938	29,852	42,562
Accumulated Depreciation	(2,256)	(18,985)	(42,837)	(76,844)	(125,330)
PP&E, Net	38,944	39,757	40,914	42,565	44,919
Other LT Assets (deposits, restricted cash)	-	-	-	-	-
Total Assets	**2,207,713**	**360,972**	**2,775,101**	**8,920,165**	**19,550,849**
Liabilities & Equity					
Current Liabilities					
Accounts Payable	117,492	254,627	434,069	1,140,942	2,215,379
Accrued Expenses	10,700	24,098	54,274	122,236	275,299
Other Liabilities	-	-	-	-	-
Total Current Liabilities	128,192	278,726	488,343	1,263,178	2,490,678
Long Term Financing	-	-	-	-	-
Total Liabilities	128,192	278,726	488,343	1,263,178	2,490,678
Stockholders Equity					
Common Stock	-	-	-	-	-
Common--Additional Paid in Capital	-	-	-	-	-
Preferred Stock	2,500,000	2,500,000	5,000,000	5,000,000	5,000,000
Retained Earnings (cume deficit)	-	(420,479)	(2,417,754)	(2,713,242)	2,656,987
Net Income (Loss)	(420,479)	(1,997,274)	(295,488)	5,370,228	9,403,184
Total Stockholders Equity	2,079,521	82,246	2,286,758	7,656,987	17,060,171
Total Liabilities & Equity	**2,207,713**	**360,972**	**2,775,101**	**8,920,165**	**19,550,849**

Statement of Cash Flows

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
	Total	**Total**	**Total**	**Total**	**Total**
Cash Flow From Operations					
Net Income	(420,479)	(1,997,274)	(295,488)	7,218,493	15,671,974
Depreciation & Amortization	2,256	16,729	23,852	34,007	48,486
Changes in operating Assets & Liabilities					
Accounts Receivable	-	(278,000)	(480,167)	(1,951,167)	(2,448,667)
Prepaid Expenses & Other ST Assets	(10,400)	(6,251)	(10,008)	(16,023)	(25,653)
Accounts Payable & Accrued Liabilities	128,192	150,533	209,618	774,835	1,227,500
Accrued Benefits	-	-	-	-	-
Income Tax Payable	-	-	-	(1,848,264)	(6,268,790)
Other Current Liabilities	-	-	-	-	-
Net Cash From Operating activities	**(300,432)**	**(2,114,262)**	**(552,193)**	**4,211,881**	**8,204,851**
Cash Flow from Investing Activities					
Acquisition of Capital (PP&E)	(41,200)	(17,541)	(25,010)	(35,658)	(50,840)
Interest Income	-	-	-	-	-
Other LT Assets & Liabilities	-	-	-	-	-
Net Cash Flow from Investing Activities	**(41,200)**	**(17,541)**	**(25,010)**	**(35,658)**	**(50,840)**
Cash Flow From Financing Activities					
Issuance of Common Stock	-	-	-	-	-
Issuance of Preferred Stock	2,500,000	-	2,500,000	-	-
Net Cash Flow From Financing Activities	**2,500,000**	**-**	**2,500,000**	**-**	**-**
Net Increase (Decrease) in Cash & Equiv.	2,158,368	(2,131,804)	1,922,798	4,176,223	8,154,011
Cash at Beginning of Period	-	2,158,368	26,564	1,949,362	6,125,586
Cash at End of Period	**2,158,368**	**26,564**	**1,949,362**	**6,125,586**	**14,279,597**

Valuation and Ownership

Industry Segment Analysis

As shown in the financial plan, our company's business model is very lean and attractive. Our fixed costs and working capital requirements are low, resulting in a much more agile company. The net result is a higher margin business that can quickly scale as our business opportunities grow. For investors, this leads to a much higher business valuation.

In looking at comparables for our business, we focused on the following industry segment:
- ***Healthcare Information Services***: providers of information technology services and products to the healthcare industry. Companies in this category include Cerner, Allscripts-Misys, Quality Systems, Eclipsys and MedAssets.

Despite the current condition of the financial markets, this industry segment presents a very attractive valuation (data below as of 9/30/2009):
- Technology Sector: P/E (ttm): 18.9
- Healthcare Information Services: P/E (ttm): 49.4

Comparison Companies

Within this industry segment, we took the seven companies that have positive P/E figures. We excluded any companies with a current loss as their P/E figures are not meaningful. Then we calculated the mean and median for the data set to determine both the actual trailing twelve month P/E and the estimated forward looking P/E. We then looked at the summary valuation for IPOs at the beginning of 2013 and 2104 as shown at the end of the chart below.

Company	Ticker	Stock Price	Market Value	Revenue (ttm)	Net Income (ttm)	P/E (ttm)	P/E (fwd)
Cerner Corp.	CERN	$ 74.80	$ 6,060,000,000	$ 1,680,000,000	$ 201,130,000	30.13	26.43
Allscripts-Misys Healthcare	MDRX	$ 20.27	$ 2,890,000,000	$ 548,440,000	$ 26,020,000	111.07	28.15
Quality Systems	QSII	$ 61.57	$ 1,760,000,000	$ 256,930,000	$ 45,350,000	38.81	26.54
HLTH Corp.	HLTH	$ 14.61	$ 1,510,000,000	$ 404,980,000	$ 16,640,000	90.75	112.38
MedAssets, Inc.	MDAS	$ 22.57	$ 1,260,000,000	$ 322,860,000	$ 13,800,000	91.30	28.57
Eclipsys Corp.	ECLP	$ 19.30	$ 1,090,000,000	$ 519,250,000	$ 85,850,000	12.70	27.18
Mediware Information Systems	MEDW	$ 7.23	$ 55,620,000	$ 40,240,000	$ 1,290,000	43.12	30.13
Mean			$ 2,089,374,286	$ 538,957,143	$ 55,725,714	59.70	39.91
Median			$ 1,510,000,000	$ 404,980,000	$ 26,020,000	**43.12**	**28.15**
MedAttune					*(operating income)*		
Valuation as of Q1 2013			*$ 311,234,559*	*$ 23,624,750*	*$ 7,218,493*	*43.12*	
Valuation as of Q1 2014			*$ 675,717,205*	*$ 49,280,000*	*$ 15,671,974*	*43.12*	

Public company data as of 9/30/2009

In coming up with the company valuations, we took the trailing 12 month P/E values of the lower of the mean or median (median in this case). We looked at IPOs at two points in time: the beginning of 2013

(using FY2012 financials for determining valuation) and the beginning of 2014 (using FY2013 financials for determining valuation). IPO values at these two points in time are calculated to be:

- IPO (Q1 2013): $311 million
- IPO (Q1 2014): $675 million

Ownership Structure & Fundraising Plans

The company is seeking an investment of $2.5 million for its Series A financing. We plan to follow that up with another $2.5 million in Q1 2011, after our first two hospitals has been deployed. In total, we believe we can get this company to profitability and IPO with approximately $5.0 million in investment.

To determine the valuations for Series A and Series B, we looked at the potential future returns and targeted 2000% for Series A, and 1000% for Series B. We assumed a Q1 2014 IPO and significantly discounted the valuation from $675 million to $600 million. This adjustment will provide cushion in the event that our revenue does not grow as quickly as planned or if our operating expenses are greater than budgeted. Even with these downward adjustments, an investment in our company is very attractive as the Series A investor can earn a return of 2,525% on its original investment!

Owner	Post-Round Ownership		IPO Ownership	Post-IPO Valuation	Investor Return
	Series A	Series B			
Founders	55%	48.1%	38.5%	$ 231,000,000	
Series A VC	25%	21.9%	17.5%	$ 105,000,000	2525%
Series B VC	0%	12.5%	10.0%	$ 60,000,000	1100%
Employees	20%	17.5%	14.0%	$ 84,000,000	
IPO			20.0%	$ 120,000,000	
Total	100%	100%	100%	$ 600,000,000	
Raise	$2.5M	$2.5M			
Post Money Valuation	$10M	$20M			
Timing	Q3 2009	Q1 2011	Q1 2014		

Board of Directors

Initially the company would like to have a five member board consisting of the following:
- Co-founder and CEO, Anthony Gioeli
- Co-founder and CTO, Michael Fehling
- Co-founder and Chief Methodologist, Gregg Courand
- Partner, lead VC firm
- Independent director, selected by VC and approved by founders

Appendix

The company can provide the following materials as backup to this business plan:

- Resumes of the Founders

- Spreadsheet for the financial model

- Patent Application

- Founder References