

Gettysburg Edge Server Project	
Vision	Date: 17/Mar/2011

Gettysburg Edge Server Project Vision

1. Introduction

1.1 Document History

OCUS Online Discussions: David Chan, Jel Coward, Tracy Monk, Colleen Kirkham, Martin Dawes, Morgan Price, Reza Alemy	Jan 14 th , 2011	OSCAR Users' view of Edge Server concept.
AMCARE introduction discussions: David Chan, Dan Horvat, Bill Clifford, Paul Stokes, Bernadette Patenaude, Lynda Pattie, Reza Alemy	Feb 22 nd , 2011	AMCARE history and vision with Edge Server
Edge Server Meeting: David Chan, Suzanne Johnston, Jeff Harries, Bill Clifford, Paul Stokes, Reza Alemy, Martin Dawes, Morgan Price	Feb 23 rd , 2011	Key points requirement and governance of PBRN
Morgan Price	March 10 th , 2011	Goal map for a primary care research network
Online Discussion: Martin Dawes, Dan Horvat, Tracy Monk, David Snadden, Jel Coward, Colleen Kirkham, Morgan Price, Lynda Pattie, Paul Stokes, Reza Alemy, Bill Clifford, David Chan, Garey Mazowita, Janusz Kaczorowski, Ruth Martin	March 12 ^h , 2011	Discussions on main strategies increasing acceptance and gathering support for project Gettysburg across divisions
Reza Alemy	March 17 th , 2011	Version 0.9

1.2 Vision Statement

Project Gettysburg is the code name for a collaborative effort between academic and clinical entities in BC to create a practice based research network of family physicians, by family physicians and for family physicians.

By building on past success stories such as AMCARE, the participants aim to create a dynamic information repository which does not send any private patient data out of the practice but provides the knowledge and wisdom to support decisions on improvement of quality of healthcare.

Through series of collaboration protocols and technologic solutions, The participants strive to foster an open source product with the highest potential for wide spread adoption that shall reflect the true state of primary care in communities and broader regions including a province or entire country.

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2. Problem Statements

2.1 Problem Statement : Wide gap between research and practice

The problem of	Wide gap between research findings and clinical practice
affects	Patients, research initiatives and clinical practices
the impact of which is	Less than 20% of research findings find their way into clinical practices and does that do take 17 years on average.
a successful solution would be	<p>To design and implement a Practice Based Research Network, to offer a supportive infrastructure and to facilitate investigation of issues.</p> <p>National visibility and repeated publicity at a local level, delivered by local investigators well known to their community is a key factor in success and acceptance of the results of such researches.</p> <p>More effective teamwork, recognition of the need for systematic approaches, adaptation and extension of findings to care of chronic diseases, and increased self-worth and research literacy with in the practice are some of the more imminent benefits of establishing a PBRN.</p>

2.2 Problem Statement: Absence of drive for bottom up approach

The problem of	Absence of drive for bottom up leadership were practitioners develop their own ideas
affects	Practices
the impact of which is	Low interest in evidence based medicine and more reliance on anecdotal methods of managing common health problems in the community
a successful solution would be	<p>To promote research awareness, collaborative projects, high quality research and opportunity and support for staff members to stretch into new rules by recruiting primary care practitioners to collect data for research.</p> <p>This would lead to a greater balance between practitioner-led and academically led research approaches, encourage recruitment to research initiatives, and provide meaningful answers to health management questions.</p> <p>By providing opportunity for direct application of research results in practice, a vibrant and engaging network for research is expected, that would provide better evidence, more meaningful answers, more efficient quality care, and more thoughtful discussion on research; all the time safeguarding patient privacy and security to the highest standard.</p>

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2.3 Problem Statement : Low quality research data

The problem of	Low quality research data (data that is not gathered from all possible sources, is not gathered in time, can not be audited reliably).
affects	Research projects
the impact of which is	Increased research cost and time to gather data, as each project needs to negotiate with practices individually and develop and implement proprietary data gathering solutions, and has to secure it separately.
a successful solution would be	<p>To develop a generic data model, which does not contain any private patient data, that is queried from each EMR so that each practice has an 'edge server' that can be queried on this model securely by the approved research project.</p> <p>The edge servers are connected in a secure manner that removes the per project security requirements. Further more, because of interoperability imposed by them there is no need to develop data gathering applications for each brand of EMR.</p> <p>As the data model for edge server is known, vendors can make their products compatible beforehand and save time in developing specific query applications. The investigators also don't require knowledge about the data model of each EMR, just the data model of the edge server and how to query it.</p>

3. Product Position Statements

3.1 Product Position Statement: Patients

For	Patients
Who	Want to have their privacy maintained, to contribute to the greater good, receive quality care, and not to be harmed,
The Gettysburg Edge Server	Is a foundation for the practice based research network
That	Provides a secure and safe environment that removes all private information but at the same time conveys the requirements in healthcare that the patients need.
Unlike	Solutions that require central databases and store private patient data
Our product	Doesn't run the risk of compromising patient privacy if someone gains access to the central database, and does not create a honeypot.

3.2 Product Position Statement: Physicians

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For	Physicians
Who	Want to provide quality care efficiently, get better evidence, engage in a vibrant network, answer meaningful questions, protect the privacy of their patients
The Gettysburg Edge Server	Provides the framework for secure collaboration
That	Communicates the clinical finding to the research analysis and back in a timely and accurate manner with guaranteed precision and integrity
Unlike	Solutions that require central databases or approaching each research project individually
Our product	The data remains in the physicians' control even after leaving the office and they can revoke the access anytime, they can decide to which initiatives in present and future they want their data to be made available, and they will get instant feedback on the analysis and result of their data.

3.3 Product Position Statement: Network Leadership

For	Network Leadership
Who	Want to make sure research does not cause harm, that research actually answers meaningful questions, that high quality results are produced for money spent on research, want to foster a vibrant network,
The Gettysburg Edge Server	Provides a versatile decision support system
That	Provides Information on quality measures over dimensions such as time and geographic location,
Unlike	Solutions that take snapshots of production systems in a central database
Our product	Provides the flexibility of changing the business rules and defining new questions as well as answering the old ones, without the need of major refactoring and loss of backward compatibility. The edge server provides an audit trail that can be leveraged to ensure the quality of data provided and to take steps on improving the strategies in place for communicating those results to the practice domain.

3.4 Product position Statement: Researchers

For	Researchers
Who	Who want to contribute to the greater good, answer meaningful questions, engage in thoughtful discussions on research and have a vibrant network
The Gettysburg Edge Server	Provides an efficient means of collaboration
That	Ensures timely and reliable communication with the participating clinicians,
Unlike	Solutions that do not follow an established data model
Our product	Provides a unified interface to EMR that abstracts the internal

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	<p>complexity of each brand, making it unnecessary for the researcher to contact the vendor to create the tools to query their specific solution.</p> <p>It also provides the researcher with invaluable management tools that track the participation of each member and forecast the achievement of milestones in information gathering, along with realistic quantification on the quality of data used to answer the research question</p>
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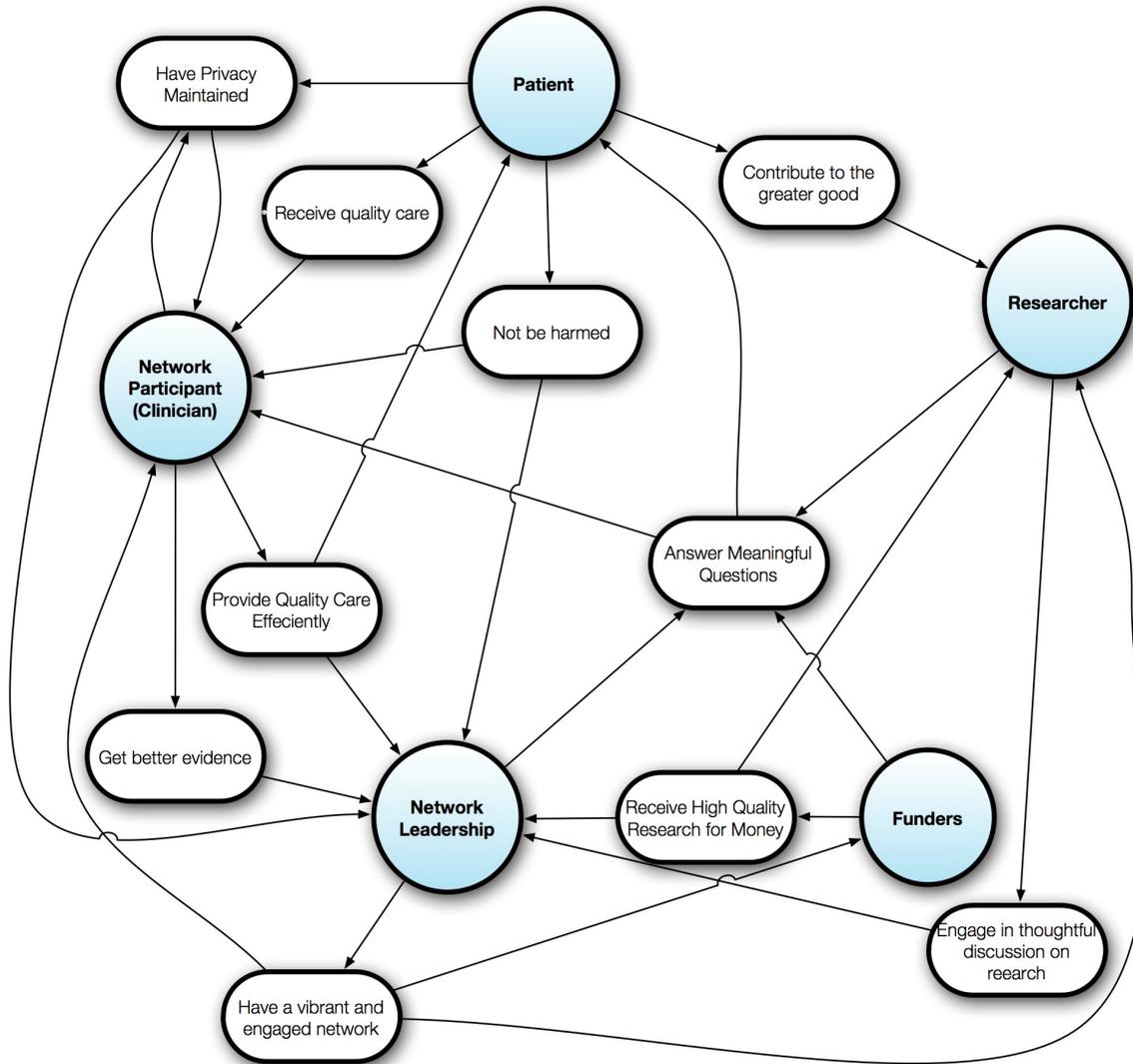
3.5 Product Position Statement: EMR Vendors

For	EMR Vendors
Who	Want their products to be used in practices that want to participate in a research network
The Gettysburg Edge Server	Provides a unified data model
That	Ensures interoperability with the rest of the network
Unlike	Having to negotiate on each project and develop custom solutions for them
Our product	<p>Provides a unified data model that can be used beforehand to ensure the compatibility of the EMR with the research network. This way, the vendor has more time on their hand to implement the data model in their product, and do not need to change it with each project their clients decide to participate in.</p> <p>The open source nature of the data model ensures that the vendors would have equal and free access to the information needed to make their product compatible with the edge server, cutting through their costs on upgrading their systems.</p>

3.6 Product Position Statement: Funding Organizations

For	Funding Organizations
Who	Need to make sure that high quality research is done for grant money, and the research community is engaged and vibrant, and that meaningful questions are answered in a timely manner
The Gettysburg Edge Server	Provides a transparent audit system
That	Ensures integrity, completeness, usability and irrefutability of data
Unlike	Solutions that are based on pre-aggregated data in a central database
Our product	<p>Provides a transparent audit trail without compromising patient privacy, that can be used to accurately calculate the effect of each research dollar in terms of patient care and research results.</p> <p>It also makes sure that all players are engaged and coverage is extended to its fullest, all the while keeping costs at a minimum by using a common data model to maximize reuse of data gathering components.</p>

GOAL Map for a Primary Care Research Network - DRAFT 1



4. Stakeholder Descriptions

4.1 Stakeholder Summary

Name	Description	Represented by
Patients	Individuals who seek medical attention.	Representatives from communities and active groups
Physicians	Qualified doctors who provide healthcare to patients	Their Division leads
Division Leads	Qualified doctors who lead their division	In person
Network Leaderships	Health authorities such as VCHA, FHA, etc	Representatives
EMR Vendors	Service providers or producers of a product in	Electronic registration to a mailing list and a web site to acquire the information needed to

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Name	Description	Represented by
	contact with Edge Server	make their products compatible.
Funding bodies	Associations, organizations and institutes providing financial support to research.	Representatives
Government Authorities	Organizations in charge of overseeing quality of care	Representative
Research Institutes	Organizations in charge of defining and carrying out research.	Head of information technology committee and representative
Academic Institutes	Organizations in charge of archiving and application of research results	Representative

4.2 User Environment

Refer to System-wide requirements document for look and feel and a usage scenario with mockup screen shots on how the system is supposed to work.

5. Product Overview

5.1 Needs and Features

Need	Priority	Features	Planned Release
To have shared ownership and development	High	See Project Data sheet	First release
To be open source and transparent	High	See Project Data Sheet	First release
To leave all patient data inside the practice and never send it out	High	Aggregation on periodic data	Continuum of AMCARE as proof of concept
To keep the edge server connections secure	High	Firewalls, VPN, PKI	First release
To keep version management across practices	Medium	See Project Data Sheet	Second release
To keep all design and documentation openly available	Medium	Wiki/Website	First release
To use EMR as the local source for truth	High	See system-wide requirements	First release
To be based on existing standards and best practices	High	See system-wide requirements	First release
To replicate one and only one EMR per Edge Server	High	See system-wide requirements	First release.

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6. Other Product Requirements

Requirement	Priority	Planned Release
To have a way of participation for paper-based offices through research assistants	Medium	First steps , employment of IHN nurses is suggested.
To have accurate data	High	First release, See System-wide requirements
To ensure the timeliness and reliability	Medium	First release, See System-wide requirements
To ensure usability and relevance	High	Second releases (criteria for measurement not available at first release) See System-wide requirements
Performance and supportability	Medium	Second releases
To address audit, compliance and security	Medium	Second releases
To be managed using Agile methodology	High	First release
To be ISO compliant	Medium	Second Releases
To provide for longitudinal as well as point in time questions	Medium	First release
Documentation	Medium	See system-wide requirements
Design constraints	Medium	See system-wide requirements