

RHIOs, Health Plans and The Community Health Record (CHR)

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BlueCross BlueShield of TN

Government Business, Emerging Markets and
SharedHealth

Contrast Internet Banking and...

The screenshot shows the Union Planters Internet Banking interface for a Checking Account - DEPOSIT ACCOUNT. The page includes a navigation menu with options like 'Account Summary', 'Transfers', 'Bill Pay', 'Help', and 'Service'. The account history section displays 'Today's Beginning Balance' and 'Current Available Balance'. A search section allows filtering by 'Description' and setting a 'Date Range' from 11/8/2002 to 3/5/2003. A 'Download to Quicken' button is visible. Below the search section is a table of transactions.

DEPOSIT ACCOUNT - History Account # : 114

Today's Beginning Balance: 0.00 Current Available Balance: 5,477.48

History Search: Search By: Description Rows Per Page: 20 find download history

Date Range: From 11/8/2002 To 3/5/2003 Choose a format

Download to Quicken help

1 - 20 of 64 Total Transactions Between 11/8/2002 And 3/5/2003 | Next 20 >>

Post Date	Description	Credit	Debit
12/12/2002	CHECK PAID		\$41.18
12/12/2002	CHECK PAID		\$130.00
12/11/2002	CHECK PAID		\$36.03
12/11/2002	CHECK PAID		\$77.33
12/10/2002	CHECK PAID		\$8.89
12/10/2002	CHECK PAID		\$10.54
12/10/2002	CHECK PAID		\$12.32
12/10/2002	CHECK PAID		\$19.03
12/10/2002	CHECK PAID		\$66.61
12/09/2002	CHECK PAID		\$14.66
12/09/2002	CHECK PAID		\$18.00
12/09/2002	CHECK PAID		\$22.00
12/09/2002	CHECK PAID		\$200.00

Universal ATM Access with...



This:



EHR Adoption: A Long Way to Go!

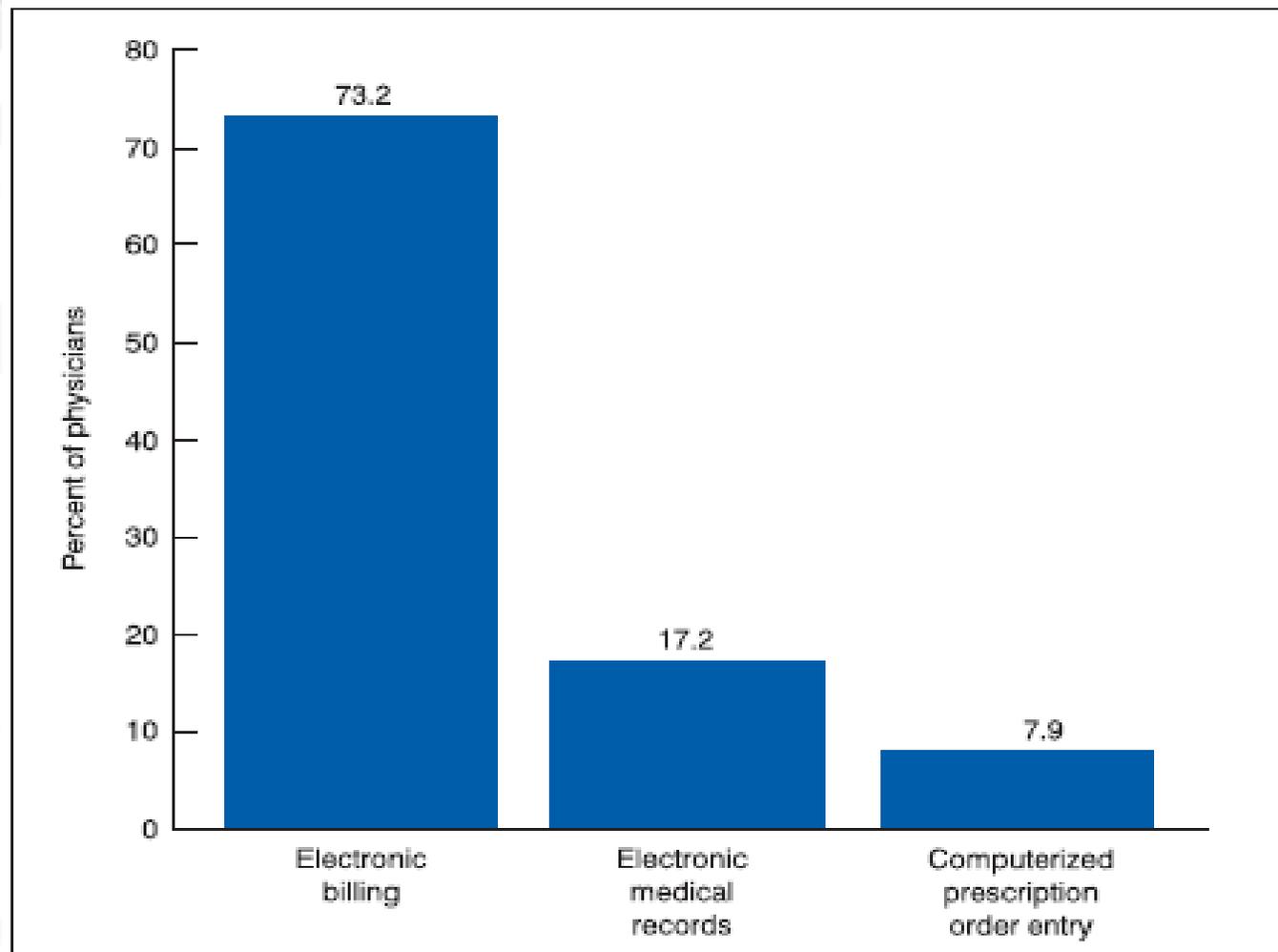


Figure 1. Percent of office-based physicians using selected information technologies: United States, 2003

Brailer's Framework

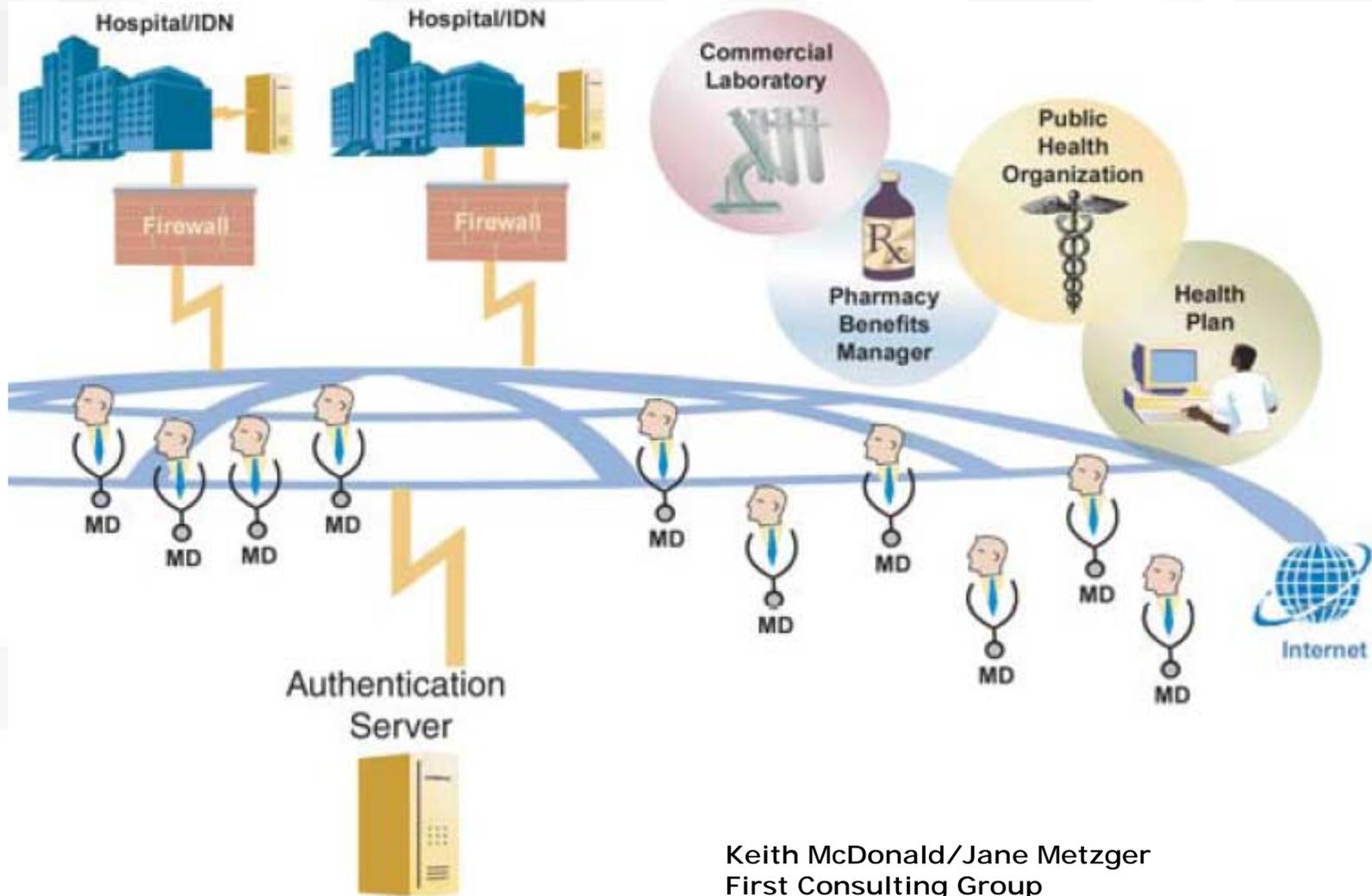
Goals:

- **Inform Clinical Practices:**
 - Promote Electronic Health Records
- **Interconnect Clinicians:**
 - Foster regional/local data sharing
- **Personalize Care:**
 - Encourage Personal Health Records
- **Improve Population Health:**
 - Unify PH surveillance architecture.
 - Accelerate dissemination of evidence.

Critical Needs:

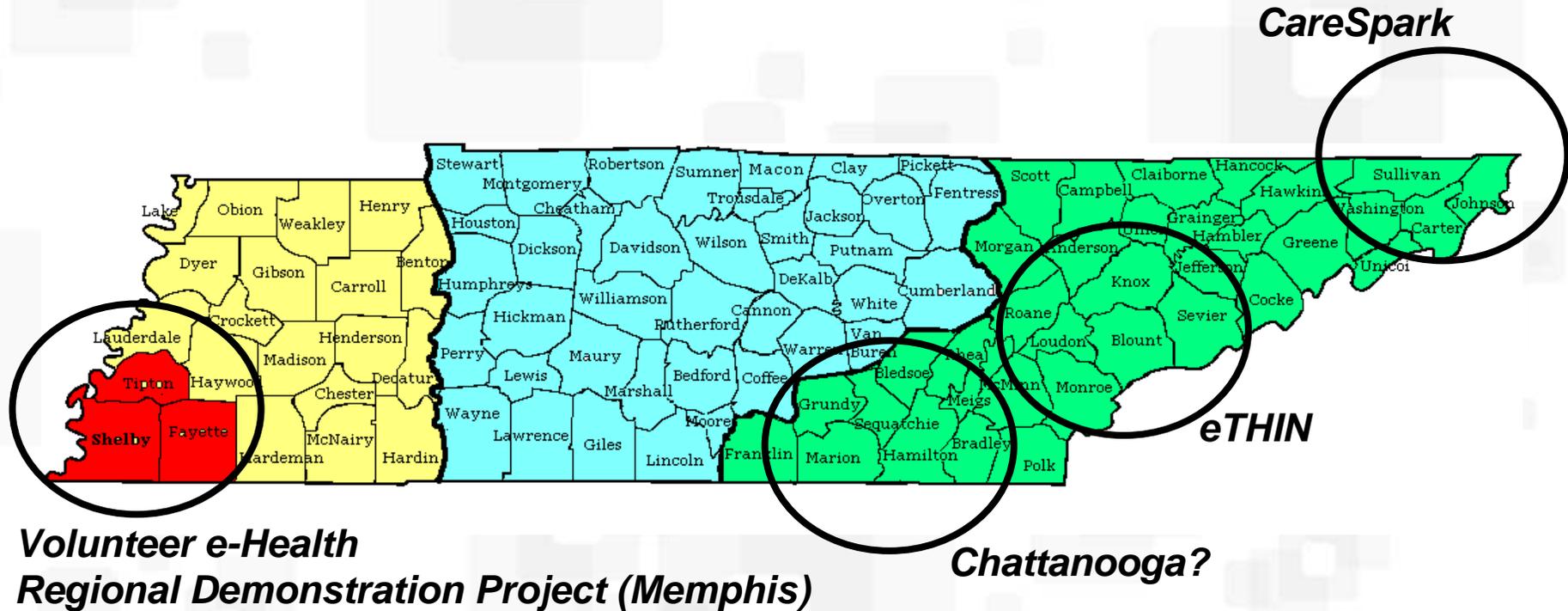
- **Avoid Medical Errors**
- **Improve Resource Utilization**
- **Accelerate Diffusion of Knowledge**
- **Reduce Variability in Access to Care**
- **Advance Consumer Role**
- **Strengthen Privacy/Data Protection**
- **Promote Public Health and Preparedness**

The HIE: Liberating Trapped Data



Keith McDonald/Jane Metzger
First Consulting Group

Current TN RHIOs





“Committed to better health in the central Appalachian region through collaboration, innovation, and wise use of health information”

Mission

To improve the health of people in Northeast Tennessee and Southwest Virginia through the collaborative use of health information

Vision

To be a world-class, quality-driven, clinically integrated, efficient health and wellness system for the people of our region

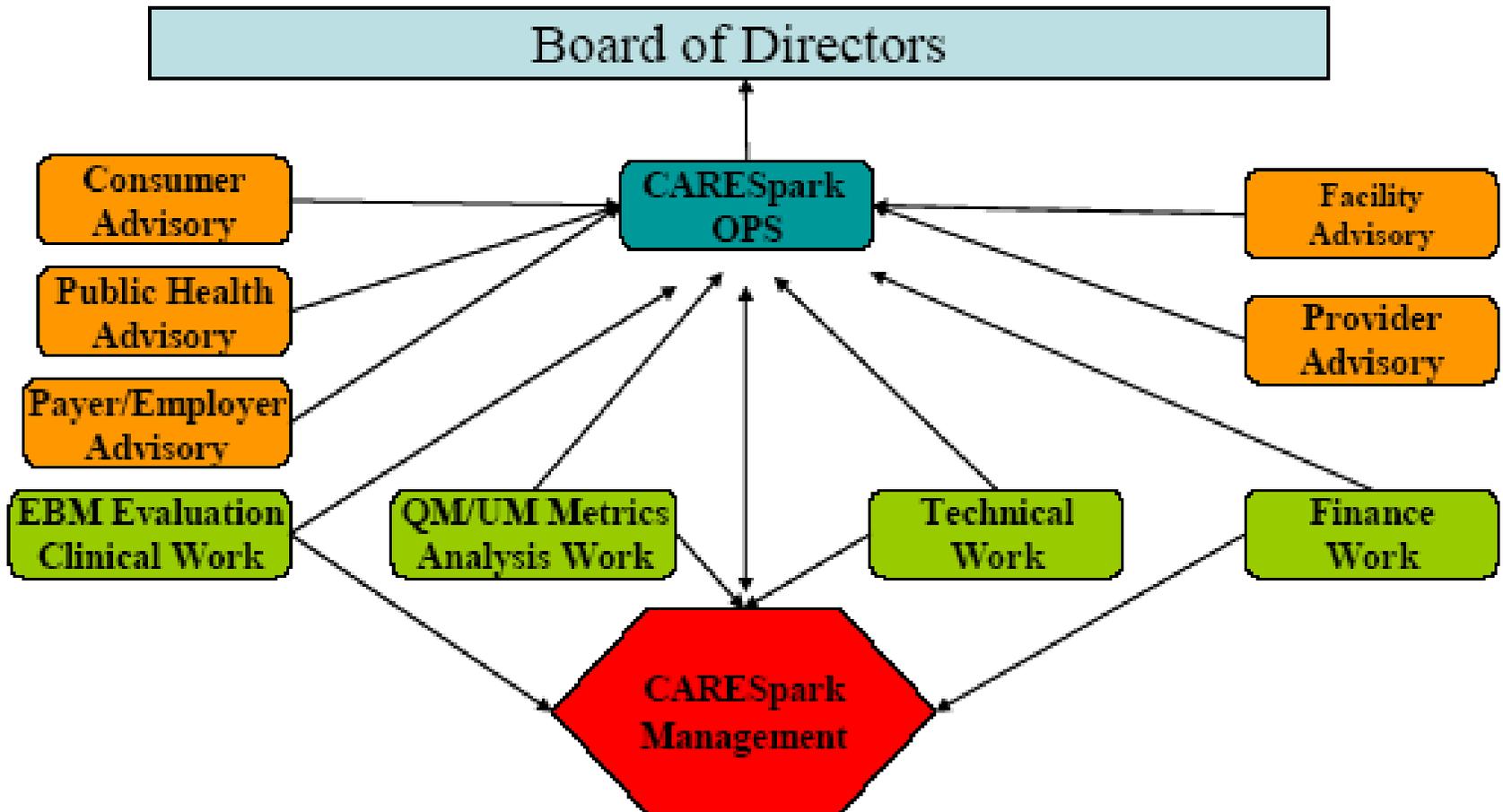
It's People Not Technology, Stupid!

- Started with strong community coalition.
 - Long history of community cooperation
 - Kingsport Tomorrow – Leisa Jenkins, Exec. Dir.
 - Community Health Improvement Project (CHIP): 10 years of community service
- Expert help: CA consulting firm and NY law firm.
 - High profile players on HIT/RHIO scene
 - Strong CITL influence (Middleton on BOD)
 - Very optimistic ROI model
- CAHIP Incorporated as 501-c-3
 - Bylaws in place
 - Non-representative community board

CareSpark: 4 Principle Activities

- Principle Activity 1: Created a “Zone of Cooperation”.
- Principle Activity 2: Completed a community-based visioning and strategic planning process.
- Principle Activity 3: Formed a not-for-profit entity to create and advance community-wide standards.
- Principle Activity 4: Create a governance structure representative of the broader community rather than of particular interest groups.

CareSpark Governance



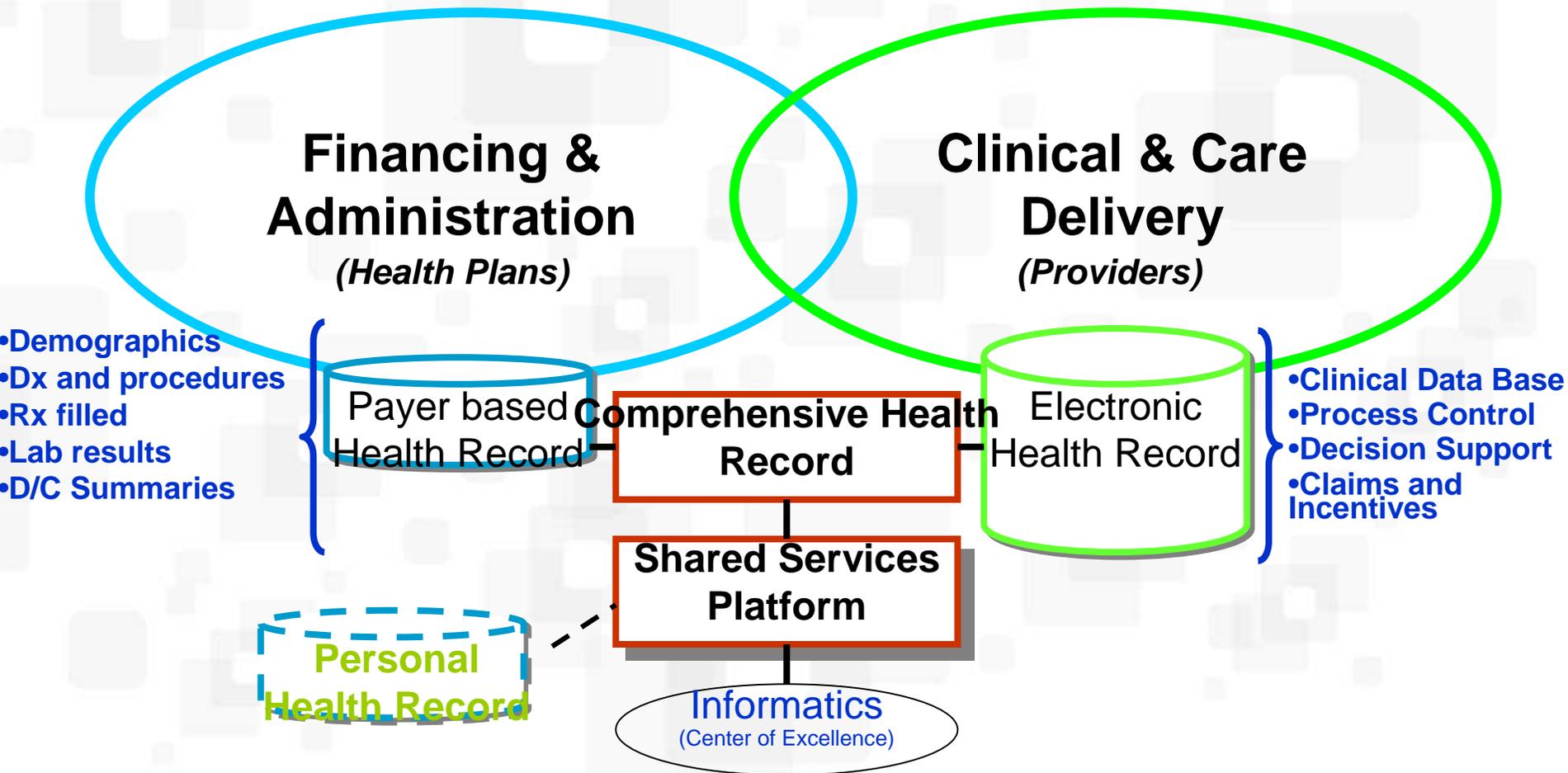
CareSpark Business Model

- Reliant on Blackford Middleton/CITL, but...
- CareSpark forced more conservative ROI
- Capitalization (The big battle over who pays!)
 - **Investment** model with:
 - **Purchasers (employers, government & payers)**
 - **Providers**
 - **Others?**
 - Debt
- **ROI = Savings (Gain Sharing)**
 - Proportional to investment
 - Devil is truly in the details:
 - **Who administers and pays ROI - RHIO? Health Plan?**
 - **Will RHIO disintermediate health plans? Competition?**

Modifications to Business Plan

- Considering more modest infrastructure.
 - Leverage existing technologies and players.
 - “In kind” contributions of talent and technology.
- Take advantage of ONCHIT’s NHIN RFP
- Evaluate other partnerships.
- Explore the “Elk’s Lodge” value proposition.
 - “Zone of cooperation”
 - Sanctuary from anti-trust, Starke, etc.
 - Transactional conduit for P4P as opposed to a mediator?

Merging 2 Worlds: SharedHealth



Payer Based Health Record - Why?

- Leverages existing information database for quick wins – **informs practice**.
- Integrates clinical and administrative data bases using standardized format.
- Breaks down silos – One accurate, efficient resource for patient information cutting across spectrum of care – **shares data**.
- It's free to physicians and hospitals.
- **Promotes implementation of EHRs** in MD offices nationwide.
- Can ultimately lessen the burden of health care costs while improving quality for all stakeholders.

SharedHealth Community Connections

- Online, person-centric community health record.
- Repository of payer + data .
- Aggregated at the patient level.
- Presented in an EHR-like format for clinicians.
- Viewable at the point of care through an Internet browser.
- Adding a robust E-Prescribe function with full decision support –10/31/05.
- Interoperable: CCR/XML interface to EHRs.

Morgan, Erin 8y F MEMBERID: 12700923 DOB: 03-12-1996

PCP: Linda Jones MD

Chart Print

Patient Summary

Patient Demographics

Claimed Visits

Medications

Immunizations

Laboratory Results

Chemistry

Hematology

Enzymes

Coagulation

Blood Gases

Endocrine

Toxicology

Immunology/Serology

CSF_Chemistry

Patient Demographics

Morgan, Erin	MRN
1220 Treehouse Lane	75012466170
Chattanooga, TN	Age
37402	9Y
Home Phone:	
(423) 778-2323	

Claimed Visits

DATE	TYPE	FACILITY	PROVIDER	CLAIM DETAIL
06-23-2004	In	Erlanger Hospital	Jones MD, Linda	View

DIAGNOSES

Diagnosis 1

Diagnosis 2

PROCEDURES

Procedure 1

Procedure 2

Medications

ORDER

ADVAIR DESKUS: 50/10, Start: 06/14/2004, Dispense: 60, Jones MD, Linda

ADVAIR DESKUS: 50/10, Start: 06/09/2004, Dispense: 60, Refills: 1, Jones MD, Linda

ADVAIR DESKUS: 50/10, Start: 02/25/2004, Dispense: 60, Jones MD, Linda

ADVAIR DESKUS: 50/10, Start: 01/29/2004, Dispense: 60, Refills: 2, Jones MD, Linda

Immunizations

VACCINE	ADMINISTRATION DATE	ADMIN AGE
Influenza	09-28-2004	8Y 6M 2W
Measles, Mumps, Rubella	09-27-2003	7Y 6M 2W
Diphtheria, Tetanus, Pertussis	05-12-2001	5Y 2M 0W
Inactive Poliovirus	05-12-2001	5Y 2M 0W
Haemophilus influenzae type b	03-13-1998	1Y 3M 0W

Morgan, Erin By F MEMBERID: 12700923 DOB: 03-12-1996

PCP: Linda Jones MD

Chart x

[Patient Summary](#)

[Patient Demographics](#)

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[Enzymes](#)

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[Blood Gases](#)

[Endocrine](#)

[Toxicology](#)

[Immunology/Serology](#)

[CSF_Chemistry](#)

Print

Medications

ORDER

ADVAIR DESKUS: 50/10, Start: 06/14/2004, Dispense: 60, Jones MD, Linda
ADVAIR DESKUS: 50/10, Start: 06/09/2004, Dispense: 60, Refills: 1, Jones MD, Linda
ADVAIR DESKUS: 50/10, Start: 02/25/2004, Dispense: 60, Jones MD, Linda
ADVAIR DESKUS: 50/10, Start: 01/29/2004, Dispense: 60, Refills: 2, Jones MD, Linda
ADVAIR DESKUS: 50/10, Start: 01/05/2004, Dispense: 60, Refills: 1, Jones MD, Linda
ALBUTEROL: 90MCG, Start: 06/14/2004, Dispense: 17, Jones MD, Linda
ALBUTEROL: 90MCG, Start: 06/09/2004, Dispense: 17, Refills: 3, Jones MD, Linda
ALBUTEROL: 90MCG, Start: 01/29/2004, Dispense: 17, Refills: 2, Jones MD, Linda
ALBUTEROL: 90MCG, Start: 01/29/2004, Dispense: 17, Refills: 2, Jones MD, Linda
ALBUTEROL: 90MCG, Start: 01/29/2004, Dispense: 17, Refills: 2, Jones MD, Linda
ALBUTEROL: 90MCG, Start: 01/29/2004, Dispense: 17, Refills: 2, Jones MD, Linda
ALBUTEROL SULFATE: 0.083, Start: 06/14/2004, Dispense: 180, Jones MD, Linda
LORATADINE: 10MG, Start: 03/18/2004, Dispense: 10, Refills: 2, Jones MD, Linda
LORATADINE: 10MG, Start: 03/08/2004, Dispense: 10, Refills: 1, Jones MD, Linda
LORATADINE: 10MG, Start: 02/25/2004, Dispense: 10, Jones MD, Linda

Help Wanda Carter Logout

Morgan, Erin By F MEMBER# 12700923 DOB: 03-12-1996
 PCP: Linda Jones MD

Chart Print

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[Toxicology](#)
[Immunology/Serology](#)
[CSF_Chemistry](#)

Laboratory Results

DATE & TIME	ITEM	VALUE	REF RANGE	STATUS	ORDERING PHYSICIAN
04-19-2004 16:00	BLD TOTAL PROT	6.9 G/DL			Jones MD, Linda
04-19-2004 16:00	SERUM ALB/GLOB	1.9			Jones MD, Linda
04-19-2004 16:00	BLD TOTAL BILIR	0.6 mg/dL			Jones MD, Linda
04-19-2004 16:00	SRM SODIUM	141 mEq/L			Jones MD, Linda
04-19-2004 16:00	SRM POTASSIUM	4 mEq/L			Jones MD, Linda
04-19-2004 16:00	BLD GLUCOSE	100 mg/dL			Jones MD, Linda
04-19-2004 16:00	BLD CREATININE	0.5 mg/dL			Jones MD, Linda
04-19-2004 16:00	SRM CHLORIDE	104 mEq/L			Jones MD, Linda
04-19-2004 16:00	BLD CALCIUM	9.4 mg/d			Jones MD, Linda
04-19-2004 16:00	BLOOD AREA NIT	21 mg/d			Jones MD, Linda
04-19-2004 16:00	BLD SGOT (AST)	21 U/L			Jones MD, Linda
04-19-2004 16:00	BLD ALKALINE PHOS	189 U/L			Jones MD, Linda
04-19-2004 16:00	BLD GLOBULIN	2.4 G/DL			Jones MD, Linda
04-19-2004 16:00	BLD ALBUMIN	4.5 G/DL			Jones MD, Linda
04-19-2004 16:00	BLD SGPT (ALT)	11 U/L			Jones MD, Linda
04-19-2004 16:00	%BASOPHILS	1 %			Jones MD, Linda
04-19-2004 16:00	%EOSINOPHILS	5 %			Jones MD, Linda
04-19-2004 16:00	%MONOCYTES	7 %			Jones MD, Linda
04-19-2004 16:00	%LYMPHOCYTES	28 %			Jones MD, Linda
04-19-2004 16:00	HEMOGLOBIN	12.5 g/dL			Jones MD, Linda
04-19-2004 16:00	HEMATOCRIT	37 %			Jones MD, Linda

STAGGS, JESSICA L 28 Y F ALLERGIES: Recorded
 PCP: NAGARAJ, HOSAKOTE M. DOB: 6/2/1977 MRN: MEMBER NUMBER: 12189608

Chart EPSDT eRx

eRx

Medication Details

New Rxc: Search ? Browse Conditions

[Past Medications](#) | [Medication Claims](#) | [Medication Profile](#)

[Dosage](#) [Pharmacology](#) [Warnings](#) [Side Effects](#) [Pregnancy](#) [Lactation](#)

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OTC **A** naproxen sodium 220 mg oral tablet

SIG 2 tab(s) orally every 8 hours , PRN: as needed for menstrual pain , 5 day(s)

Dispense No refills

- Dispense As Written
- Print DEA number

Management Starts: 8/25/2005 Supply Remaining: PRN

Expect to renew: No

Internal comment: i like

History	DATE	PERFORMED BY	COMMENT
Modify	9/9/2005	user5, CHR_User5	i like
Signed	8/25/2005	user5, CHR_User5	

Past Medications for naproxen	(Last 12 months)	START DATE	REASON ENDED	MANAGED BY	ACTIONS
-- No Results --					

Medication Claims for naproxen	(Last 12 months)	QUANTITY	FILL DATE	DISPENSING PHARMACY	MANAGED BY	ACTIONS
-- No Results --						

naproxen

[Dosage](#) [Pharmacology](#) [Warnings](#) [Side Effects](#) [Pregnancy](#) [Lactation](#)

Warnings

Patients with a hypersensitivity (angioedema, bronchospasm, urticaria, or rhinitis) to aspirin or other nonsteroidal anti-inflammatory agents (NSAIDs) may be cross sensitive to naproxen. Patients with the "triad" of asthma, nasal polyps, and aspirin or other NSAID hypersensitivity are at particular risk. The use of naproxen is considered contraindicated in these patients.

In addition, renal function may be further compromised by the use of naproxen in patients with renal dysfunction, heart failure, hypovolemia, cirrhosis, nephrotic syndrome, or hypoalbuminemia. Renal blood flow in patients with renal dysfunction, edematous disorders, or hypovolemic states is dependent upon renal prostaglandin synthesis. If naproxen must be used, periodic monitoring of renal function is recommended.

Serious gastrointestinal toxicity, such as bleeding, ulceration, and perforation, can occur at any time with or without warning symptoms, in patients receiving NSAID therapy chronically. Symptomatic upper gastrointestinal (GI) ulcers, gross bleeding, or perforation appear to occur in approximately 1% of patients treated for 3 to 6 months, and in about 2% to 4% of patients treated for one year. Caution should be exercised when using NSAIDs in the elderly and debilitated, because most of the spontaneous reports of fatal GI adverse events are in this population. Patients that consume 3 or more alcoholic drinks per day may be at a higher risk of stomach bleeding.

Because of the potential to cause gastrointestinal bleeding, renal failure, high blood pressure, and heart failure, naproxen meets the Beers criteria as a medication that is potentially inappropriate for use in older adults.

An increased risk of cardiovascular events has been observed in the preliminary data analysis of a clinical trial involving the use of naproxen in patients at risk of developing Alzheimer's disease, when compared to placebo. In the meantime until the full review of scientific information on naproxen is completed, the FDA has issued a statement advising that patients taking over-the-counter naproxen products should not exceed the recommended doses of naproxen (220 mg twice daily) and should not take naproxen for longer than ten days unless a physician directs otherwise.

Side Effects

gastrointestinal

Gastrointestinal side effects have been reported the most frequently. These have included constipation (3% to 9%), general abdominal discomfort (3% to 9%), nausea (3% to 9%), dyspepsia (3 to 9%), diarrhea, and stomatitis. Serious gastrointestinal side effects include peptic ulcerations, and, in rare cases, gastrointestinal hemorrhage or perforation. Ulcerative esophagitis, eosinophilic colitis, allergic sialadenitis, and pancreatitis have been reported. Heartburn and stomatitis have been reported in patients receiving the controlled release formulation of naproxen.

Because peptic irritation may be asymptomatic, occasional monitoring of the hematocrit and of the stool for occult blood loss is recommended.

Patients with a history of serious gastrointestinal events or alcohol abuse are at increased risk for severe gastrointestinal side effects. Naproxen should be used with caution in these patients.

A new study reports that the combination of naproxen and alendronate have a synergistic effect in the development of gastric ulcers.

[Chart](#) [EPSDT](#) [eRx](#)

Search

?

[Browse Conditions](#)

[Return to Medication Profile](#)

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ostol (Arthrotec)

Lodine XL)

aid)

Advil Childrens...)

locin, Indocin SR)

is, Orudis KT...)

l, Toradol IV/IM)

roxen (PREVACID NapraPAC 375, PREVACID NapraPAC

onstel)

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b)

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600, Tolectin DS)

The Roll-Out

- 6/2005: 2-year agreement with TN Medicaid (TennCare) program
- 7/2005: Successful launch to providers for BlueCross TennCare - 750K members.
- 10-12/2005: All TennCare membership (approx. 1.3M members) loaded into system.
- 1Q2006: Shared Health offered to commercial insurers and group accounts
- Pipeline: Agreements with other Blues and other states.

Lessons Learned (So Far!)



- “Drop and run” technology will not be used.
- It’s the work flow, stupid!!!
- Enthusiasm 🕒 Adoption/Use
- Free may not be cheap enough.
- Paper is a good thing.
- Physicians will not adopt information technology without practice staff buy-in.
- Patients don’t get it...yet.