

HIE: A Rural Case Study

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A Case Study

*“If you can build an HIE in Tehachapi,
you can build one anywhere”* (M.Allison, 2008)

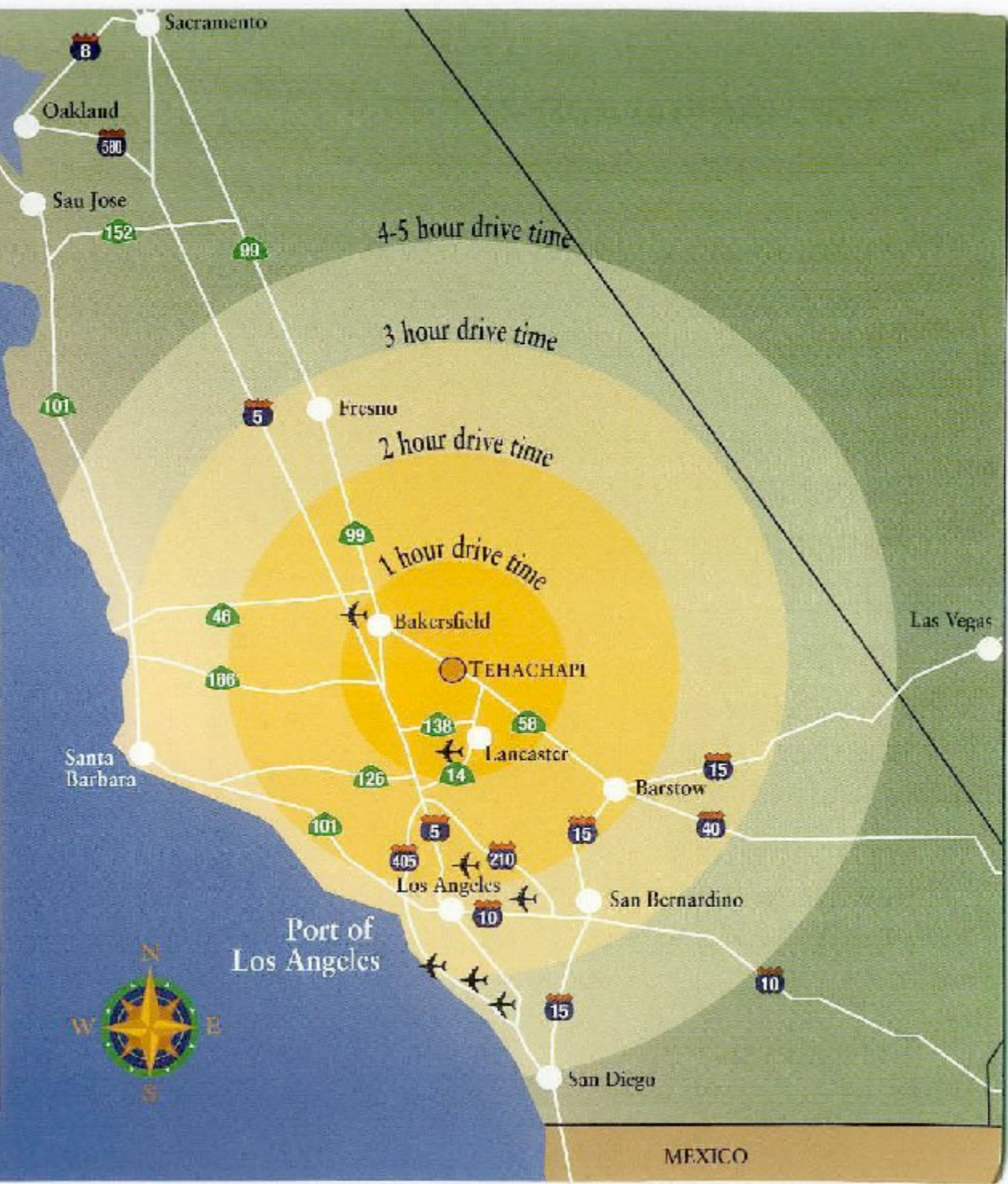


Pacific Ocean

Proximity

	distance	travel time*
Local Airport		
City of Tehachapi Public Airport	in town	< 5 min.
Commercial Airport		
Meadows Field/Bakersfield	45 mi.	50 min.
Burbank	112 mi.	1.5 hrs.
Ontario	128 mi.	2.5 hrs.
International Airport		
Los Angeles International	130 mi.	2.5 hrs.
Rail		
Burlington Northern & Union Pacific: Piggy Back Service/Fresno	150 mi.	varies
Piggy Back Service/Los Angeles	120 mi.	varies
Motor Freight		
Interstate 5 North/South interchange	65 mi.	1 hr.
Highway 58 East/West	local	< 5 min.
Highway 14 North/South	20 mi.	30 min.
Highway 99 North/South	45 mi.	45 min.
Highway 40 East/West	86 mi.	1.5 hrs.

*Average



MEXICO

In the beginning.....

- Academia meets Tehachapi
- President Bush - “Paperless by 2010”
- Agency for Healthcare Research and Quality funded initiatives
 - September, 2004 - 1 year planning
 - September, 2005 - 3 year Implementation grant
 - Purpose is to “promote the use of health information technology (health IT) to”..... “Increase our knowledge and understanding of the clinical, safety, quality, financial, and organizational value and benefits of health IT”.
 - Community Based Participatory Research was required

Realization that we (like most rural areas)...

- Didn't have an integrated medical group
 - A critical mass of participating physicians in a practice dedicated to understanding the patterns of practice and implementing change
 - Organizational context for continuous quality improvement
- Didn't have an organized delivery system
 - Including information systems
 - Including partnerships with health plans
 - That can align and link incentives
- Didn't have a "business case"
 - Eg those that have better quality receives better reimbursement or greater market share
- Don't have an environment and leadership that embraces quality improvement
- Had no idea the extent to which CCM existed in the region...or ever could exist in the region

The infrastructure that "works" is an urban paradigm.

(Coye, M. 2001)

What did we start with?



Status of IT in the Region - 2005

Approximately 17 primary care physicians and 7 midlevels in 13 sites in 4 towns

- Various stages of IT adoptions
 - Some with no computerized practice management systems
 - Some without internet access
 - No customized databases
- One with an EHR
 - No data exchange occurring
 - System not being used for reporting
- Hospital with multiple systems at different levels of functionality and not interfaced

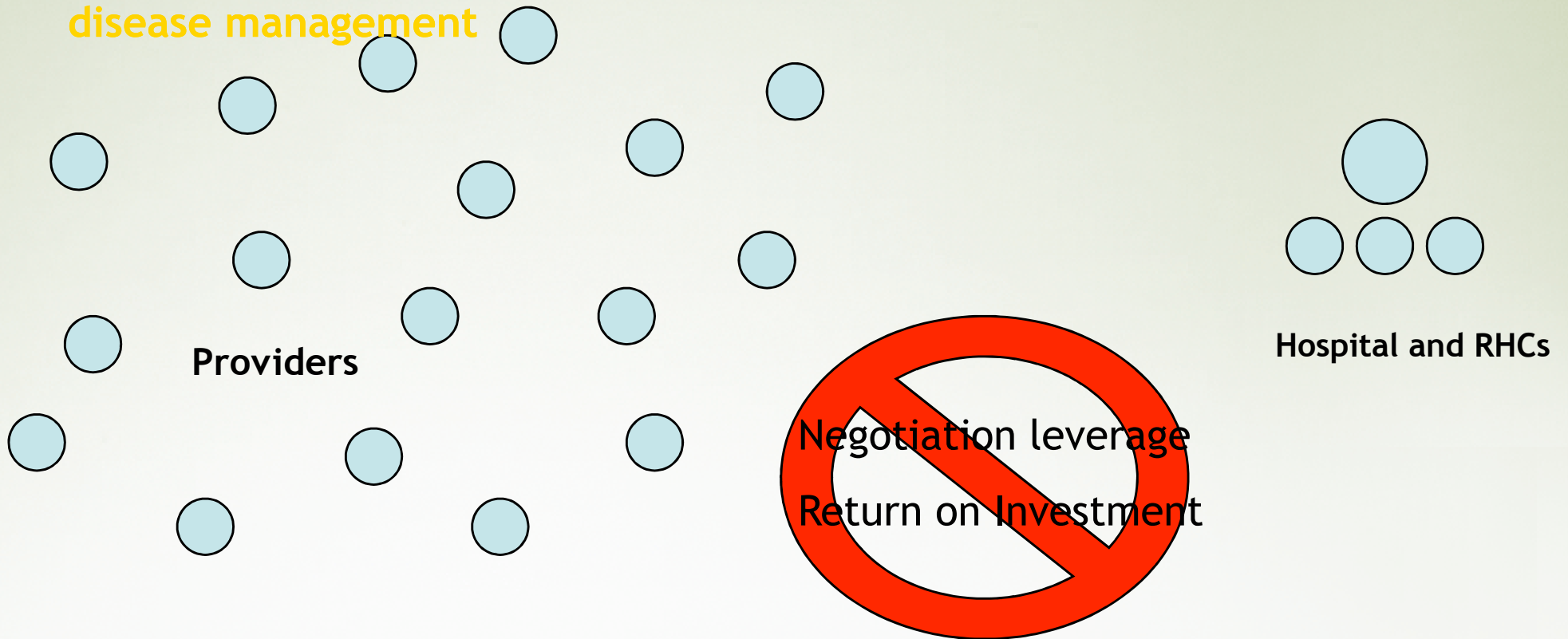
Scope of our Project

What does it take to implement HIT in a rural region?

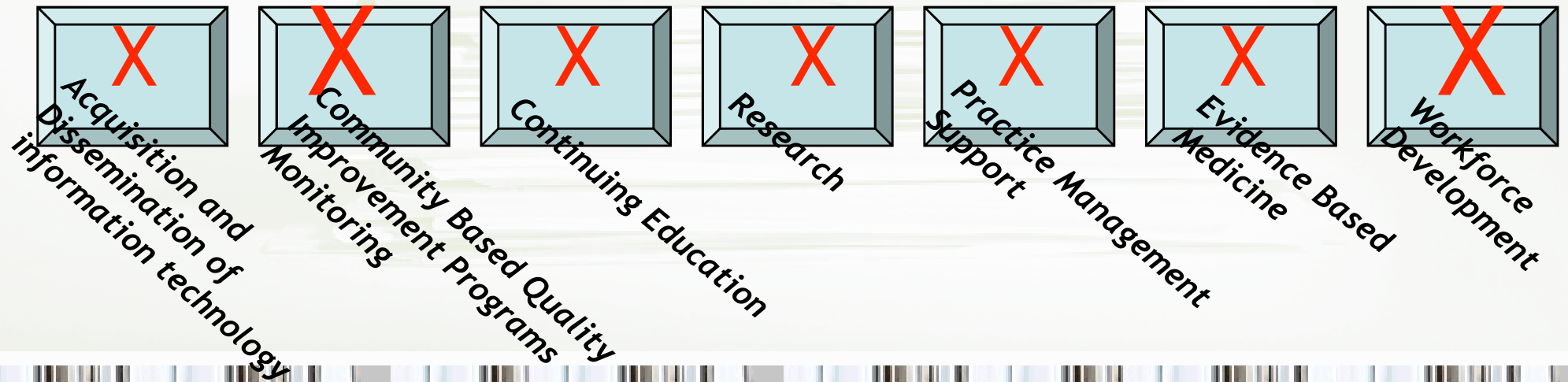
- *Infrastructure*
- *Telemedicine*
- *EHRs and CHIE*
- *PHRs*
- *Diabetes Education*
- *Health professions training*



Before...no infrastructure to facilitate information technology, quality or disease management



Presence of consistent and coordinated community oriented approach ???



Created EKCITA...The East Kern County Integrated Technology Association

- A network of providers...broadly defined
- Focuses on the communities' chronic health needs
- Redesigns the delivery system
- Provides HIT throughout region
- Has evidence-based medicine woven throughout.
- Provides self-management support through PHR
- Provides CME, e-health alerts and other educational interventions
- Provides a “turf-neutral” space for population based health interventions
- Allows for all of the CCM and DM components to exist in rural, from a bottom - up approach.

EKCITA

◎ EHRs

- Selected, purchased, and installed electronic health records in private practices, a CAH, and rural health clinics

◎ PHRs

- Developed and implemented a web-based personal health record

◎ HIE

- Open source, hybrid model HIE
- Has MPI and RLS
- Has hospital, ambulatory EHRs, imaging, and some ambulatory laboratory interfaces
 - ADT
 - Encounters
 - Lab
 - Imaging
 - Dx
 - Med Lists
- Has population health reporting capabilities
- Has patient and provider participation components
- Can provide reporting and queries on specific conditions
- Scalable
- Operational

We've gone from...



Smith, Joe

123 Main St. Anytown, USA

Tw2-5053

DOB 12.1.17

Date Dx Tx

Date Dx Tx

6.3.52 FXR wrist cast

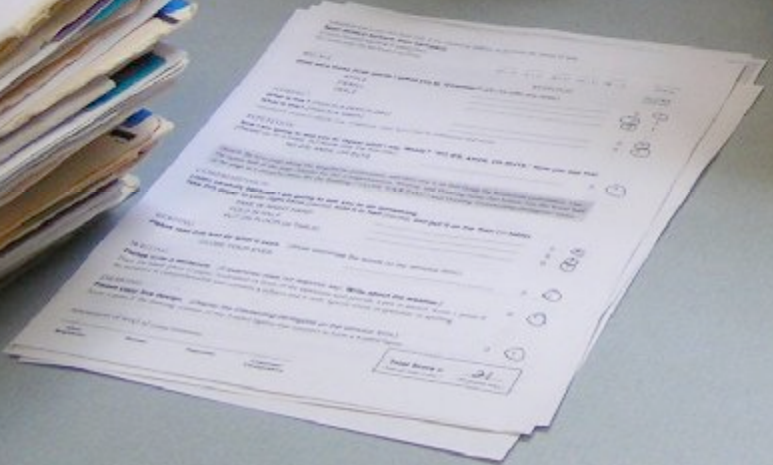
12.21.68 MVA ASA, letter to Atty

7.12.58 Luies PCN

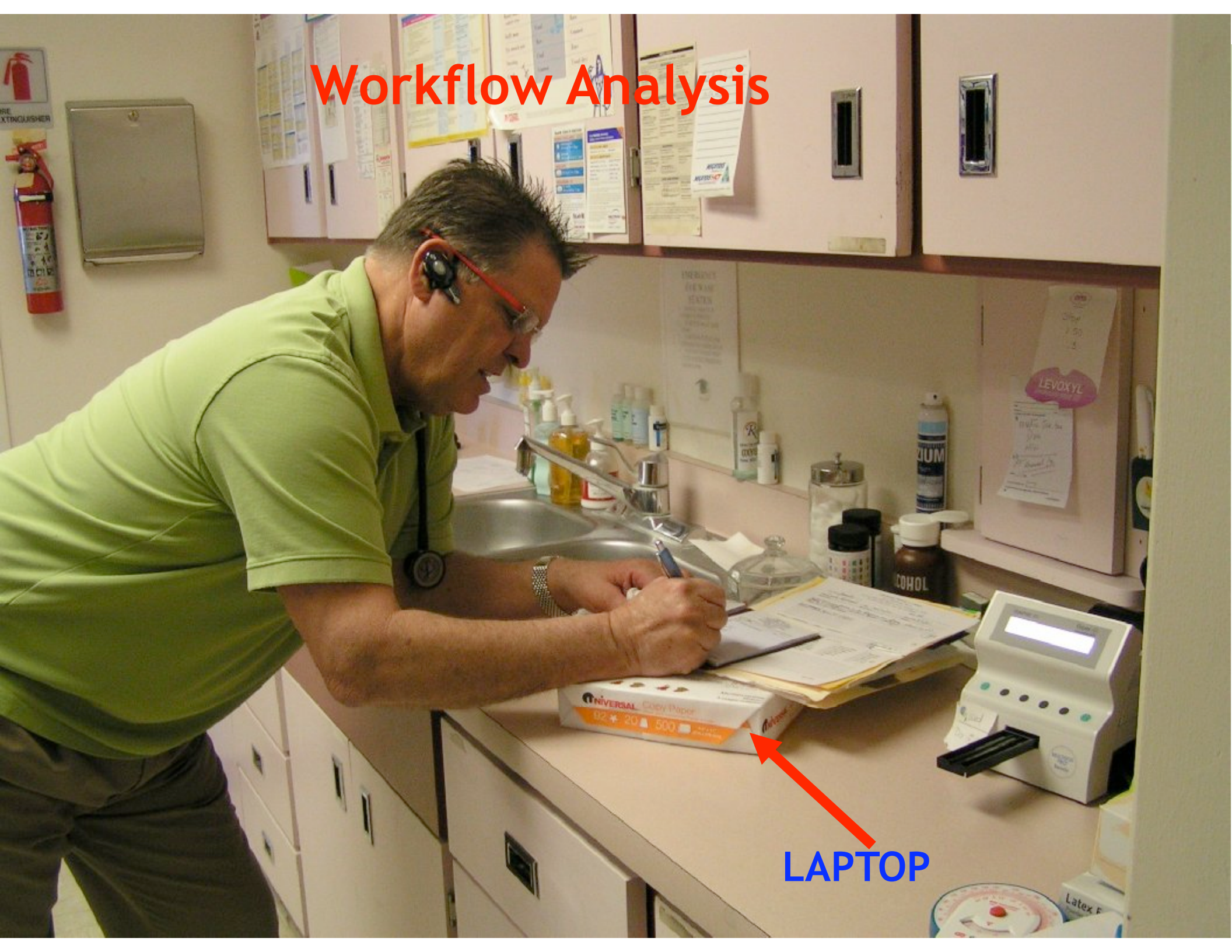
3.24.62 Tonsilectomy

9.21.66 Obesity Dex Inj

10.15.68 CHF Digitalis



Workflow Analysis



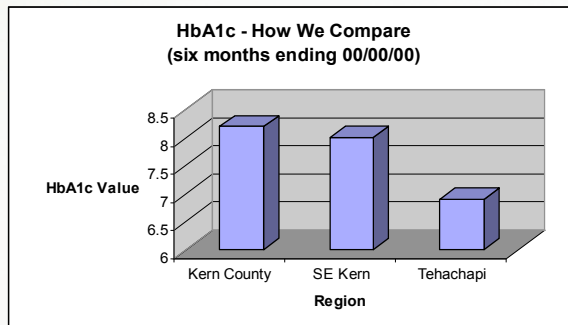
LAPTOP



Community Health Alert Diabetes Management

SE Kern Health Data from 2007 indicates the Tehachapi Average HbA1c is 6.9

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Resources Available to you and your patients:
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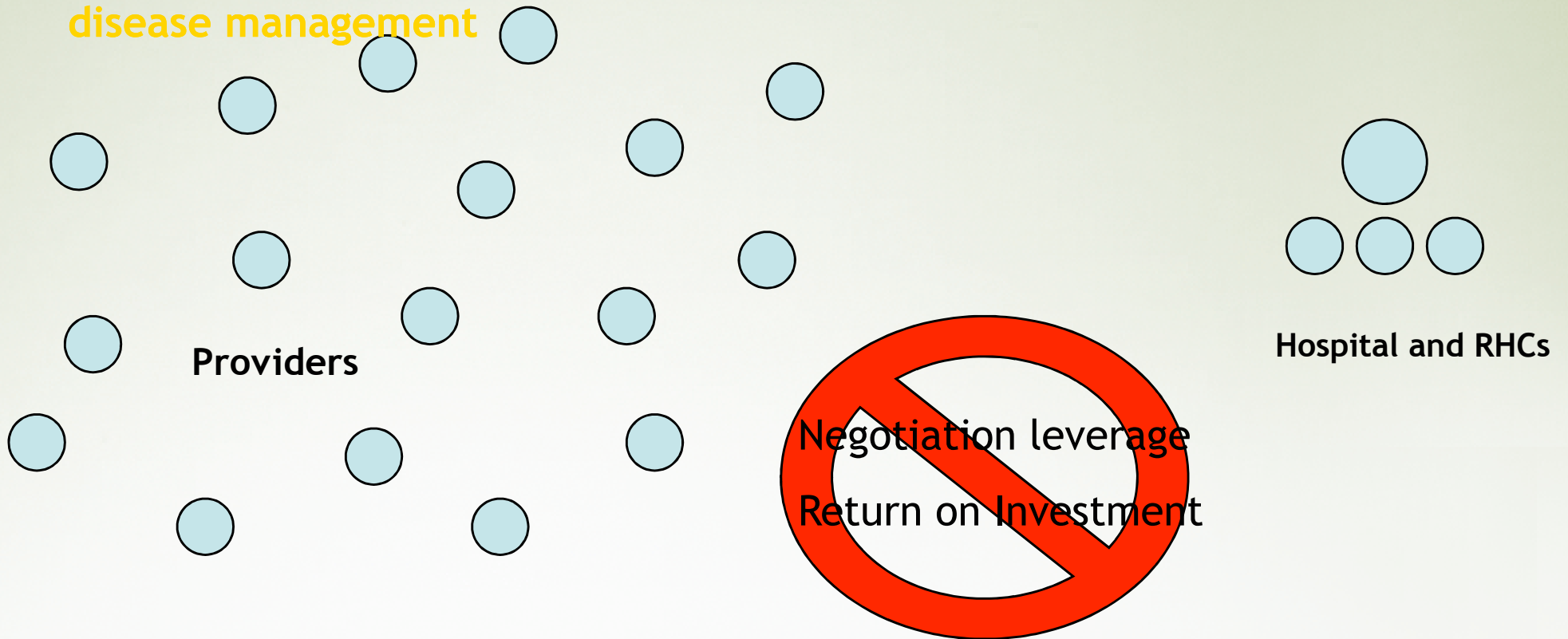
What are best practices for managing?

De siuo dom ori xiow ir d q[op d pepj c c ;siojd do ujdi rt . d oej ohg ' dpioj d weoi g ijnmx s r[lou ndls, p hmkm

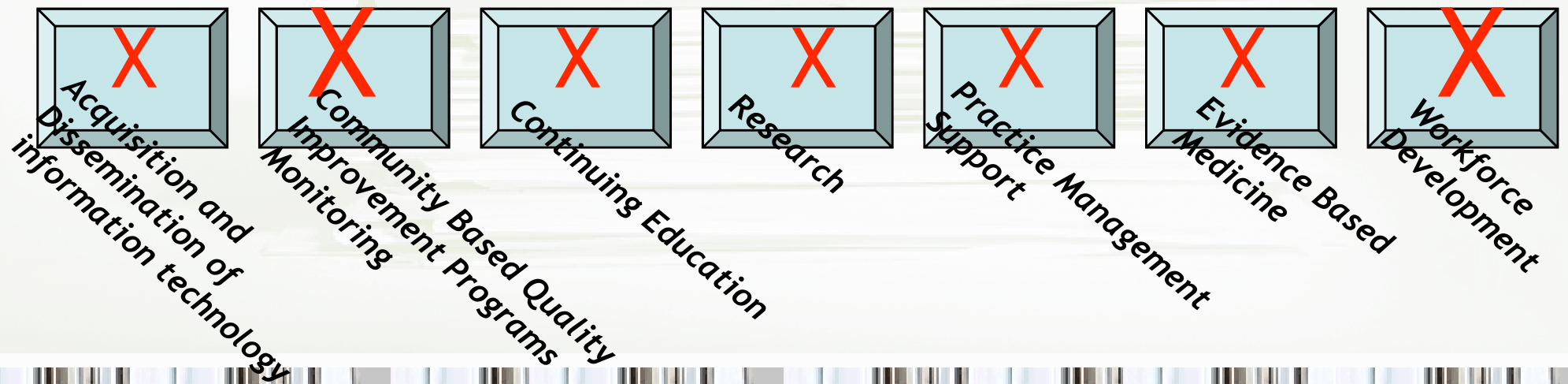
Did you know?.....

Djo bomne oneo eoh dohtoy di oeht eot e thoehje soejne bdboe noc eohosyt xmxwss theomz nxnd md mdnen xmmd soi mdoijd uuum
Meje. Mep0ut mepj dj p0iie
S put epiem dmpej mep0ut eempdi

Before...no infrastructure to facilitate information technology, quality or disease management



Presence of consistent and coordinated community oriented approach ???

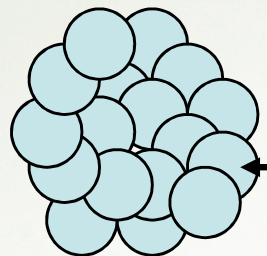


Provider leadership team

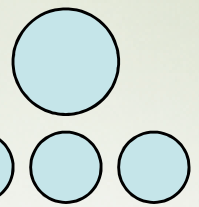
Governance

EAST KERN COUNTY INTEGRATED TECHNOLOGY ASSOCIATION "EKcita"

(a 501(c)3 public benefit corporation)



Providers in SE Kern

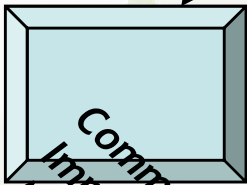


Hospital and RHCs

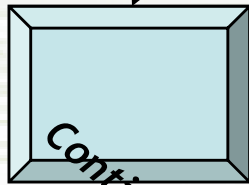
Consistent, Coordinated, Integrated, Community Approach to Health



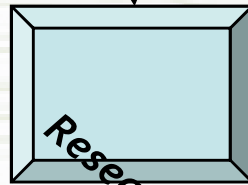
Acquisition and Dissemination of information technology



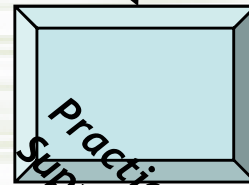
Community Based Quality Improvement Programs



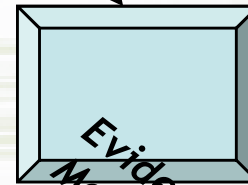
Continuing Education



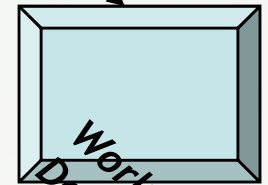
Research



Practice Management Support



Evidence Based Medicine



Workforce Development

We've learned alot

- The value of key informant interviews
- The value of a collective vision
- The value of a safe place
- The Power of N
- The need for a business case
- Technology is just a tool
- “The perfect is the enemy of the good” (Voltaire)
- EKCITA.....the rural RHIO that could - is at Stage 5
- If you've seen one RHIO.....
- Create, enhance and nurture social capital

And now we get to share!

Stages of RHIO Implementation

- **STAGE 1:** Recognition of the need for health information exchange among multiple stakeholders in your state, region or community. 12%
- **STAGE 2:** Getting organized; defining shared vision, goals & objectives; and identifying funding sources; setting up legal and governance structures. 14%
- **STAGE 3:** Transferring vision, goals and objectives to tactics and business plan; defining needs and requirements; securing funding. 15%
- **STAGE 4:** Well under way with implementation. The technical, financial and legal systems are being put into place and the end-users are beginning to adopt the system. 37%
- **STAGE 5:** A fully operational health information organization is up and running. 12%
- **STAGE 6:** Project is ready to expand beyond the initial participants. 11%

Source: eHealth Initiative, 2005; *H&HN* research, 2006

How did we get there?

Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it`s the only thing that ever has. Margaret Mead



Keys to “success”

- Community Based Participatory Research (“CBPR”) - a partnership approach
- Just-in-time, concurrent education
 - Learning together, growing together
- How can we enable you?
- There are no failures, only findings
- Their creation of their common, shared vision
- Social capital
- Fun, trust, and a little bit of pixie dust!

And what are we doing next?

- It's a numbers game - time to grow
- Focus on our assets
 - Operational
 - Small
 - Creative
 - Little bureaucracy
 - Strong, proven team with diverse backgrounds and expertise
 - Over 50 years of experience in rural and underserved communities
 - A system that is operational and scalable
- Partner to balance our weaknesses
- Keep moving....fast



Who is “Believe Health”?

- LLC that works with small, rural, and underserved communities to enter the HIE superhighway
- Management company for HIEs and rural HIT programs
- A firm with unparalleled experience and diverse skills and knowledge of health IT, particularly in rural communities

Believe Health: Partnering with rural, small and underserved communities

July 6, 2009

Congratulations to the NRC Domain 2 awardees! **AHRQ** made a total of awards under this domain. The successful offerors (with contract numbers) are below:

HHSA290200900012I - Abt Associates
HHSA290200900013I - **Believe Health**
HHSA290200900014I - Booz Allen Hamilton
HHSA290200900015I - Fox Systems
HHSA290200900016I - ICOR Partners
HHSA290200900017I - Indiana University
HHSA290200900018I - John Snow, Inc.
HHSA290200900019I - Mathematica
HHSA290200900020I - NORC
HHSA290200900021I - RTI
HHSA290200900022I - Thomson
HHSA290200900023I - Westat

Here we go again!



Acknowledgements

Agency for Healthcare Research and Quality (Planning, Implementation and now the IDIQ NRC Master Contract)

Blue Shield Foundation

CalRHIO

Tehachapi Valley Healthcare District

The Communities of Tehachapi, Mojave, and California City
The Board of EKCITA

Jill Gordon (DWT), Atif Zafar, MD, (Regenstreif/Indiana U), and
Browsersoft

The once in a lifetime team of Jami, Kim and Joe

