



care spark

Dec. 2, 2005

better health through collaboration and innovation



Presentation Overview



- **Who is CareSpark?**
- **What are we working to achieve?**
- **How will we fund, build, govern?**
- **What results do you expect?**

What is a RHIO?



Regional Health Information Organizations...

1. **Multi-stakeholder governance with public trust**
2. **Technical infrastructure for sharing of electronic health information**
3. **Process for defining and enforcing policies to assure patient privacy and security**
4. **Alignment of financial incentives to providers and purchasers**



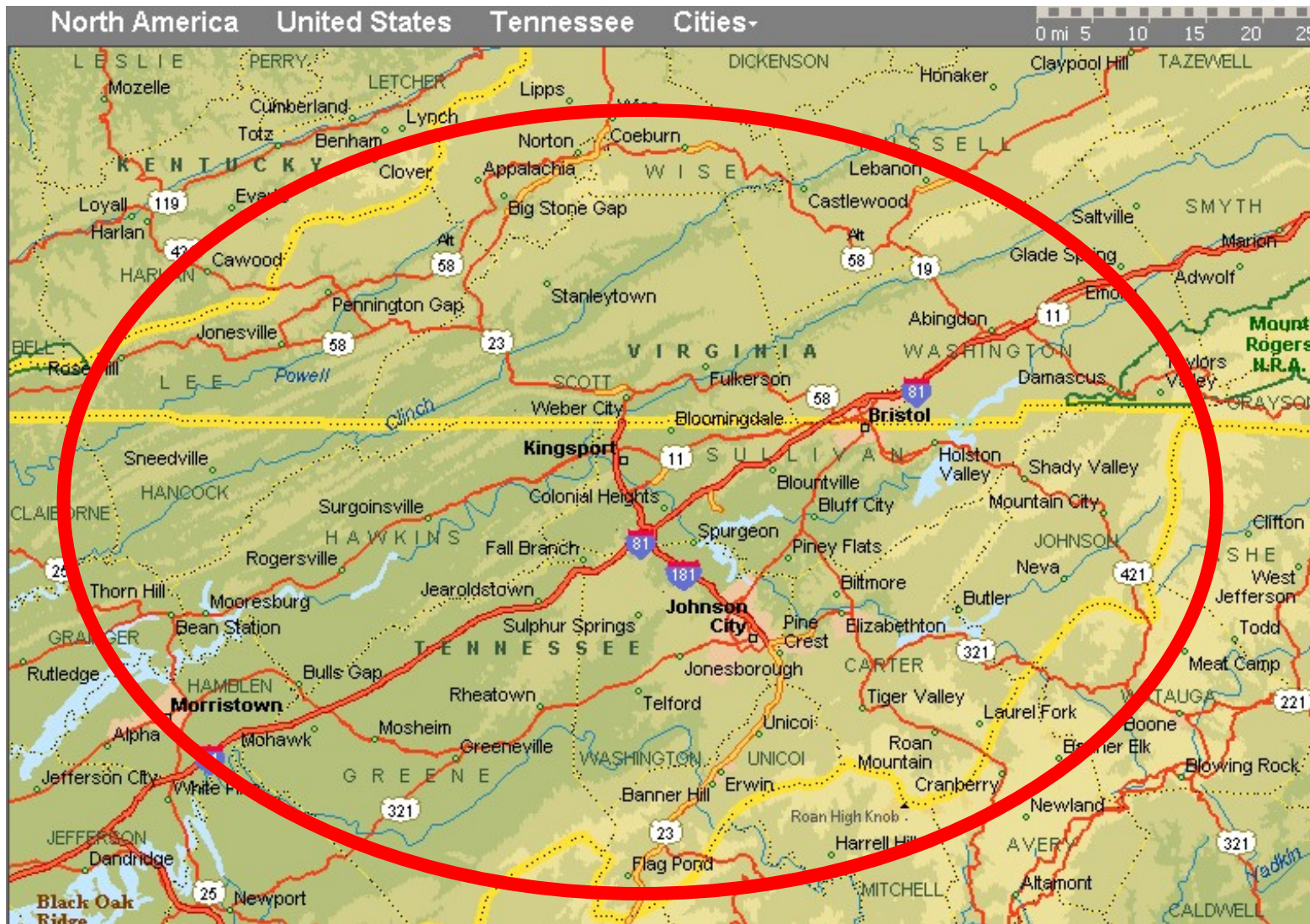
Mission

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

Tri-Cities TN / VA Regional Medical Service Area



**Medical
Service
Area
Statistics:**

**705, 000
patients
1200 MDs
16
Hospitals**

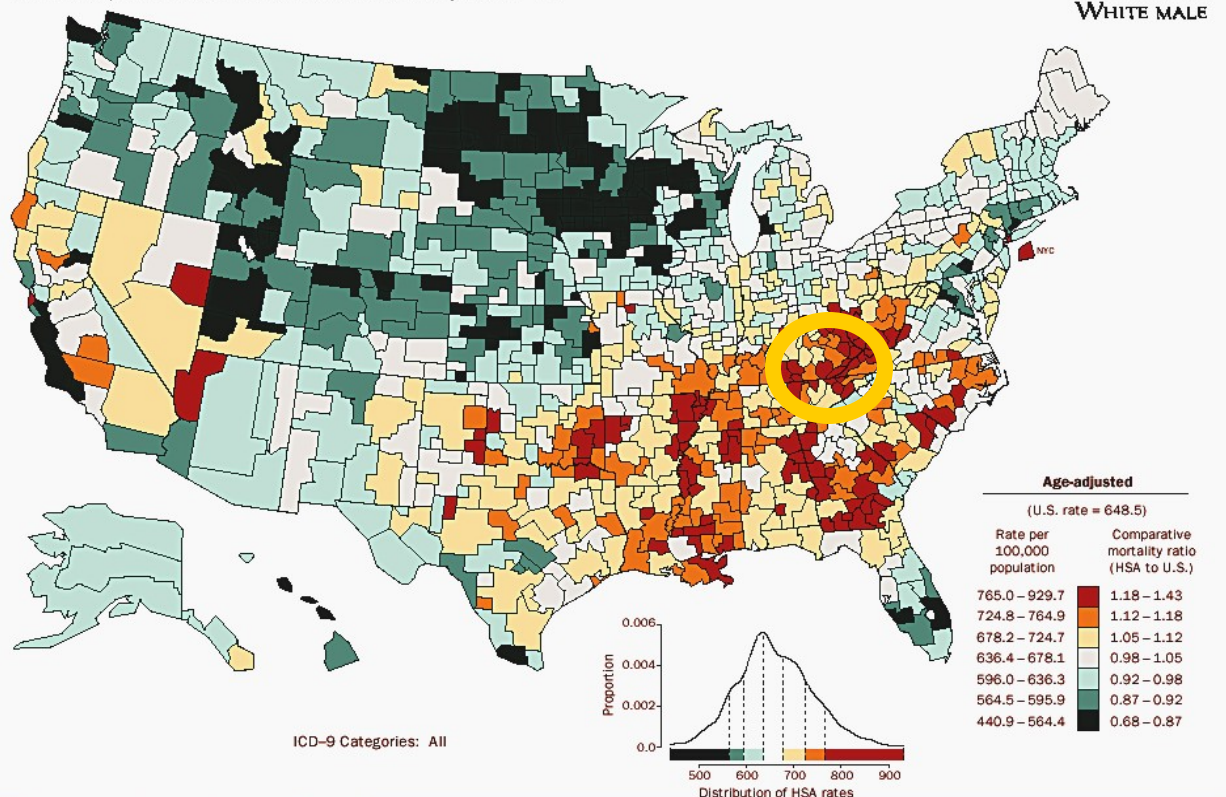
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Regional Health Status



168 AGE-ADJUSTED DEATH RATES BY HSA, 1988-92

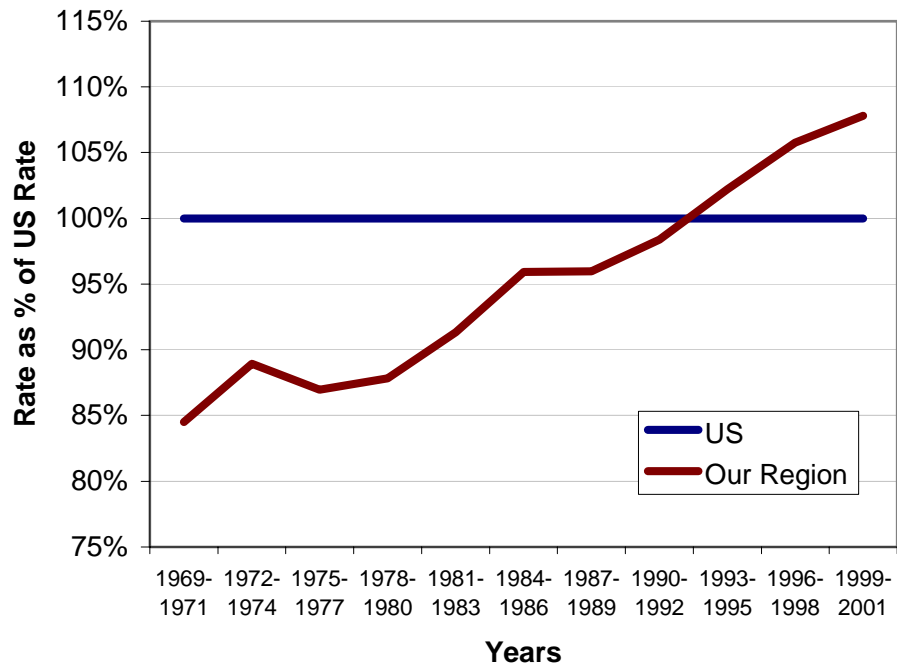
ALL CAUSES
WHITE MALE



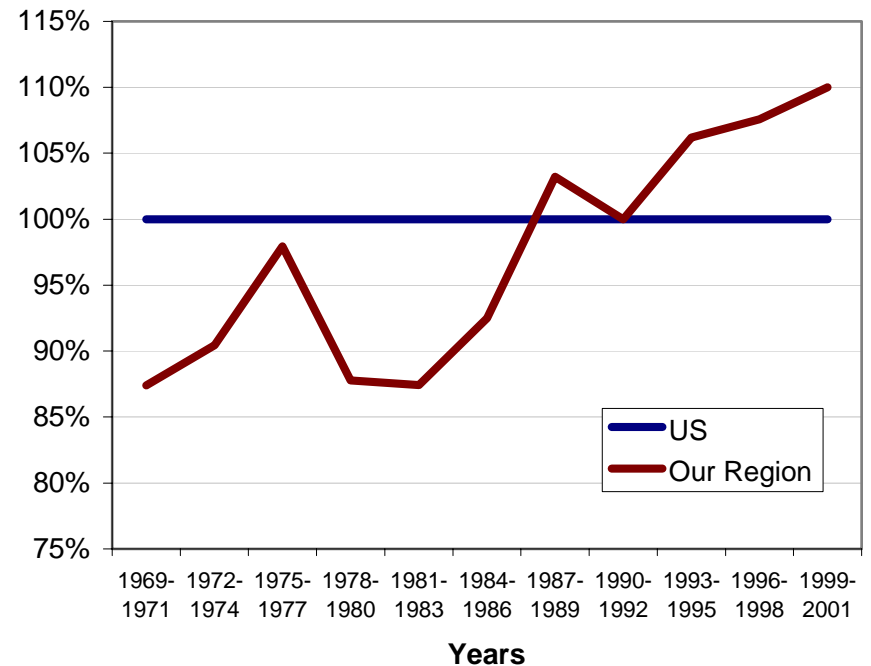
TN / VA Regional Health Problems



All Cancer Mortality Trends
% of National Levels



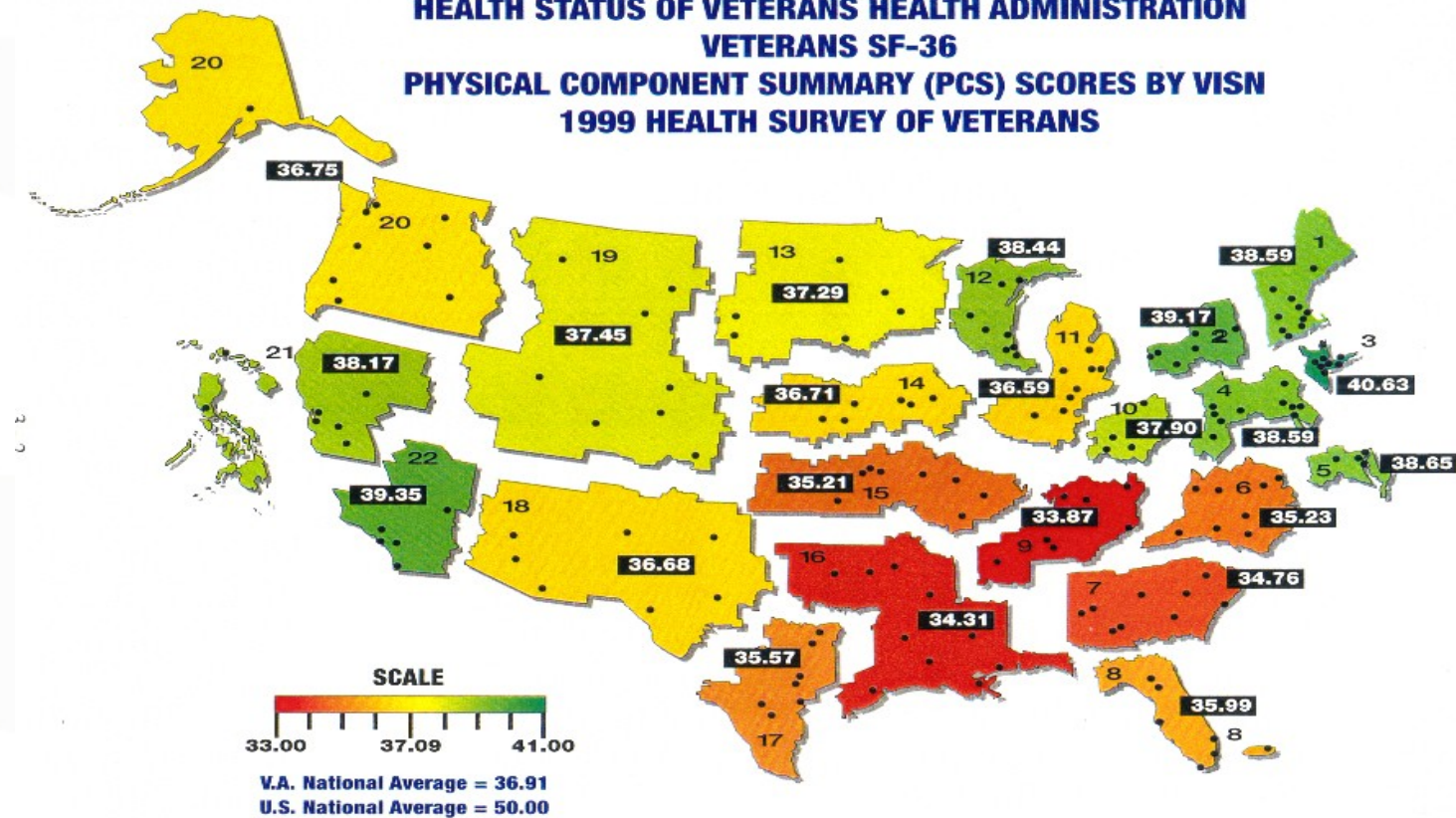
Diabetes Mortality Trends
% of National Levels



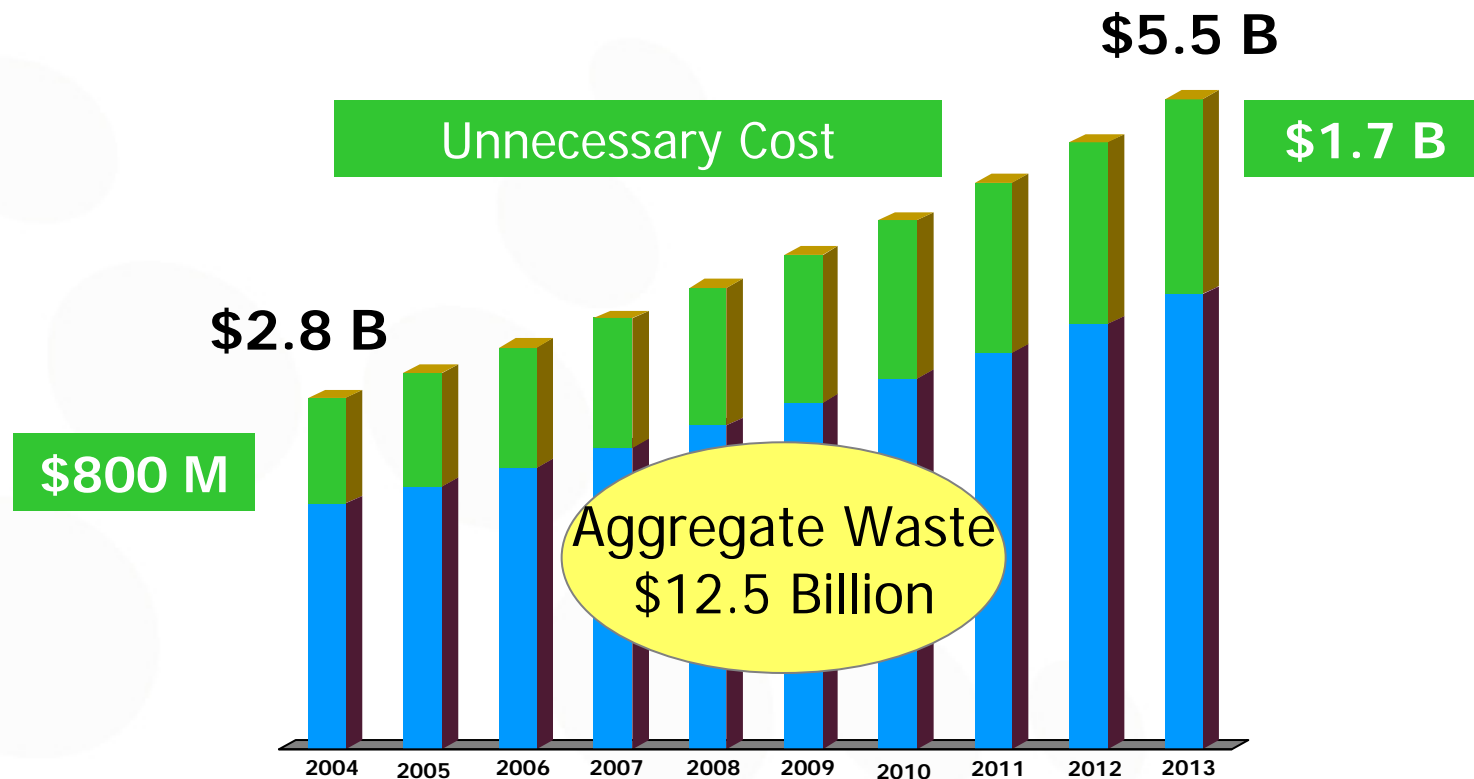
Poor Health Status means \$2,400 More Per Capita Annually



HEALTH STATUS OF VETERANS HEALTH ADMINISTRATION VETERANS SF-36 PHYSICAL COMPONENT SUMMARY (PCS) SCORES BY VISN 1999 HEALTH SURVEY OF VETERANS

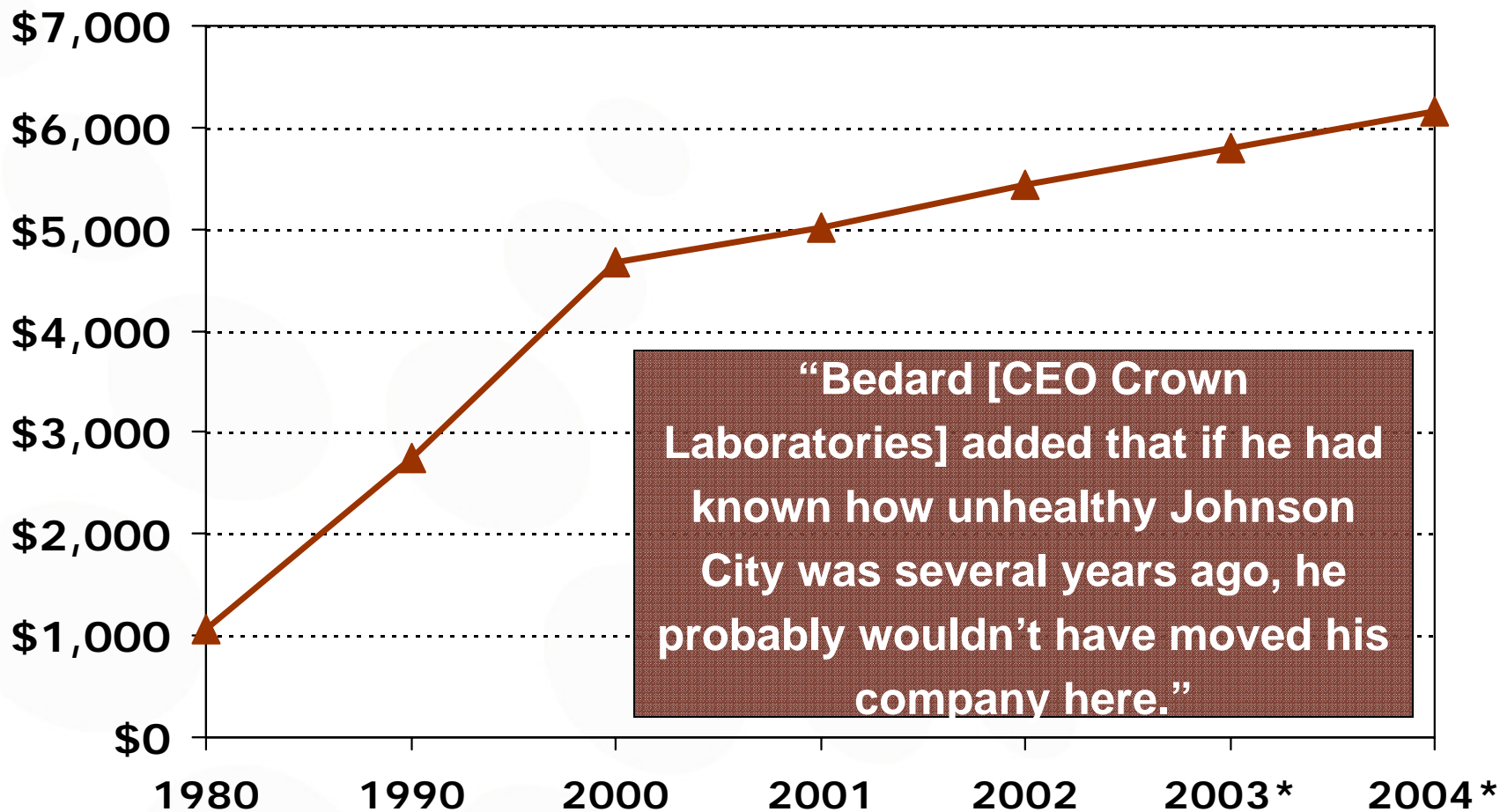


Projected Cost and Waste in Tri-Cities TN / VA Region



Source: U.S. Department of Health and Human Services, Gordian Project analysis

National Health Expenditures per Capita



Data source: CMS; Quote from the Johnson City Press, 3/3/05

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Who Participates in RHIO?



Health Care is Delivered Locally

Define your local medical service delivery area (referrals to tertiary care centers)

Identify key stakeholders and partners

Identify individuals within each to represent both organizational and knowledge base

Innovative Regional Cooperation To Improve Health



Active, representative membership, including

- Eastman Chemical Company, AFG, General Shale, BAE Systems
- Blue Cross Blue Shield, John Deere Health, Cariten PHP
- Mountain States Health Alliance, Wellmont Health System, Frontier Health, Johnston Memorial Hospital, Quillen V.A. Medical Center, Laughlin Memorial
- Holston Medical Group, Highlands Wellmont Health Network, Health Alliance PHO, Cardiovascular Associates, ETSU University Physicians, Clinch River Health Services, Rural Health Services Consortium
- East TN State University School of Medicine, College of Nursing, College of Public and Allied Health
- Regional Health Departments: Sullivan and Northeast Regional in TN, Cumberland Plateau and Lenowisco in VA
- Kingsport Tomorrow, United Way of Kingsport, Rotary Club of Kingsport
- American Cancer Society, Minority Health Coalition
- Intellithought, LucentGlow, eTechSecurityPro, Saratoga Technologies



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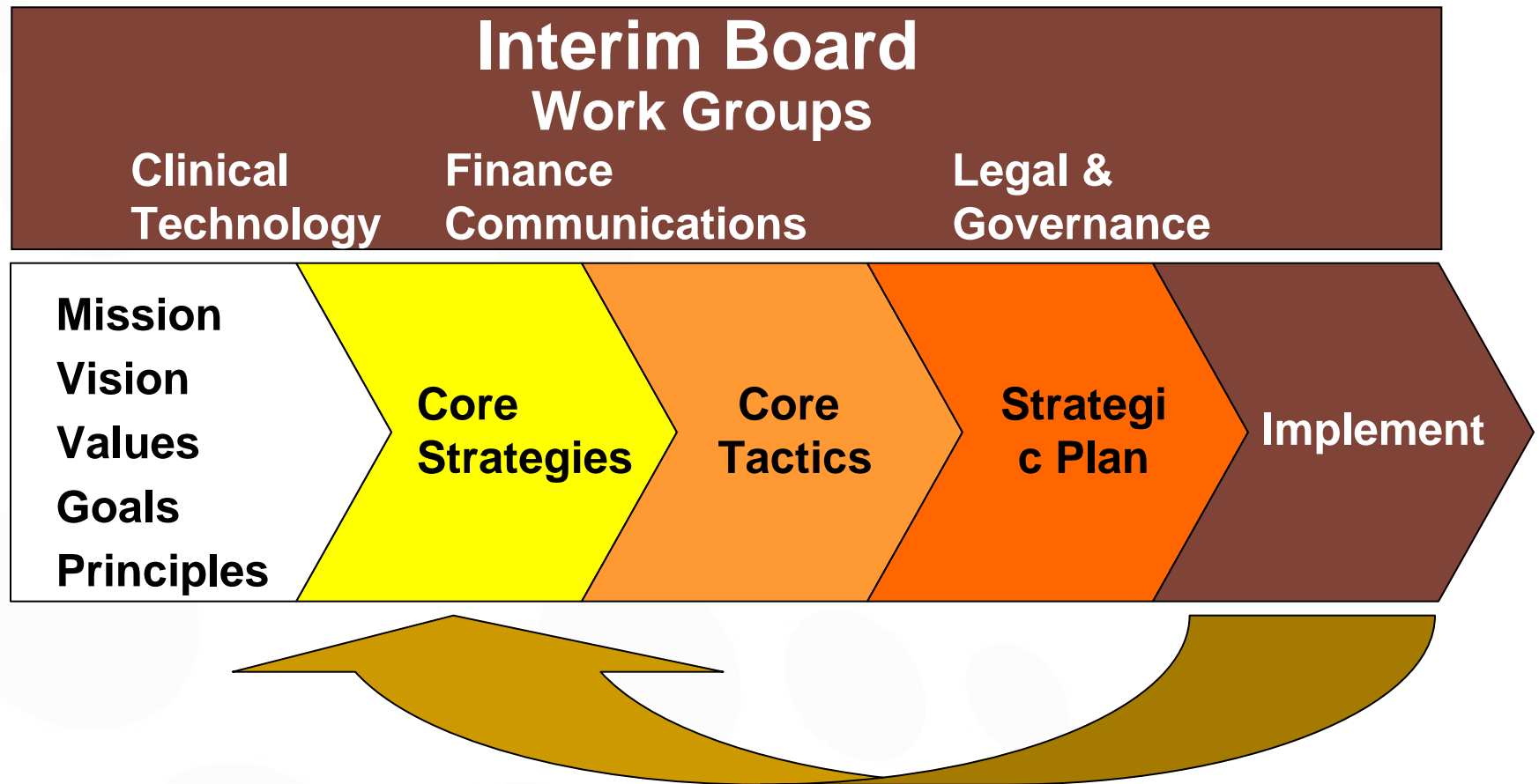
What will the RHIO do?



Key issues:

- a. Population health improvement**
- a. Improved outcomes for individual patients**
- a. Better value for healthcare dollars spent; wiser use of health resources**

Strategic Planning Process



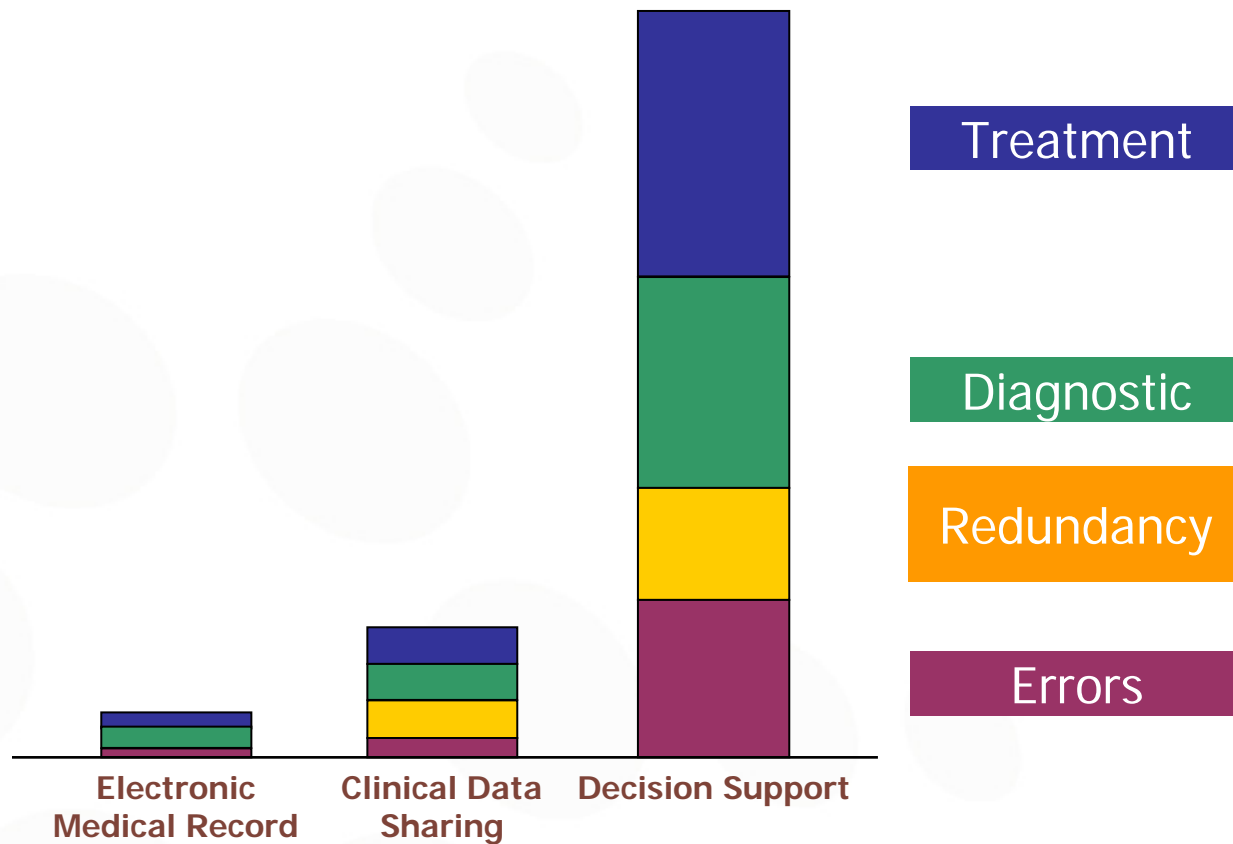
Continuous Improvement Cycle

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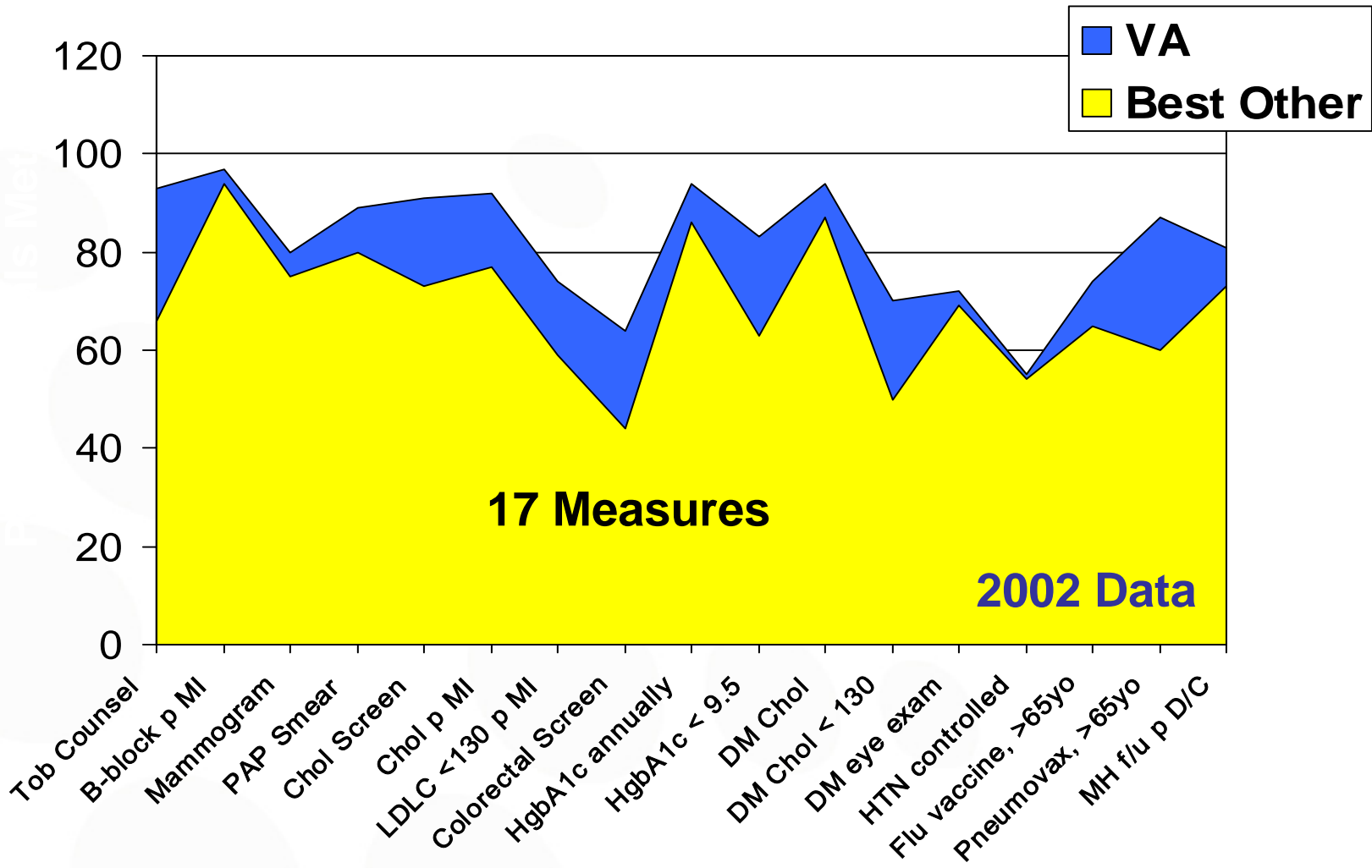
1. Provide **patient information** on demand at the point of care
2. Provide **decision support** information available at point of care
3. **Empower Patients** to make healthy choices and informed decisions
4. Provide selected aggregate data for **population health improvement**

Benefits Arise from Better Medical Decisions



Source: SBCCDE, CITL, Gordian Project analysis

Quality Measures For VA Compared With Best Practices



Slide 17

BW1

dramtaic improvement is acheivable

Ben Wilson, 11/1/2004

We are targeting the health issues of greatest impact on quality of life and cost:

- 1. Diabetes**
- 2. Hypertension / stroke**
- 3. Cardiovascular disease**
- 4. Lung disease / asthma**
- 5. Preventive immunizations / screenings**

To address health issues, we propose to provide technical capability and encourage clinical process improvement in the following areas:

- 1. Prescription Medication**
- 2. Diagnostic (lab, imaging) Services**
- 3. Preventive Medicine (immunizations / screenings)**
- 4. Chronic disease management**

1. Community-based coordinating mechanism

- "zone of cooperation"
- Visioning and strategic planning process
- Not-for-profit governance entity

2. Improve Quality of Care

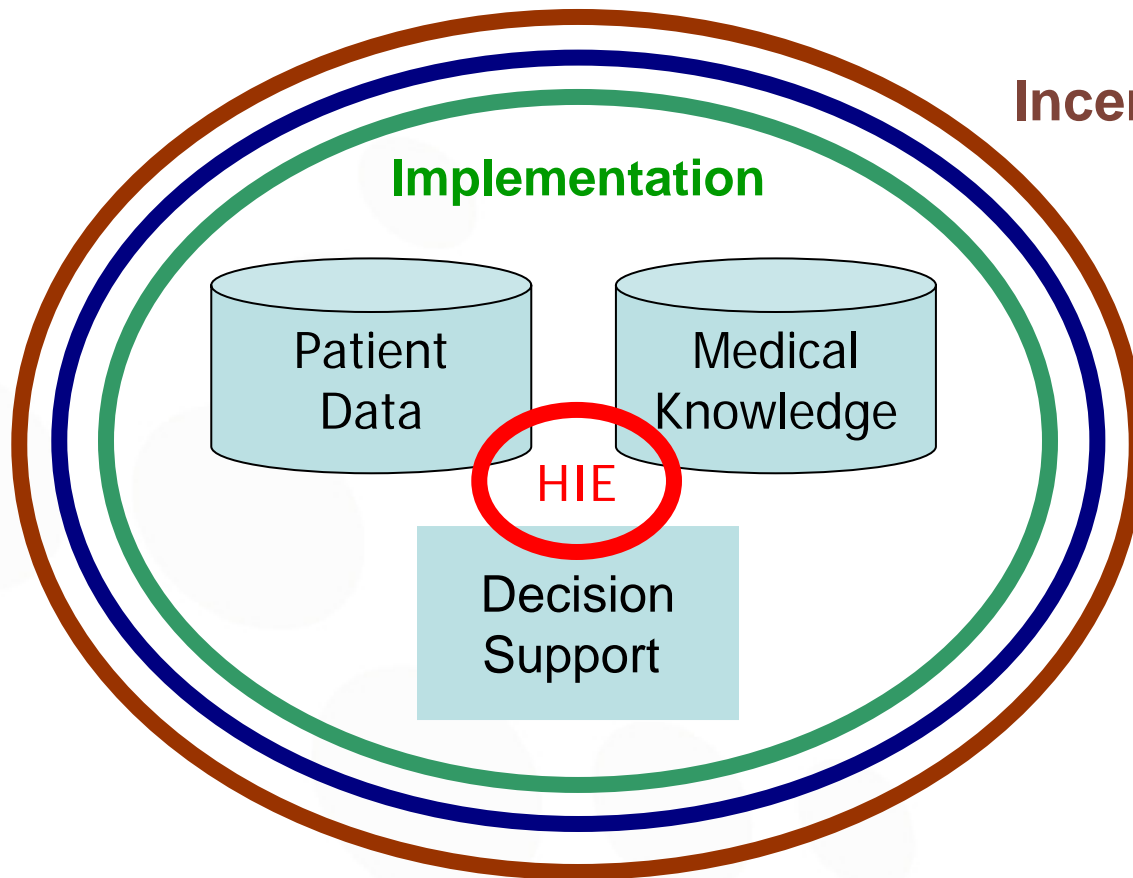
- Support physician use of electronic health information at point of care
- Advance clinical best practices and use of evidence-based medicine

3. Engage patients in health living

Local Governance

Quality Improvement

Incentives

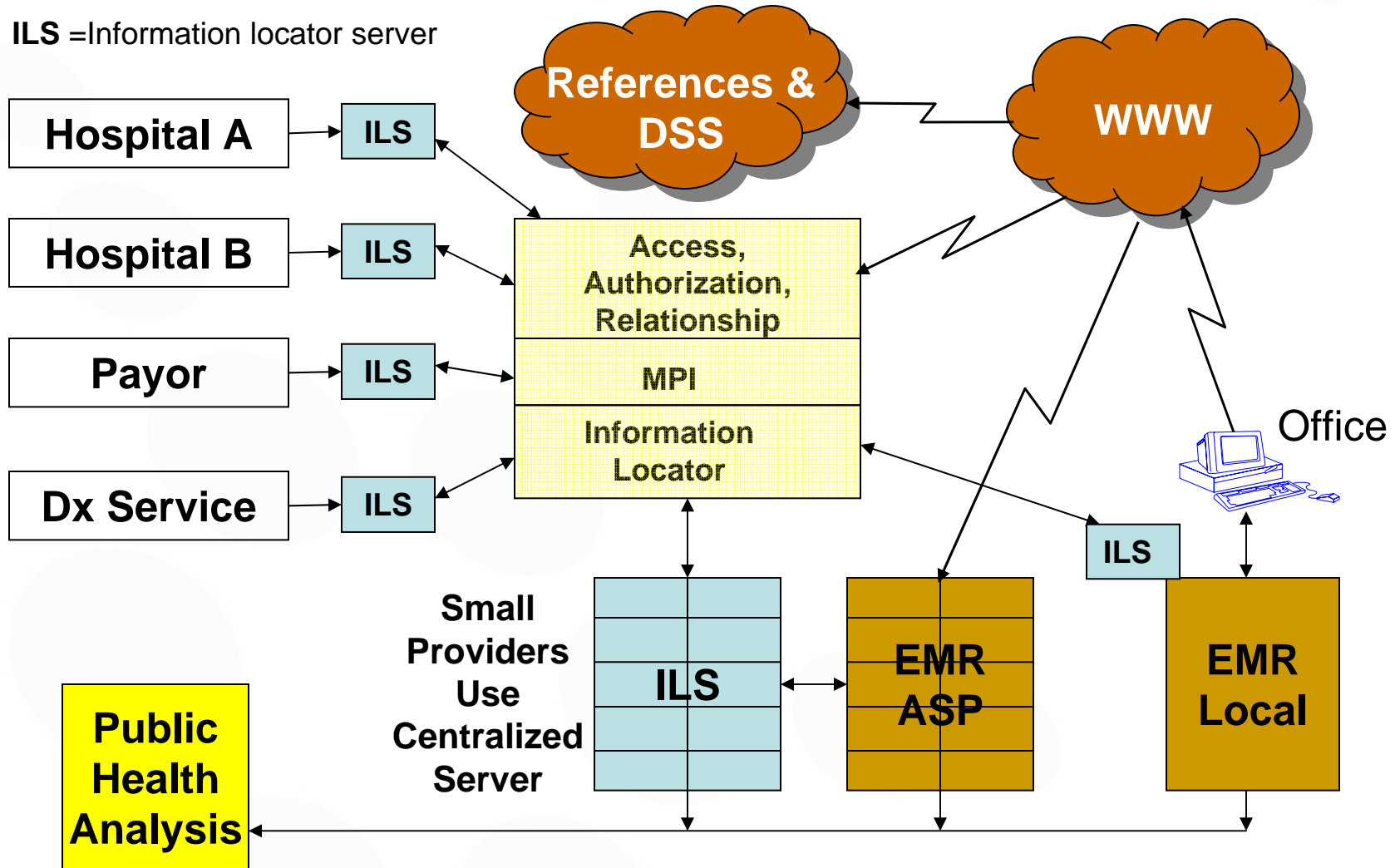


Financing

Health Information Exchange



ILS = Information locator server



Aligning Community Interests & Resources



Aspects of Financial Model



- **Savings model**
- **Cost model**
- **Funding model**

Unnecessary Expenditures:



\$1.1 B per year as of 2004

Program	Annual Market Opportunity (\$ M)	% of Total Opportunity	Target Annual Savings ¹ (\$ M)	% of Total Opportunity
Medication Management	123	12.3%	30	3.0%
Diagnostic Improvement	140	13.3%	37	3.7%
Subtotal	263	25.6%	67	6.7%
Disease Management				
Prevention				
Total	1,100			

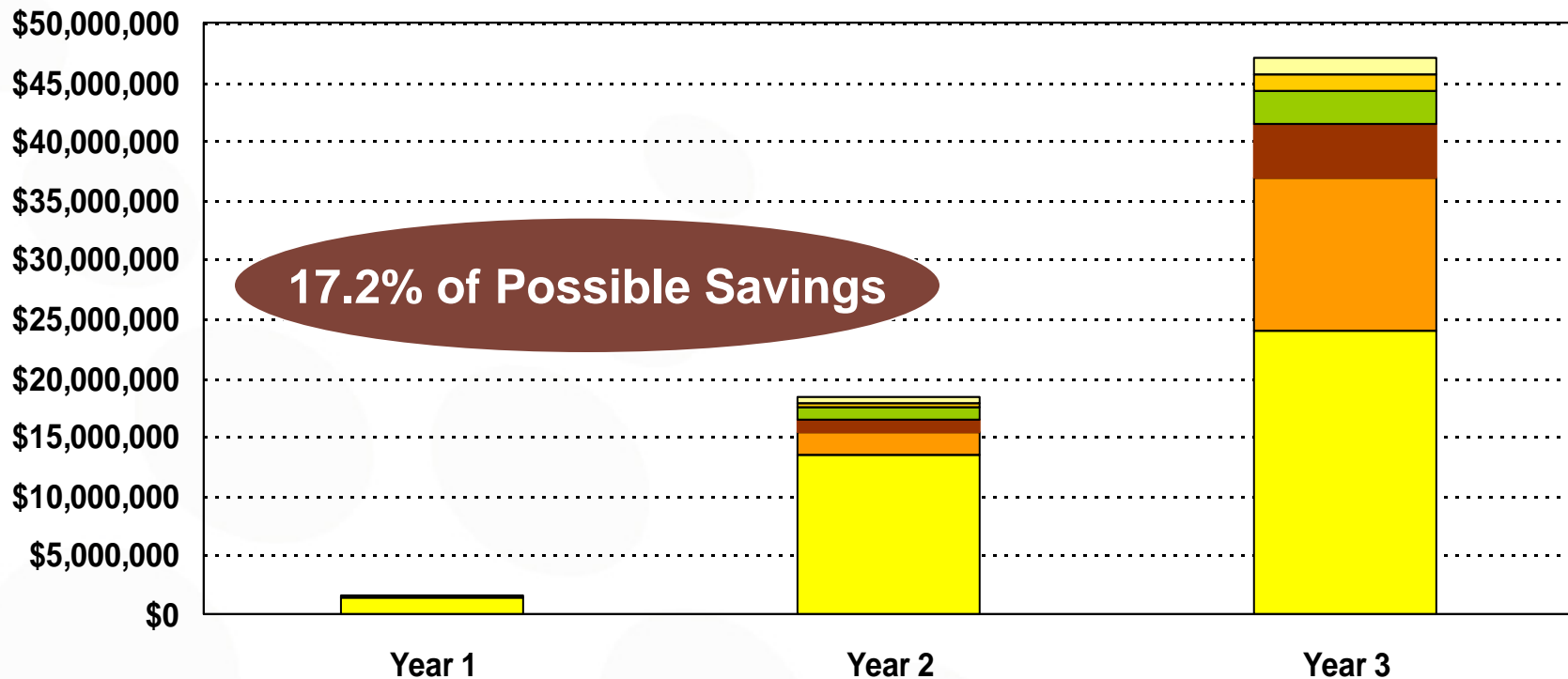
Only one-quarter of the opportunity identified to-date

Annual Dx Improvement Market Opportunity Assumptions



Opportunity	Base Case	Alternate Case
Population	705,000 ¹	
Outpatient Physicians	945 ²	
Laboratory Charges		
Value per 1% decrease	\$198³ PPM	.27³ PMPM
Variance to Benchmark	13%³	8.8%³
Radiology Charges		
Value per 1% increase	\$425³ PPM	
Variance to Benchmark	20%³	14%³
Physician Admin Costs		
Value per 1% decrease	\$.04⁴ PMPM	
Variance to Benchmark	20%⁴	8.6%⁴

Medication and Diagnostic Services Improvement Savings Model Projections*



- Generic Substitution
- Rad Utilization
- Lab Utilization
- Adverse Drug Events
- MD Admin Cost
- Callbacks

* Data sources: BlueCross BlueShield and John Deere

Dx Improvement Benefit Flow



Revenue Impact

Laboratory Utilization Reduction
 Radiology Utilization Reduction
 MD Admin Cost Reduction

Payers	Employers	Patients	MDs	Hospitals	Radiology	Labs

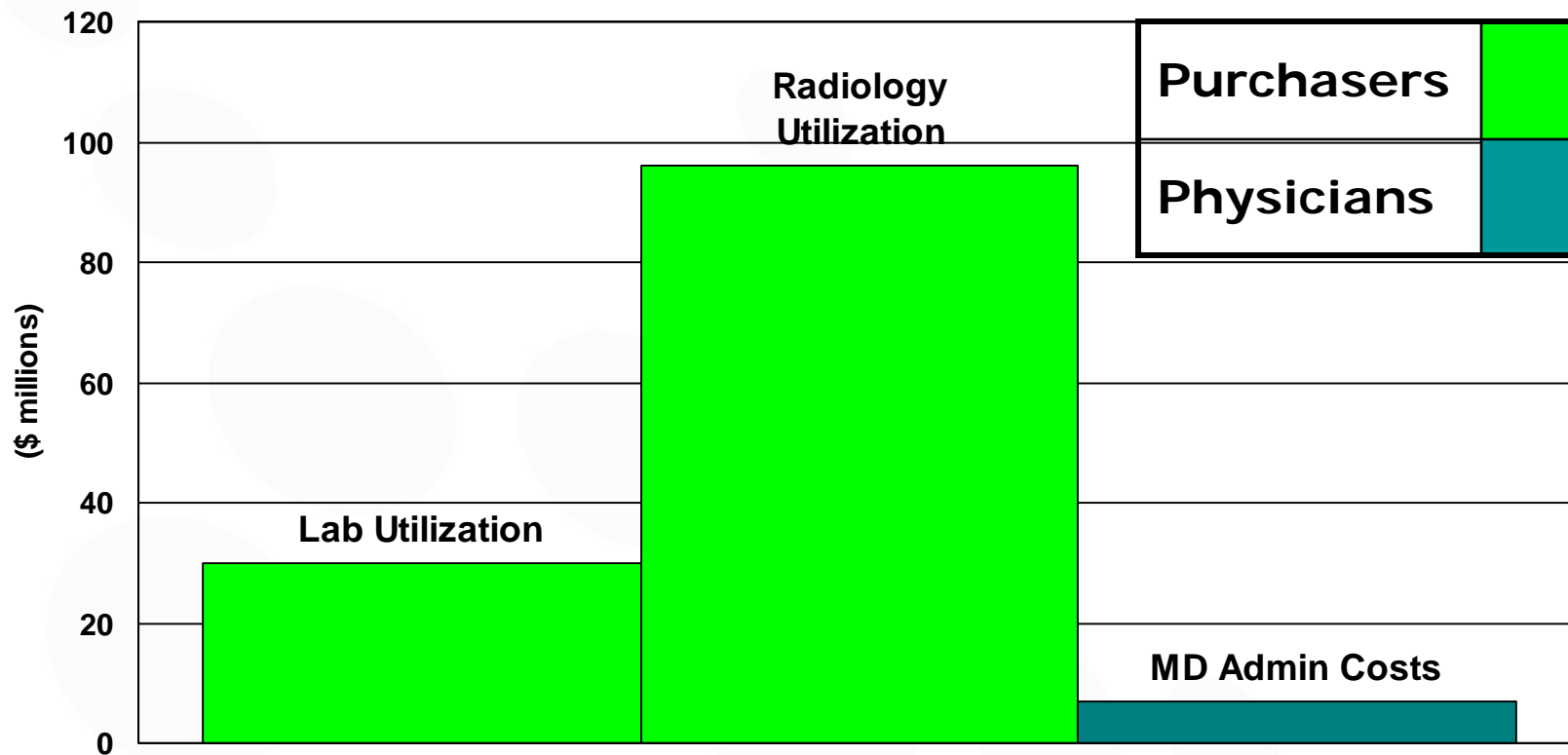
Cost Savings Impact

Laboratory Utilization Reduction
 Radiology Utilization Reduction
 MD Admin Cost Reduction

Payers	Employers	Patients	MDs	Hospitals	Radiology	Labs

Positive	
Neutral	
Negative	

Annual Dx Improvement Market Opportunity (2004)



Purchasers garner 95%
Physicians garner 5%

Dx Improvement

Cost Model Assumptions: POHIT



Item	CapEx	Assumption
Wired HW Solution	Yes	30% of physicians choose at \$20,600
Wireless HW Solution	Yes	70% of physicians choose at \$14,420
SW License	Yes	\$7,500 per physician (one-time)
Vendor Implementation	Yes	\$100,000 per year
Data Center	No	Outsource to 3 rd -party at \$3,133 per month
Maintenance/Broadband	No	15% of capital license per year/\$80 per month
Tech Support Staff	No	8 staff members = \$420 K in salary and benefits

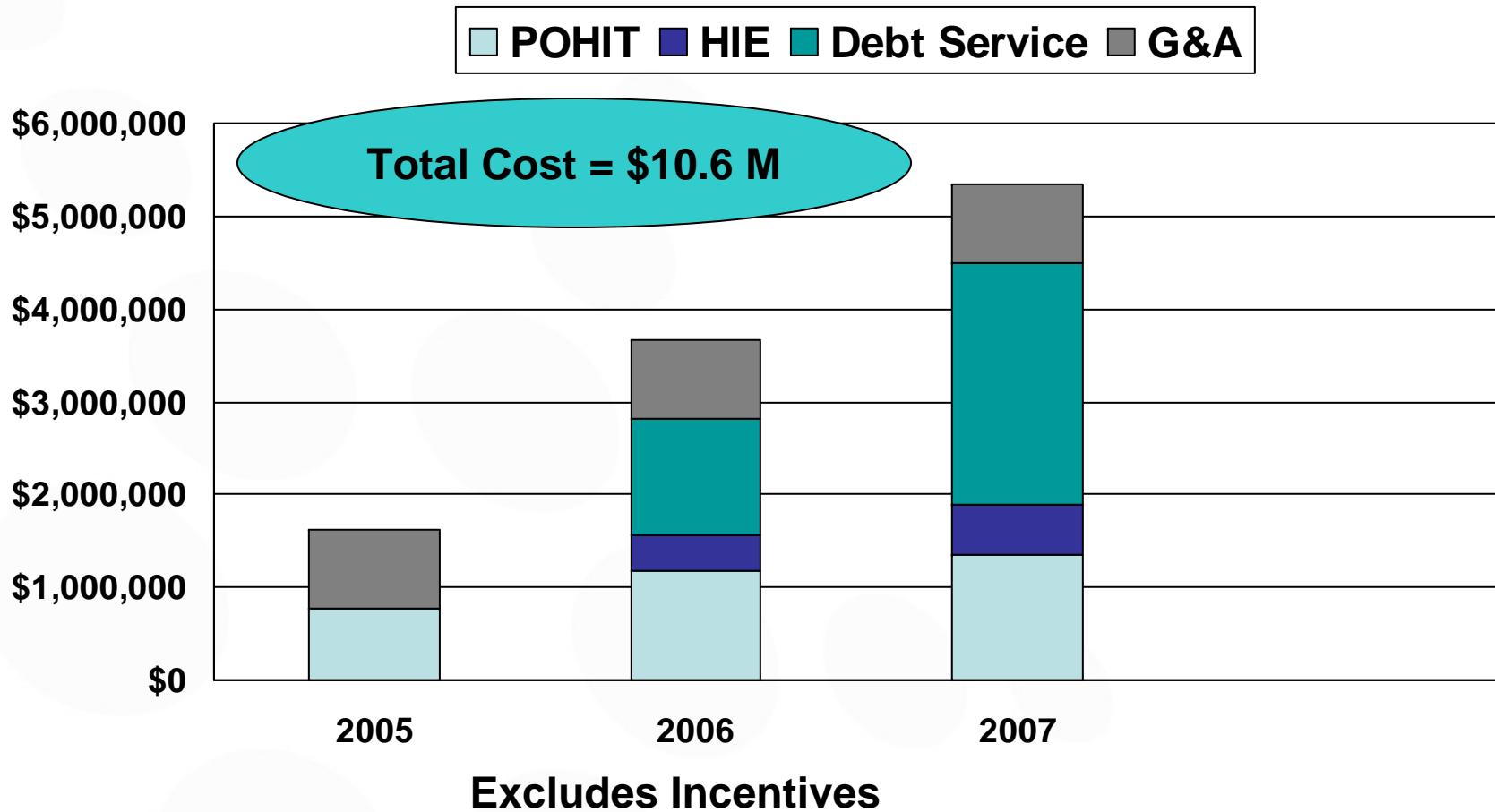
Source: Software cost estimates provided through multiple proposals and other costs are estimates by experts on CAHIP Technology Work Group

Dx Improvement & Rx Management Cost Model Projections

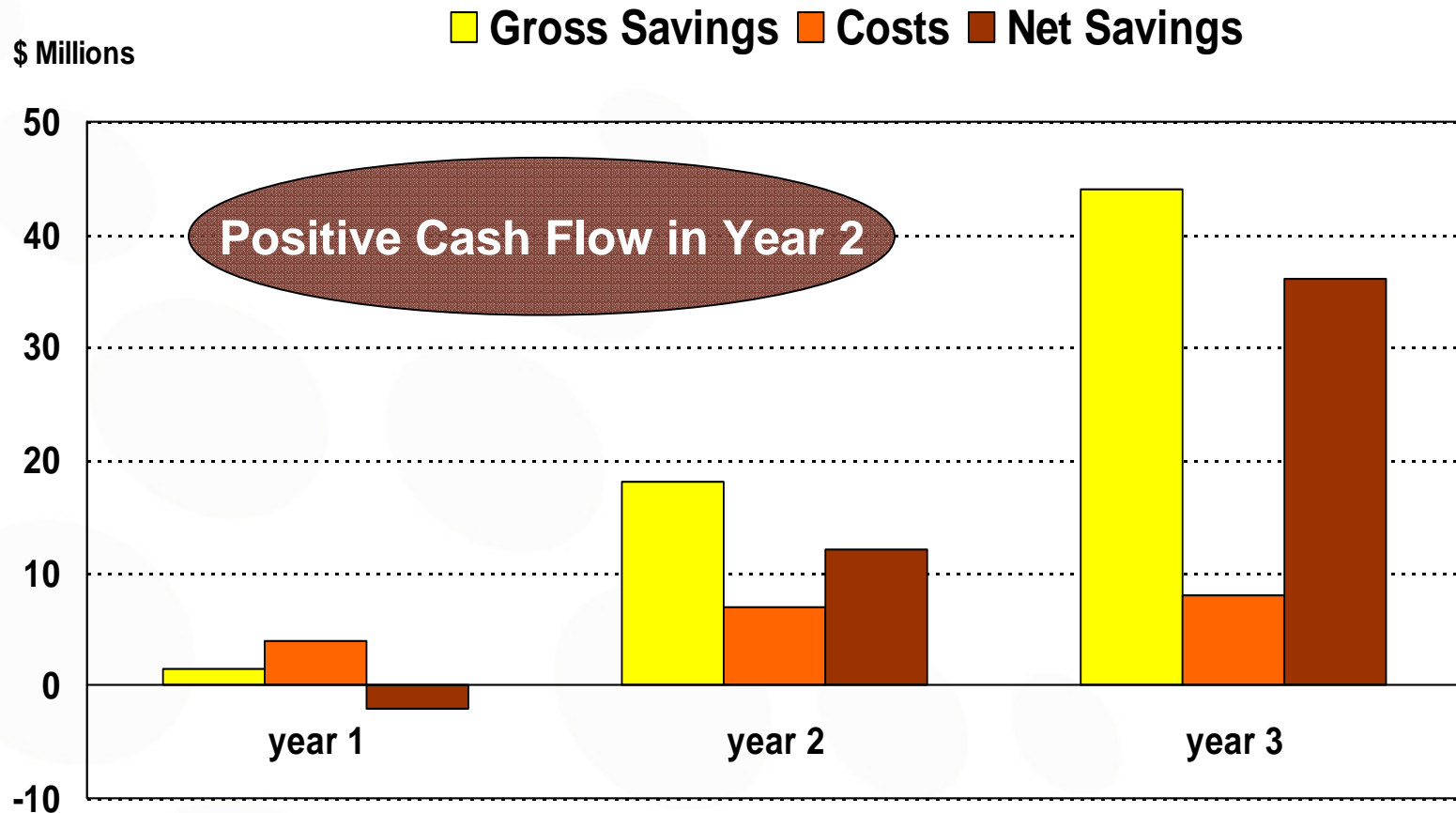


Uses of Capital		Year 1	Year 2	Year 3
<u>Capital Expenditures</u>				
	POHIT Hardware	1.4	1.6	0.7
	POHIT Software	2.7	3.3	1.4
	Software Development	0.7	0.5	0.5
	Subtotal	4.8	5.4	2.6
<u>Operating Expenses</u>				
	Information Technology	0.8	1.6	1.9
	Quality Improvement	0.0	0.0	0.0
	Physician Incentives	0.9	9.1	20.5
	G&A Expenses	0.8	0.8	0.8
	Fees	0.0	0.0	0.0
	Subtotal	2.5	11.5	23.2
<u>Debt Service</u>				
	Interest Expense	0.0	0.3	0.6
	Debt Repayment	0.0	1.0	2.0
	Subtotal	0.0	1.3	2.6
Total Uses of Capital		7.3	18.2	28.4

Dx Improvement & Rx Management Cost Model Projections



Cost-Benefit Projections*



* Includes medication and diagnostic services improvement only

Possible Investment and Reward Scenarios



- There are multiple “investors” who can invest different resources in different proportions
- “Investors” may invest effort, risk, and expense
- Rewards should be shared equitably and proportionately

Scenario	Purchasers/ Insurers	Physicians/ Health Systems	Others
A	67%	33%	
B	33%	67%	
C	50%	50%	
D	33%	33%	33%

Purchasers 1/3 Physicians 1/3 Others 1/3



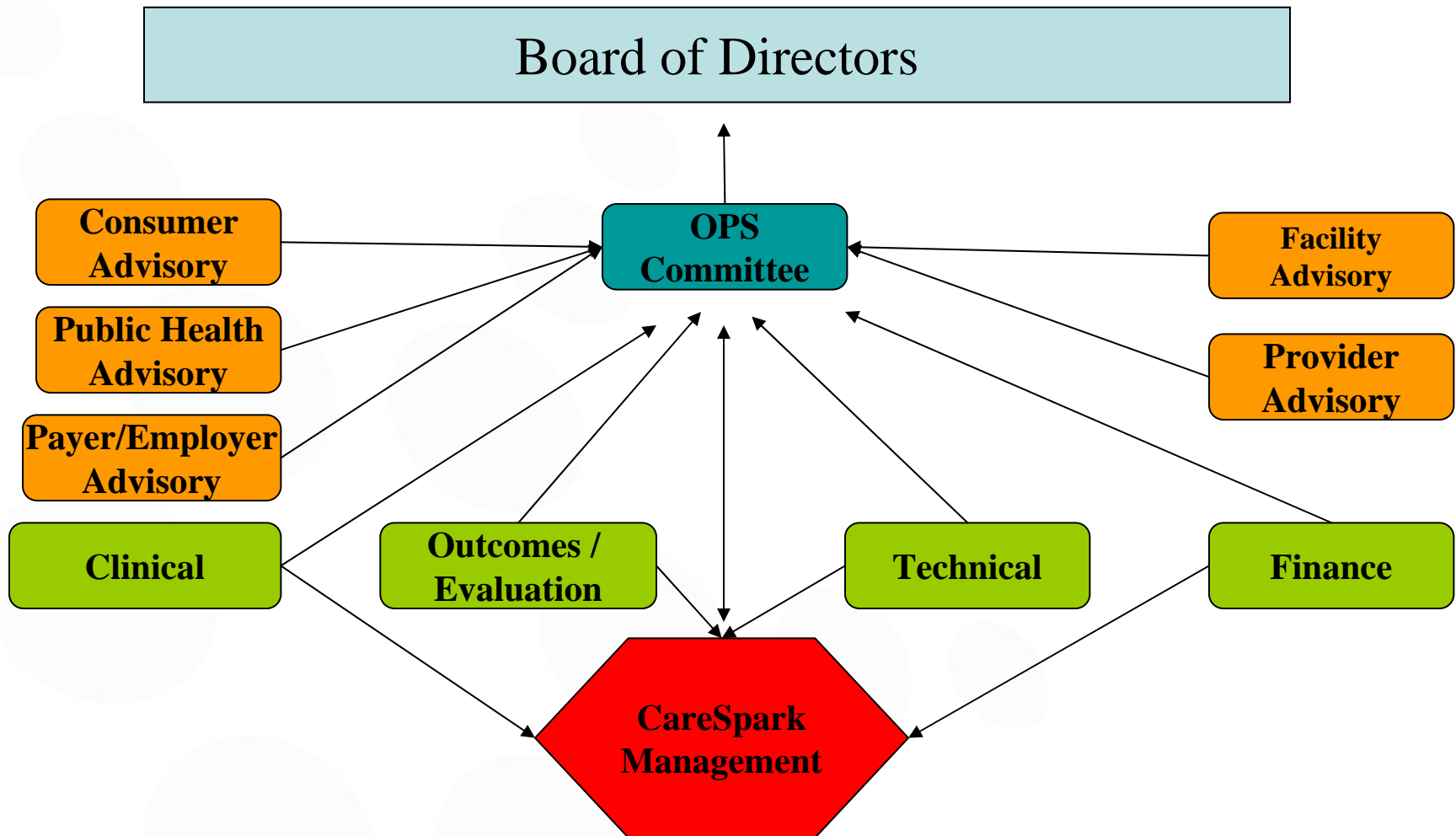
Purchasers	2005	2006	2007	Total
Allocation	33%	33%	33%	33%
Gross Savings	\$ 937,654	\$ 10,754,286	\$ 25,093,280	\$ 36,785,220
Total Costs	\$ 531,828	\$ 1,207,682	\$ 1,762,061	\$ 3,501,570
Net Savings	\$ 405,826	\$ 9,546,604	\$ 23,331,220	\$ 33,283,650
<u>MPPM</u>				
Gross Savings	\$ 0.89	\$ 5.63	\$ 13.13	
Enrollment Fee	\$ (0.17)	\$ (0.21)	\$ (0.30)	
Gain Sharing	\$ (0.59)	\$ (3.71)	\$ (8.67)	
Purchaser Gain	\$ 0.14	\$ 1.70	\$ 4.16	
<u>Physicians</u>				
Allocation	33%	33%	33%	33%
Gross Savings	\$ 937,654	\$ 10,754,286	\$ 25,093,280	\$ 36,785,220
Total Costs	\$ 531,828	\$ 1,207,682	\$ 1,762,061	\$ 3,501,570
Net Savings	\$ 405,826	\$ 9,546,604	\$ 23,331,220	\$ 33,283,650
<u>PPPM</u>				
Gain Sharing	\$ 304	\$ 1,602	\$ 3,034	
Cost	\$ (172)	\$ (180)	\$ (213)	
Physician Gain	\$ 132	\$ 1,422	\$ 2,821	

Funding Model



Sources of Capital	2005	2006	2007
<u>Revenue</u>			
Enrollment Fees	1.1	2.5	3.7
Incentive Compensation	0.9	9.1	20.5
Subtotal	2.0	11.6	24.1
Cumulative Revenue	2.0	13.5	37.6
<u>Contributions</u>			
Providers	0.0	0.0	0.0
Purchasers	0.0	0.0	0.0
3rd Parties	0.5	1.2	1.7
Subtotal	0.5	1.2	1.7
Cumulative Contributions	0.5	1.7	3.4
<u>Debt</u>			
Vendor Financing	4.8	5.4	2.6
Cumulative Vendor Financing	4.8	10.2	12.9
3rd Party Financing	0.0	0.0	0.0
Cumulative 3rd Party Financing	0.0	0.0	0.0
Subtotal	4.8	5.4	2.6
Total Sources of Capital	7.3	18.2	28.4

CareSpark Governance Structure



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- **Technical inventory and feasibility study completed**
- **Strategic business plan developed**
- **Non-profit organization formed, board of directors, committees and staff in place**
- **Funding commitments of \$2,065,000, to date**

Next Steps



- **Secure \$4.5M in funding for development and execution through Dec. 2006**
 - \$600K by July 2005
 - \$2.5M by Dec. 2005
 - \$2M by June 2006
- **Secure staffing for development and operations**
- **Define technical specifications, conduct vendor selection process (Dec 2005)**
- **Finalize partnership agreements (Jan 2006)**

Funding Sources – Planning Phase



BlueCross BlueShield of Tennessee	\$162,125
Foundation for eHealth Initiatives (Office for Advancement of Telehealth, HRSA, DHHS)	\$100,000
AllScripts HealthCare Solutions	\$ 25,000
John Deere Health	\$ 41,500
Eastman Chemical Company	\$ 50,000
Mountain States Health Alliance	\$ 50,000
Wellmont Health System	\$ 50,000
Novartis Pharmaceuticals Corporation	\$ 15,000
Frontier Health	\$ 10,000
Health Alliance PHO	\$ 10,000
Highlands Physicians Inc.	\$ 10,000
Holston Medical Group	\$ 10,000
United Way of Greater Kingsport	\$ 10,000
Rotary Club of Kingsport	\$ 10,000
East TN State University / Medical Education Assistance Corp.	\$ 5,000
Laughlin Memorial Hospital	\$ 2,500
Johnston Memorial Hospital	\$ 2,500
Kingsport Tomorrow	\$ 1,500
Cardiovascular Associates	\$ 250
Total funds contributed:	\$562,875

Funding Sources – Development Phase



Employers:

\$300,000

State of TN:

\$1,000,000

Other:

NHIN prototype: ?

State of Virginia:

Health Plans:

Opportunities for Our Region



Contribute to emerging national policy

Coordination / Collaboration between

**North Carolina · Tennessee · Virginia
· Kentucky · West Virginia**

**Local Investment Leverages Other
Funding (federal / state / private)**

**Small Business Expansion / Creation of
High-Wage Jobs (Health Care,
Technology)**

- **Engagement of stakeholders**
- **Multiple vendors / standards / data sets**
- **Patient / physician concern about security, privacy and liability**
- **Funding for upfront capital costs**
- **Ability to track ROI and outcomes**

National effort to remove barriers



- **“Harmonization” of state / federal / organization policies and regulations**
- **Move to establish data standards that support interoperability, certification for electronic medical records**
- **Pilots for financial incentives to encourage adoption and spur private investment**
- **Coordination through policy-making body: American Health Information Community**

Better Health for Central Appalachia



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