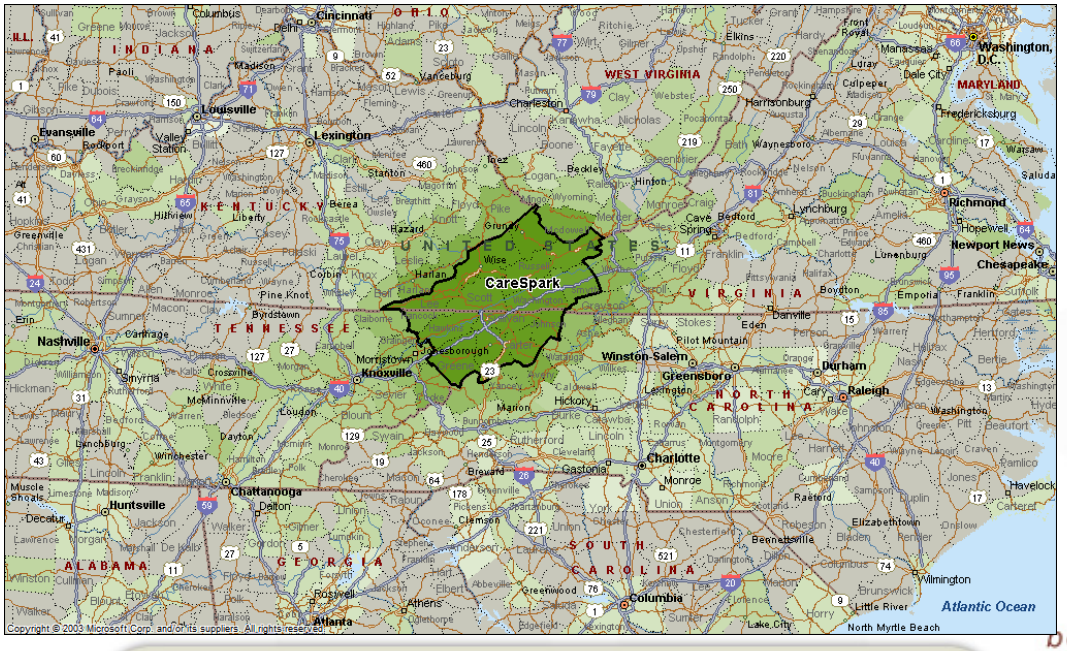
care spark

NHIN Forum on Privacy and Security 10-16-06

better health through collaboration and innovation

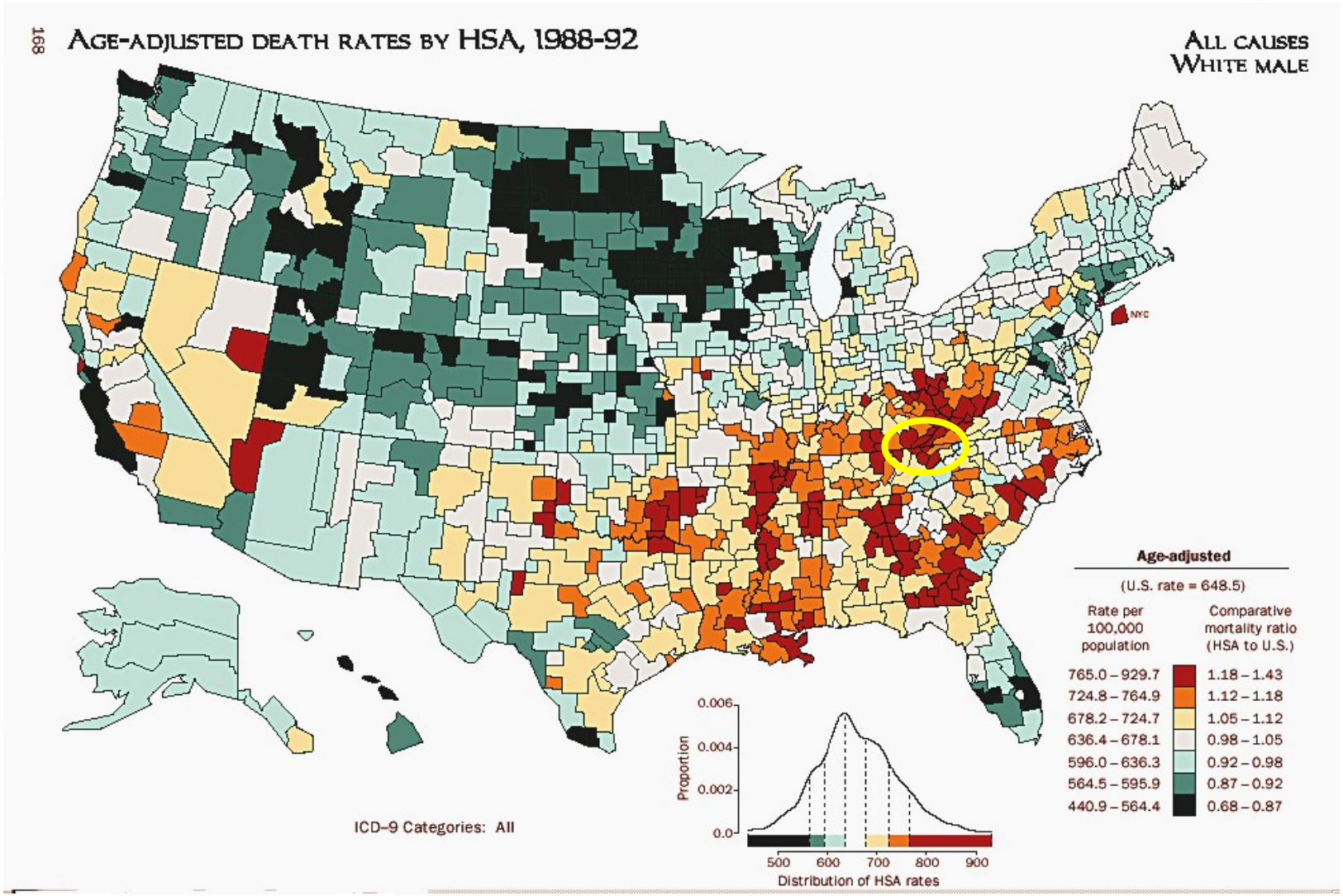
CareSpark Facts

- **Multi-State Region**
- **710,000 Patients**
  - ($^2/_3$ in TN, $^1/_3$ in VA)
- **16 Hospitals**
  - 2 Large Community-Based Health Systems

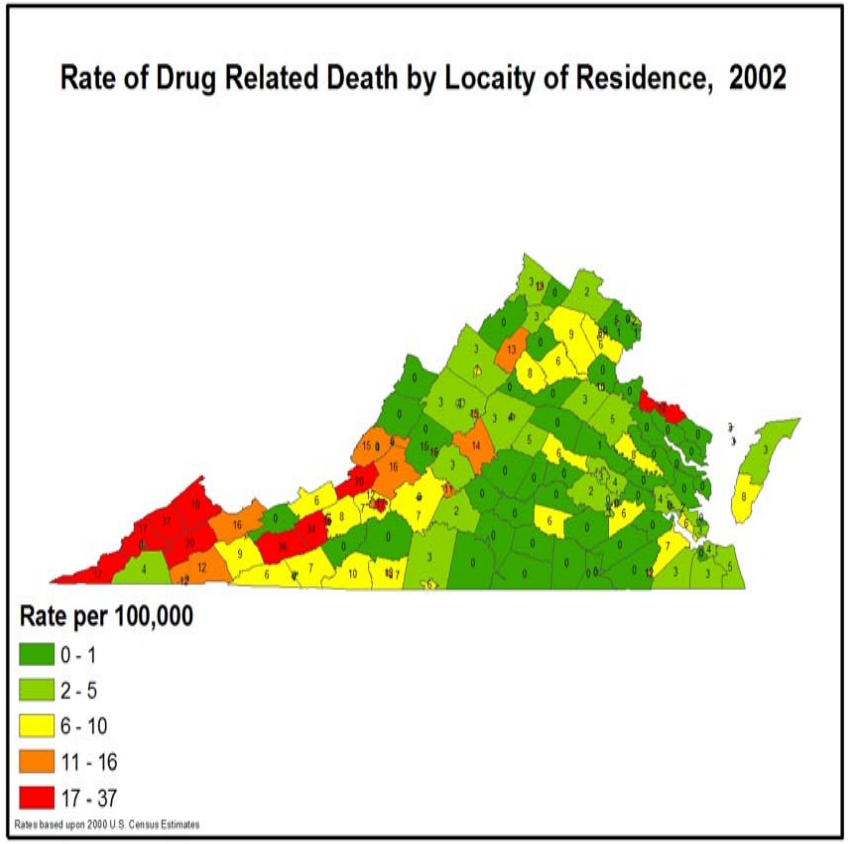


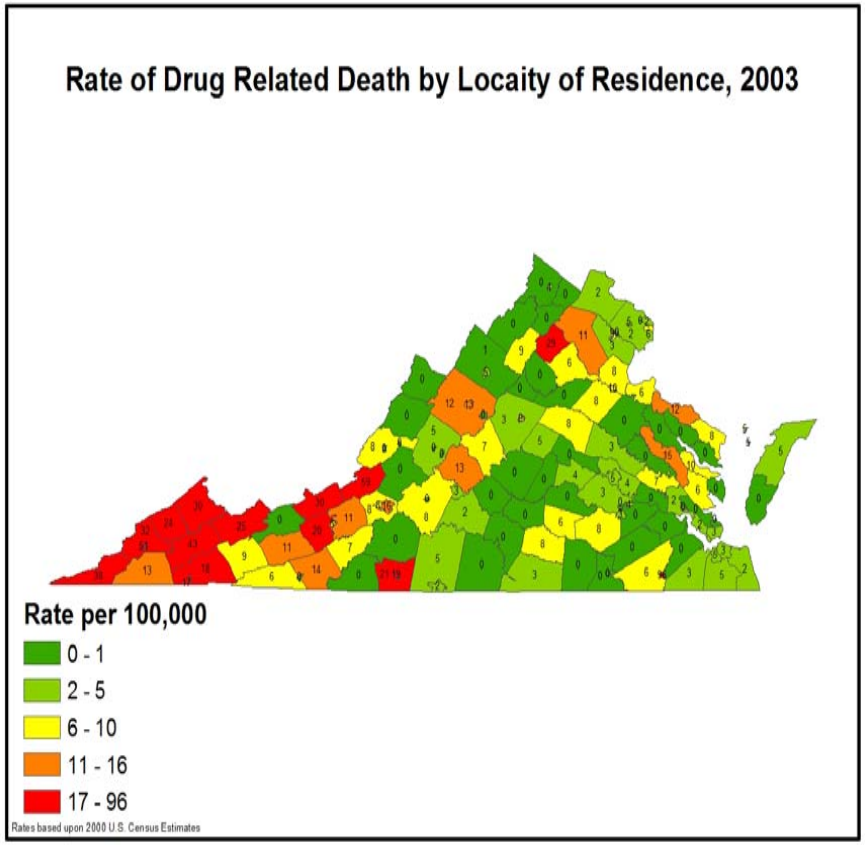
- **1,200 Physicians**
  - Many Rural and Smaller Practices
- **No single payor dominance**
  - 25% Medicare, 18% Medicaid, 2-20% Other
- **Few Large Employers**
  - Eastman Chemical – 8,000

TN / VA Regional Health Problems



Drug *Caused* Death Rates 2002 - 2003





VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

CareSpark Mission

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

Regional Health Disparities:

- **Diabetes**
- **Cardiovascular Disease**
- **Hypertension**
- **Lung Disease**
- **Cancer**

Goals & Priorities – Parallel Pathways

1. **Interoperable EHR Adoption** – Encourage and support increased use of certified EHRs (with e-prescribing and decision support tools) among providers
   - Recommend those with CCHIT certification, align with EHR use case
2. **Regional HIE Platform –** Implement infrastructure and connectivity for sharing of information among providers, payors, public health
   - Align with HITSP standards and NHIN prototype learnings
3. **Public Health Improvement –** Increased biosurveillance, community-wide aggregation and study, improved disease reporting, prevention services and chronic disease identification, management and outcomes
   - Align with Bio-surveillance use case
4. **Financial Incentives –** Align financial incentives for payor, provider and patient participation
   - Align with CMS “pay for performance” and other initiatives

Key Strategic Decisions

1. **Scaled to allow participation by all patients and providers in region**

2. **Default Passive Enrollment ("opt-out") and Active Enrollment ("opt-in")**

   enabled by Master Patient Option Preference (MPOP) and Local Patient Option Preference (LPOP)

3. **Clinical Data Repository** to enable decision support, public health monitoring and centralized services

4. **Data Access and Uses**

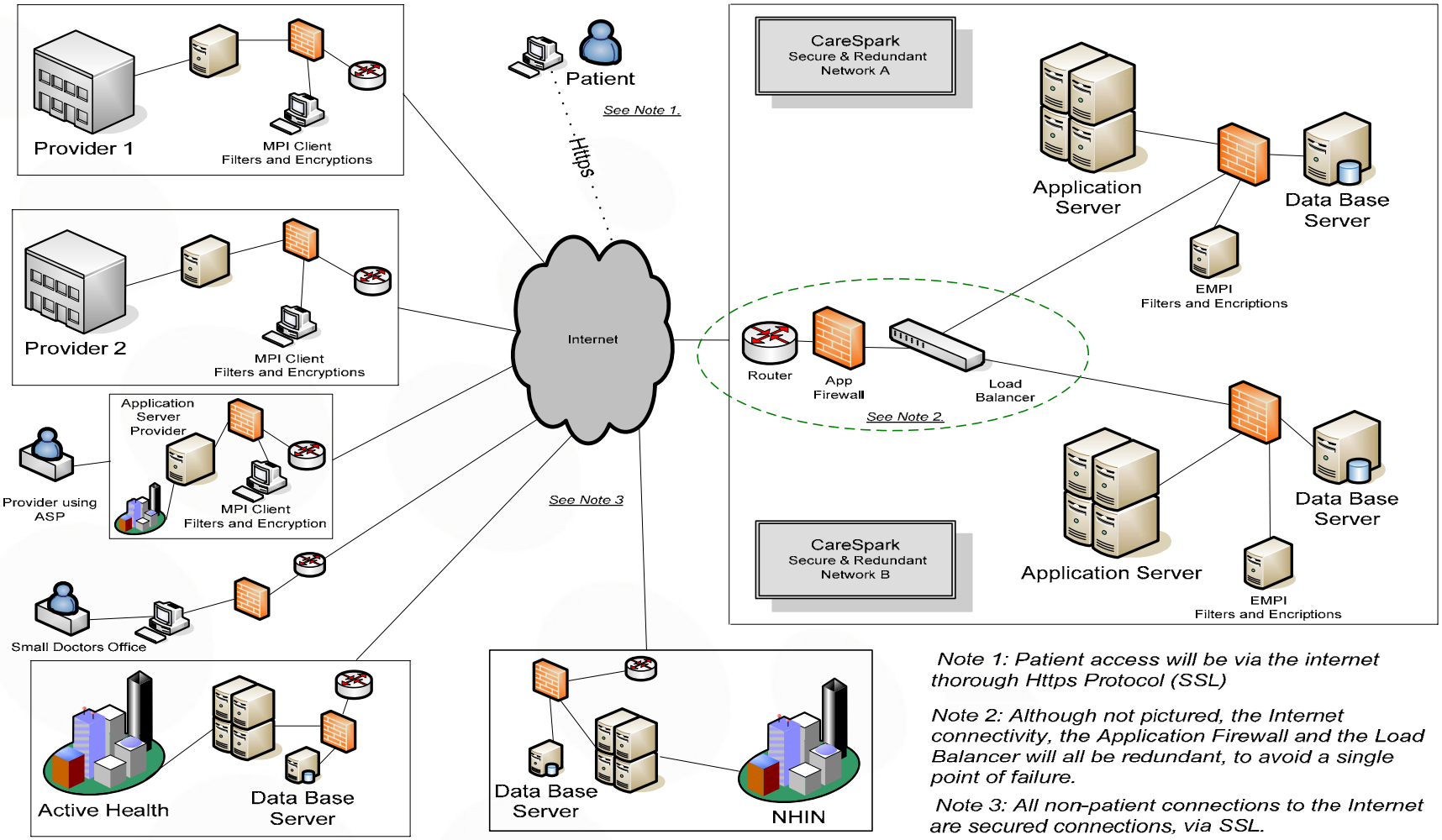
   patient: view content of records, view access log
   provider: payment, treatment, operations
   public health: required reporting and authorized queries
   research: IRB-approved studies
   payers: de-identified aggregate data

5. **Fee-Based Revenue Model**

   contracts with insurers and employers

   transaction fees for data providers (labs, hospitals, large practices)

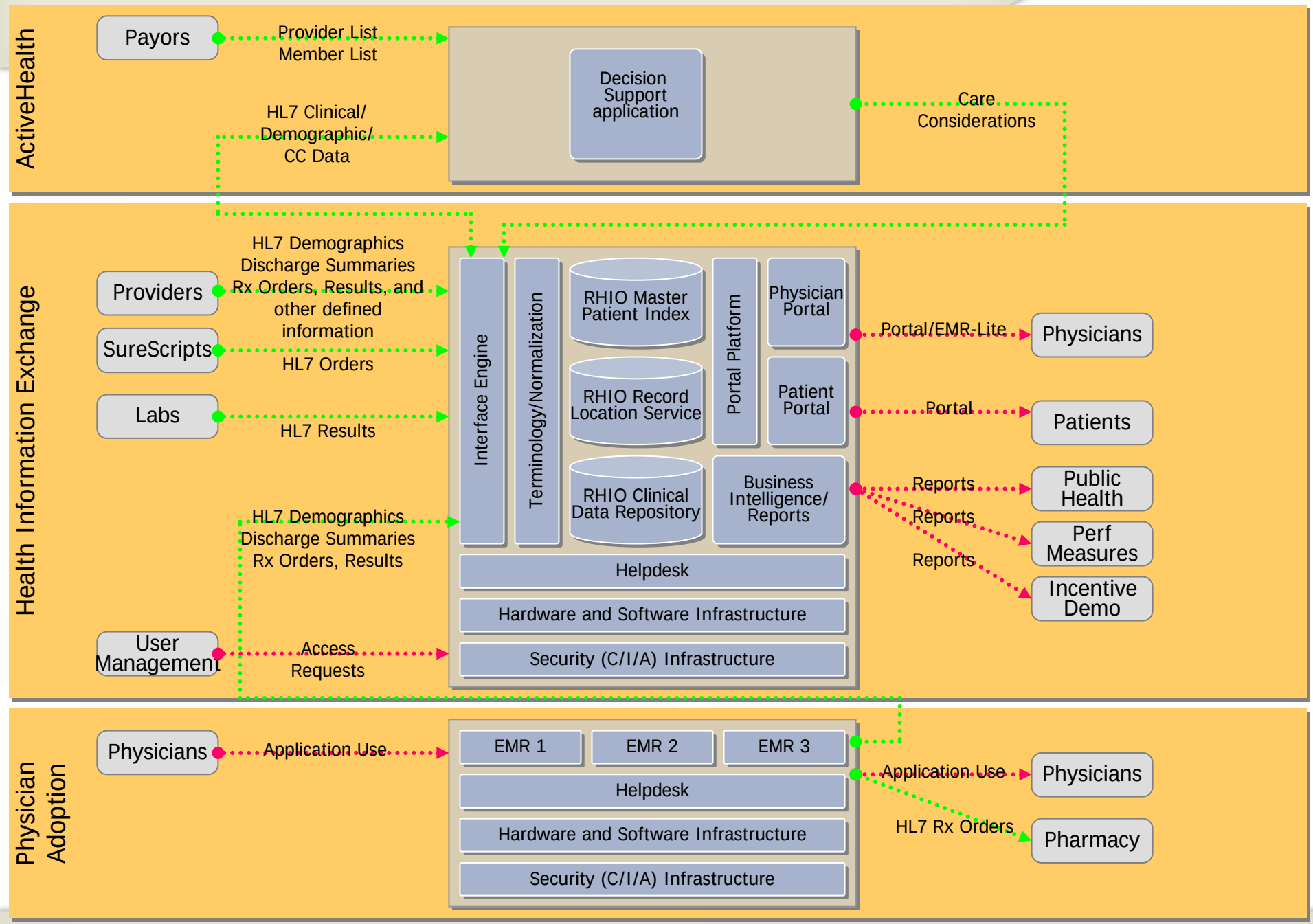
Technical Architecture



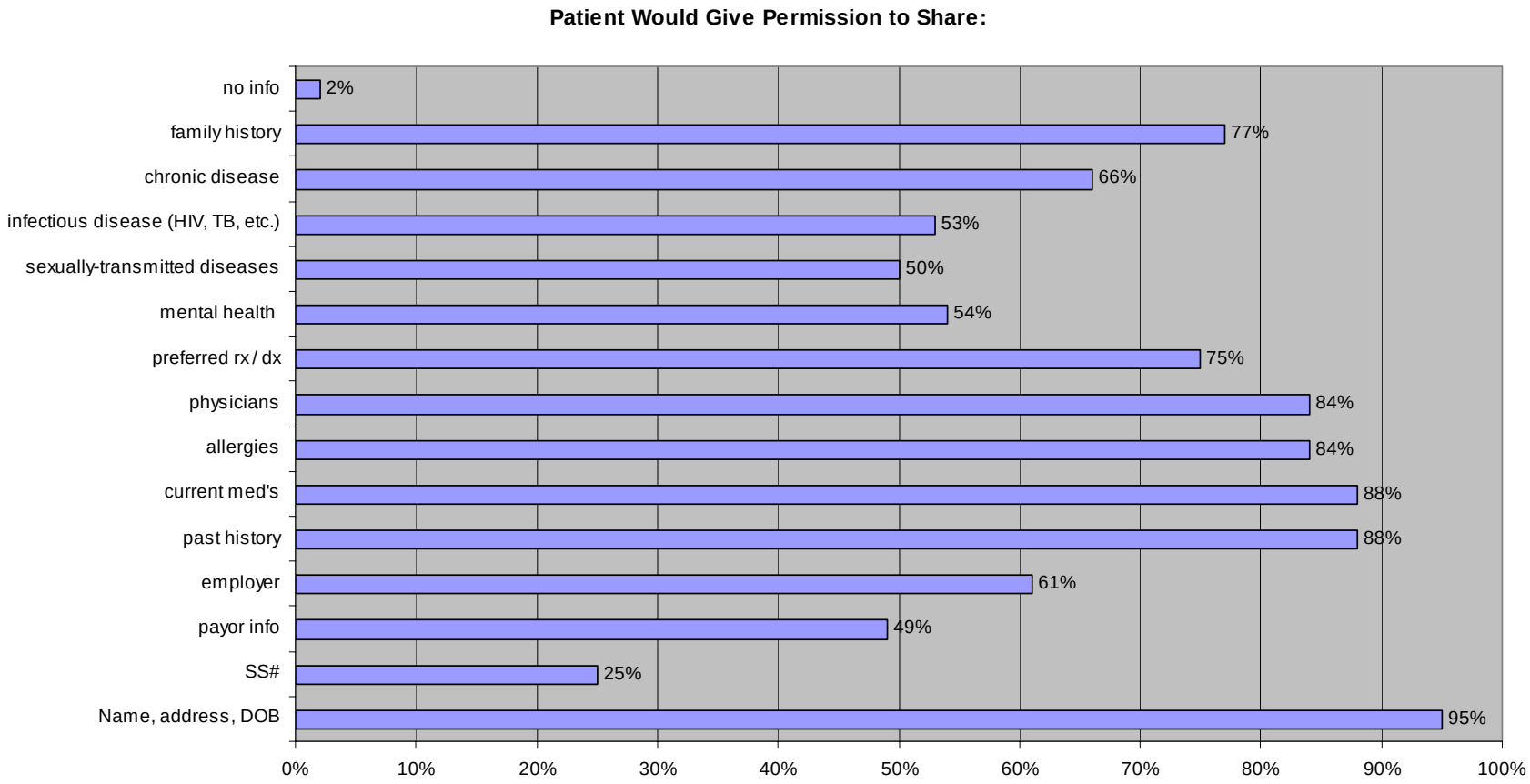
Note 1: Patient access will be via the internet thorough Https Protocol (SSL)

Note 2: Although not pictured, the Internet connectivity, the Application Firewall and the Load Balancer will all be redundant, to avoid a single point of failure.

Note 3: All non-patient connections to the Internet are secured connections, via SSL.

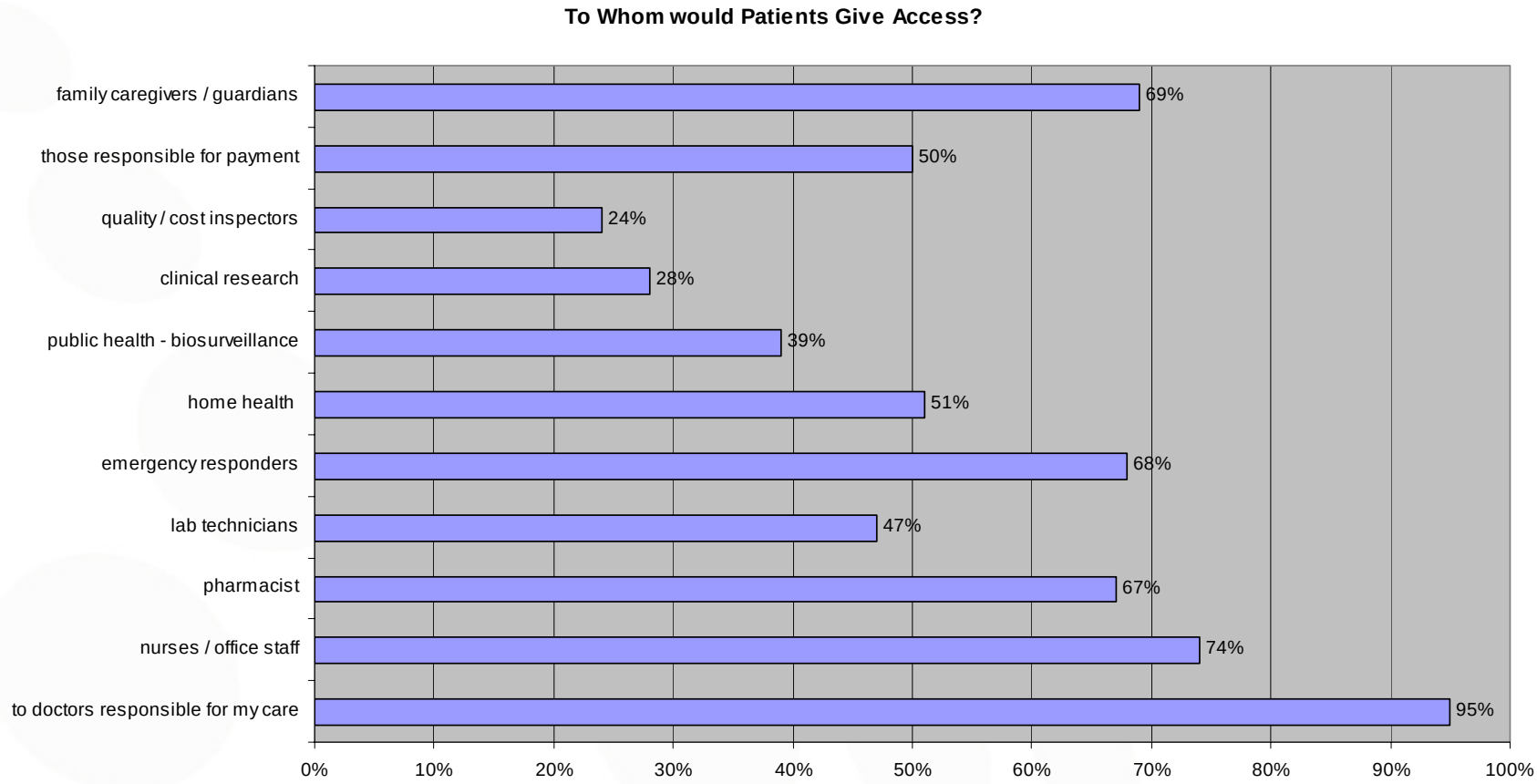

ActiveHealth
Payors
Provider List
Member List
HL7 Clinical/
Demographic/
CC Data
Decision
Support
application
Care
Considerations
Health Information Exchange
Providers
SureScripts
Labs
User
Management
HL7 Demographics
Discharge Summaries
Rx Orders, Results, and
other defined
information
HL7 Orders
HL7 Results
HL7 Demographics
Discharge Summaries
Rx Orders, Results
Access
Requests
Interface Engine
Terminology/Normalization
RHIO Master
Patient Index
RHIO Record
Location Service
RHIO Clinical
Data Repository
Portal Platform
Physician
Portal
Patient
Portal
Business
Intelligence/
Reports
Helpdesk
Hardware and Software Infrastructure
Security (C/I/A) Infrastructure
Portal/EMR-Lite
Physicians
Portal
Patients
Reports
Public
Health
Reports
Perf
Measures
Reports
Incentive
Demo
Physician
Adoption
Physicians
Application Use
EMR 1
EMR 2
EMR 3
Helpdesk
Hardware and Software Infrastructure
Security (C/I/A) Infrastructure
Application Use
Physicians
HL7 Rx Orders
Pharmacy

Community Feedback on Privacy



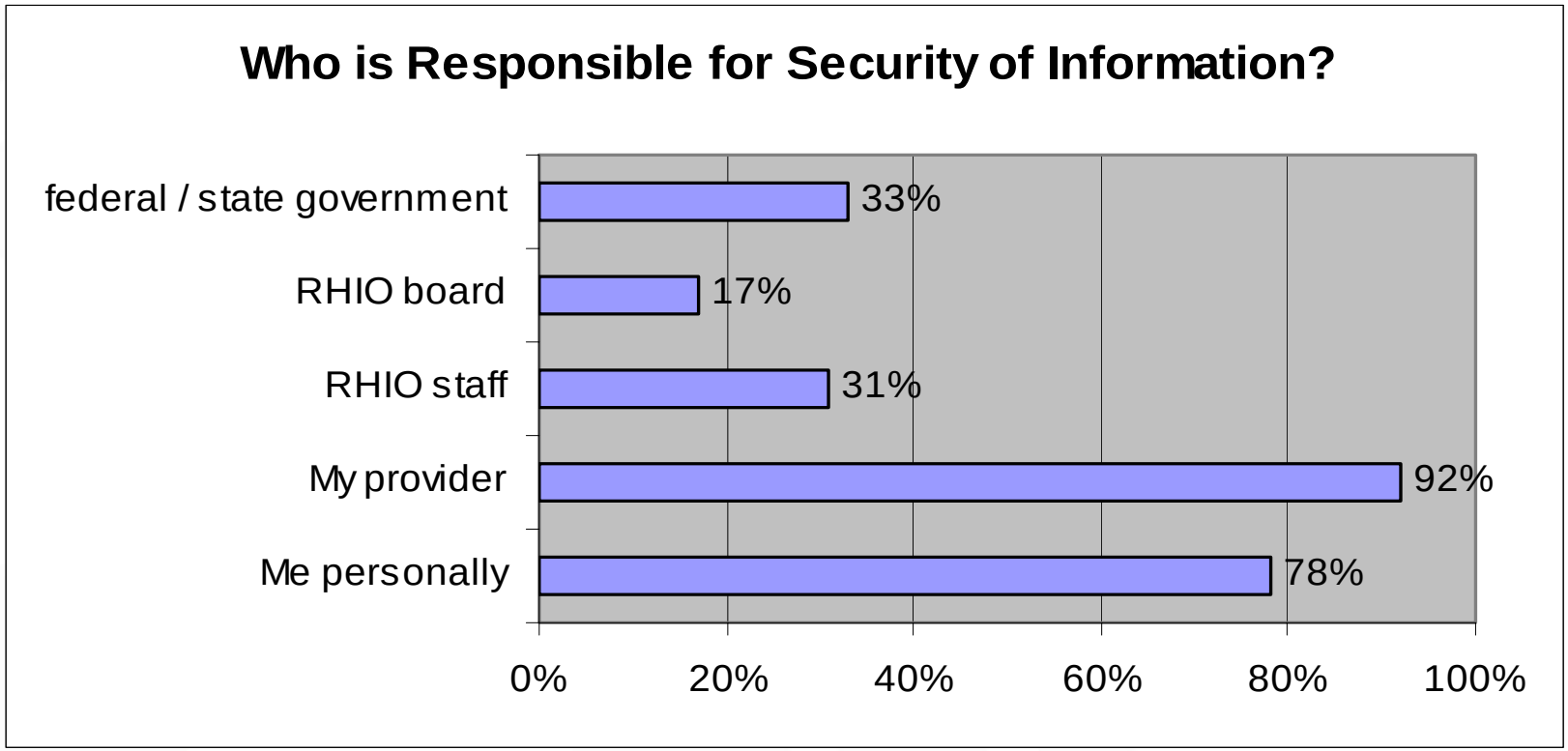
Source: general community survey of 169 people in CareSpark region, March – May 2006

Community Feedback on Privacy



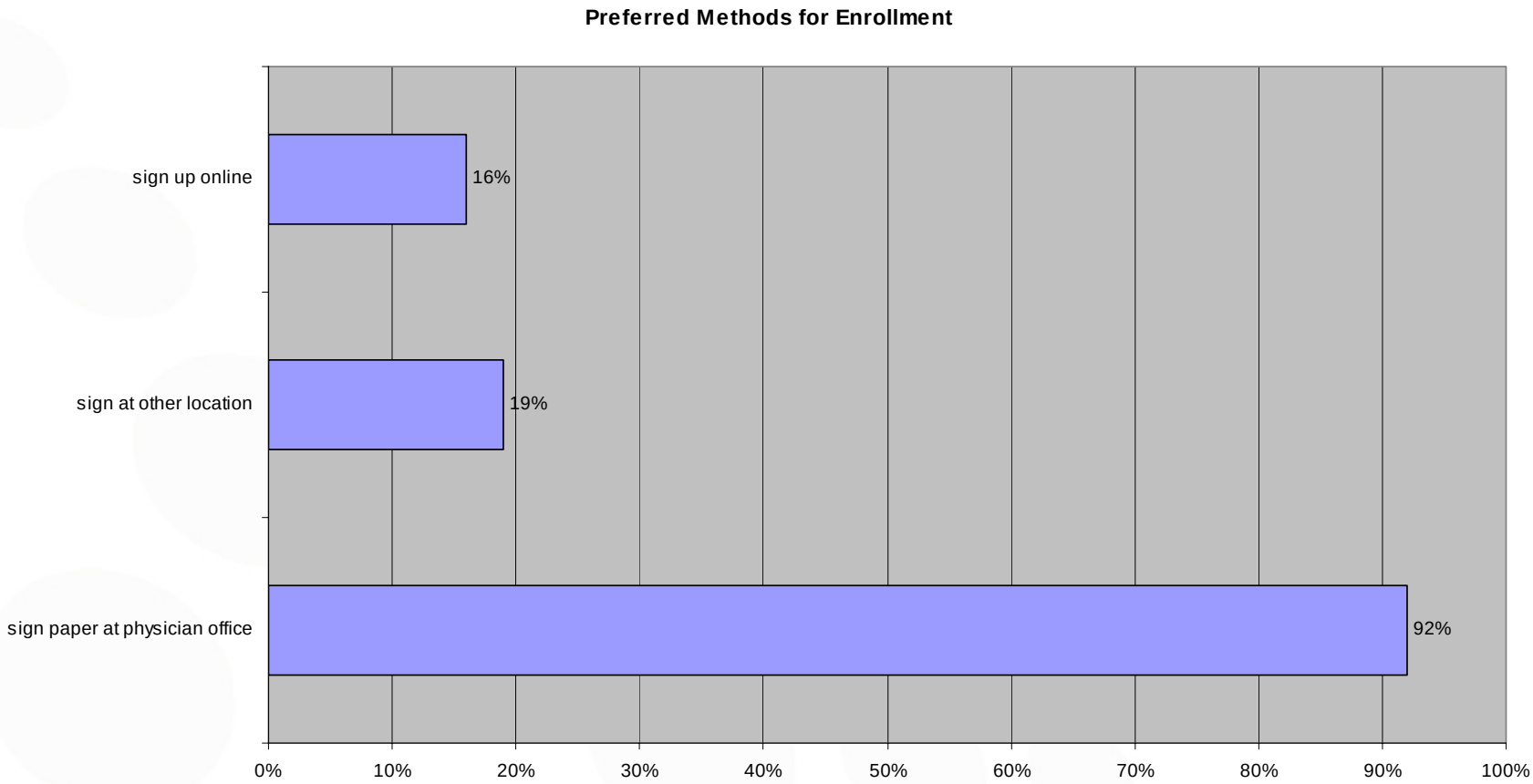
Source: general community survey of 169 people in CareSpark region, March – May 2006

Community Feedback on Security



Source: general community survey of 169 people in CareSpark region, March – May 2006

Community Feedback on Enrollment



Source: general community survey of 169 people in CareSpark region, March – May 2006

Physician Perspective

Concerns:

- Liability for security breach, unauthorized access to patient info
- Resources needed: hardware, software, services, staff training, compliance monitoring
- Functionality: single sign-on, seamless across sites and applications, “hassle factor” of authentication, time required
- Enforcement: who? how?

Provider Preference

Federated Identity Management

- Reduces burden of administration at provider level, allow for remote authentication
- Allow authentication by “trusted entity”
- Third-party authentication – public and private keys divided among multiple entities, no one has enough for unauthorized access
- Single sign-on
- Unique provider identifier or name / facility

Gaps to be addressed

- **Balance of security / functionality in clinical setting**
- **Reasonable burden of liability for physicians**
- **Resources for adequate training, monitoring, enforcement**
- **Phasing to allow for transition**

Summary

- **Don’t worsen the disparities for small, rural providers and patients!**
- **96-98% of patients will agree to share health** information—don’t let the vocal minority inhibit real and necessary outcomes. **If physicians are comfortable using HIE, patients will be more comfortable.**
- **Planning and resources needed at three levels: local provider organization, health information network, national**

Better Health for Central Appalachia

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