Network Integrated Electronic Health Records System

Community Health Access Network

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COMMUNITY HEALTH ACCESS NETWORK

- 5 Health Centers with (8) primary care practice sites
- 2 Affiliate CHC Members
- 45,000 patients
- Payer Source: 36% uninsured; 18% Medicaid
- Represents 80% of Community Health Center Patients Statewide
- Key Partners (MOA)
  - AHEC
  - PCA
  - Minority Health Coalition

NETWORK HISTORY

Established in 1995

Mission:

- Serve vulnerable populations with a focus on uninsured and Medicaid enrolled
- Support a comprehensive range of services
- Expand primary care access
- **Initial Goals:**
- Plan for impending Medicaid Managed Care
- Reduce costs and increase efficiency for members
- Strengthen and expand CHC’s in state

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HOW CHAN WORKS

Collaboration and Integration:

- Board of Directors = Health Center Directors
- Medical and Clinical Directors
- Finance Committee
- Technical Resources Steering Committee
- Program and Operations Committee
- Business Office Managers Group
- Provider EHRS User Group
- Nursing EHRS User Group
- Nutritionists' and Social Workers' Work Groups
- Ad hoc committees as needed (Y2K, HIPPA)

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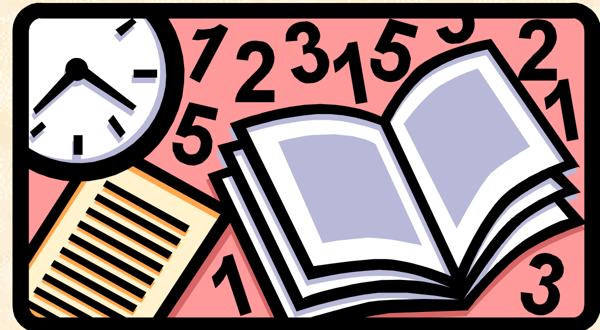
OBJECTIVE:
FUNCTIONAL INTEGRATION

- Information Systems
- Clinical Services
- “Back Office” Operations
- Administrative Efficiencies



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VISION:
INFORMATION RESOURCES

- **Quality care for lowest cost**
  - **Clinical data** to show impact on population
  - **Decrease costs** of providing care

- **Data to negotiate** for additional dollars from funding sources

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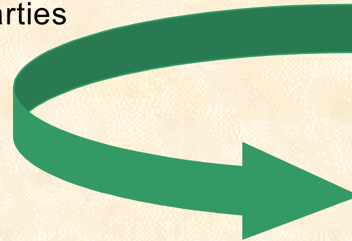
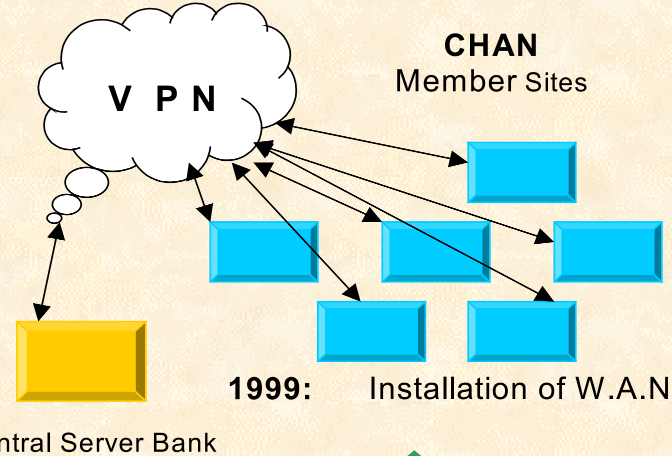
I.T. SET-UP HISTORY

1996
Agreement:
Purchase & installation of software & equipment by all parties

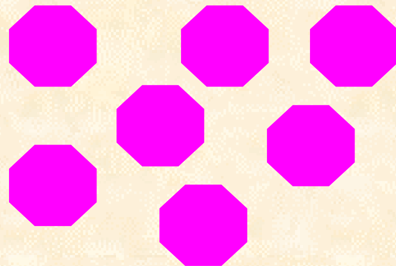




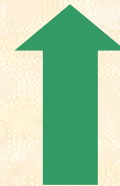
2000: Site Migration to Central Server Support

Central Server Bank

1999: Installation of W.A.N



1997
Independent local set-ups & resources adhering to CHAN standard for the application

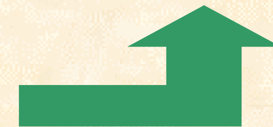


1998
Strategy

Expansion of users
Upgrades
Control of uniformity

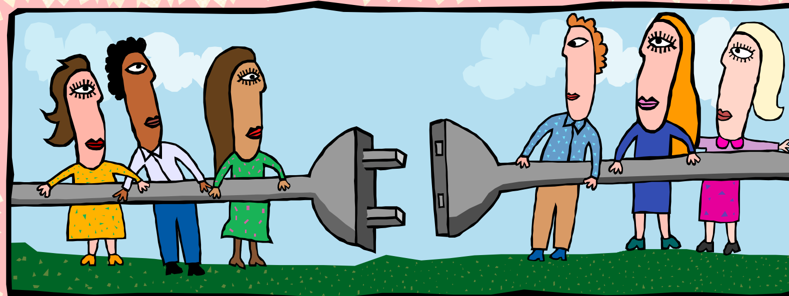
Manual extraction & format & recompilation of data for analysis

Redundant costs incurred for upgrades, training & maintenance



CHAN I.T. SERVICES TODAY

- WAN (Wide Area Network)
- Centralized IT support -- Help Desk
- Standardized O.S. and software
- Shared Electronic Medical Record (EMR)
- Shared Practice Management software
- Centralized Accounting System



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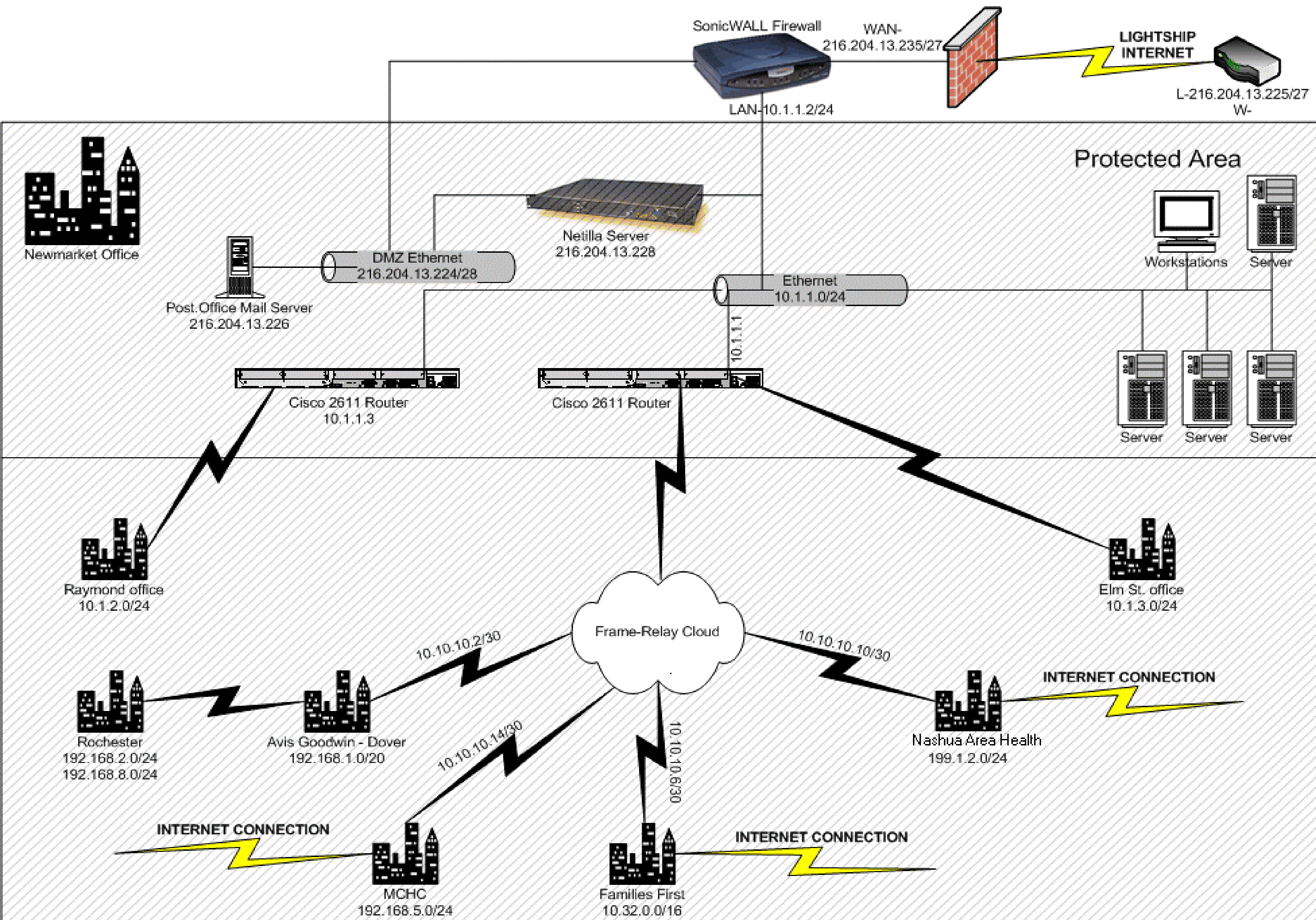
Community Health Access Network WAN Configuration



EMR IMPLEMENTATION GOALS

- Reduce Operating Costs
- Improve Documentation
- Risk Management
- Data Collection and Reporting
- Patient Satisfaction
- Disease Management Support
- Clinical Best Practice Implementation
- Full Integration with Other Center Systems

EMR IMPLEMENTATION HISTORY

Network Goal: Implement All Sites

- 1995- Planning for EMR implementation already underway at one site
- 1997- Health First -- first site to implement on separate server
- 2000-2003 Seven sites on central server -- first site went live in May 2000
- Last site scheduled for Spring 2005

EMR IMPLEMENTATION STEPS

- Encounter Forms
- Workflow Development
- Preload
- Training
- Linkages
- Scanning
- Report Development

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EMR MAINTENANCE

- Training
  - New Forms and Revisions
  - New Workflows
  - New Processes
  - Quality Improvement
- Form Revision and Maintenance
- Upgrades
- Workflow Changes

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EMR SUCCESSES
Improved Quality of Care

- Improved Documentation through Structured Encounter Forms
- Standardized Workflows for Staff
- Improved Support of Provider Decision-making through Protocols, Standardized Forms and Evidence-based Proven Practices Prompts
- Guides Clinical Support Staff to Support Practice Guidelines
- Ready Access to Charts 24/7 Improves Continuity of Care
- Immediate Retrieval of Medical Data from the Chart
- Improved Ability to follow Vital Signs & Lab Values via Flowsheet Views and Graphing
- Supports Case Management for Chronic Disease Conditions

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EMR SUCCESSES

Risk Management

- Ease of Audit (aggregate)
- Improved Feedback for Providers
- Interaction Checking
- Legibility of Prescriptions & Charts
- Coding accuracy

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EMR SUCCESSES

Access to Data

- CLINICAL DATA
- ADMINISTRATIVE
- CLINICAL OPERATIONS
- FINANCIAL
- RISK AND SAFETY MONITORING
- PRODUCTIVITY

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Dashboard Reports

Report	Data from	Source	Frequency
Administrative			
No show rates	CHAN	Logician	Annual/July
Patient Satisfaction	CHAN	Opinionmeter	Annual/May
Consolidated client demographics and Analysis	Site	PMS	Annual/April
Payer Mix			
a) total users per coverage source	Site	PMS	Annual/April
b) Medicaid users trended	Site	PMS	Annual/April
c) uninsured users trended	Site	PMS	Annual/April
Top 20 Diagnoses for Office Visits	CHAN	PMS	Annual/July
Operational Reports			
Orders			
% completed orders for Tests and Procedures			In dev.
Billing			
E&M Coding match rate	Site	PMS	Annual
Risk & Safety monitors			
Allergies recorded/updated (% of visits in 12 mos)	CHAN	Logician	Annual/Oct.
Clinical Reports			
Follow-up			
Tickles for abnormal pap and mammogram follow-up			
Diabetes Measures Trended			
HgbA1c rate (2/year)	CHAN	Logician	Quarterly
Average A1c level	CHAN	Logician	Quarterly
% with self-management goals set	CHAN	Logician	Quarterly
Asthma Measures Trended			
% with recorded classification level	CHAN	Logician	Quarterly
Antiinflammatory meds rate / persistent disease	CHAN	Logician	Quarterly
% with Action Plan	CHAN	Logician	Quarterly
Prenatal			
1st Trimester enrollment			In dev.
Pediatric			
Lead screening rate for 2 yr olds	CHAN	Logician	Annual/Jan.
Adolescent			
% with risk assessment performed / recorded			Annual/Jan.
Geriatrics			
Flu shot rate			Annual/Oct.
Cancer Prevention			
Colo-rectal screening rate >50 yrs			Annual/July
Mental Health			
Prevalence rates of Depression and Anxiety			Annual/July
Family Planning			
Chlamydia screening women ages<25			Annual/Oct.
Cardiovascular			
Cholesterol tested q 5 yrs (adults >19)	CHAN	Logician	Annual/July

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Diabetes Compliance Report

27-Sep-04

Total # of Patients with Diagnosis of DIABETES 1628

	Number	Percent	Goal
Patients with HgA1c tested twice within past 12 months:	1077	66%	**>90%**
Patients with BMI in the past 12 months:	1193	73%	
Patients with BMI <30 within past 12 months:	447	37%	
Patients with Monofilament within past 12 months:	1070	66%	**>90%**
Patients with Flu Vaccine within past 12 months:	785	48%	**>90%**
Patients with Microalbumin urine within past 12 months:	918	56%	**>50%**
Patients with LDL within past 12 months:	1083	67%	**>90%**
Patients with LDL <100 within past 12 months:	605	56%	**>70%**
Patients over 55 prescribed ACE or ARB medications:	466	60%	**>75%**
Patients asked about Smoking Status in the past 12 months who answered "yes":	384	43%	**<12%**
Current smokers recommended for Tobacco Cessation in the past 12 months:	256	67%	

Asthma Case Management Report

Note: The report captures the *last value* entered for Flu Vax, Sx Free Days, Severity Assessment, and Peak Flow assessed within the past 365 days. Visit Hx and medication refills capture data for the past 12 months. Any upcoming appointments will be listed in the appointment section.

PATIENT NAME Age 25 ASTHMA, MILD INTERMITTENT, UNSPECIFIED

Severity Assessment : Mild Intermittent **Flu Vaccination:** 10/23/2003

Symptom Free Days Days (past 2 weeks): 6 **PFM:** 440 08/20/2004

Albuterol Refill History (past year):

ALBUTEROL 90 MCG/ACT AERO	Qty:	1 MDI	Refills:	10/1/2004

Visit History (past year) :

OV reason:	meds	10/01/2004	*Provider Name*
OV reason:	meds	08/20/2004	
OV reason:	Asthma exacerbation/anxiety	04/01/2004	
OV reason:	lesion labia	12/30/2003	

Scheduled Appointments:

12/02/2004	SITE	meds

PATIENT NAME Age 51 ASTHMA, MILD INTERMITTENT, UNSPECIFIED

Severity Assessment : Mild Intermittent **Flu Vaccination:**

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CRYSTAL ENTERPRISE

- Centralized reporting (multiple data sources)
- Schedule routine reports
- Saves previously run reports
- Increased access for non-clinical staff
- Reduced IT time

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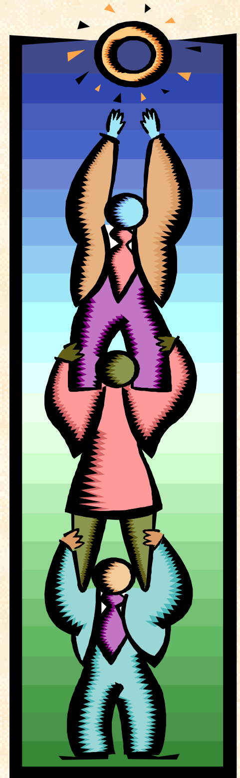
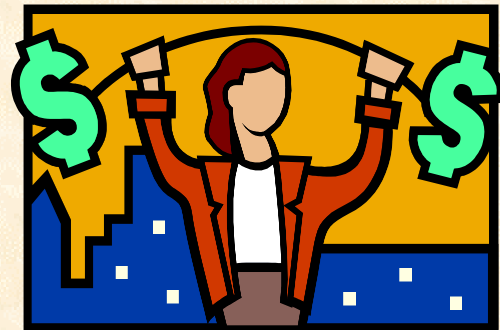
EMR SUCCESSES



- **Savings in systems costs**
  - EHRS (Logician) would have cost 157% more ($696K) if purchased by individual sites
  - PM (Millbrook) would have cost 251% more ($703K)
  - Each site would spend $300K annually for staff to maintain systems
  - Only the first sites to implement each system experienced significant revenue interruption
    - Reduced learning curve for subsequent sites
    - Rotate first site to go live with new systems and module
  - Better pricing negotiated with vendors with larger number of users (software, licenses, support)

EMR SUCCESSES

- **Savings in operating costs**
  - Medical Records staffing costs reduced by $71,546 for one center; by $27,000 at a smaller center
  - Dictation costs virtually eliminated, saving $44,000 at one center; $58,000 at another
  - Centralized training
  - Shared network IT staff reduces staffing needs of individual sites
  - Core hardware and software costs are shared among centers



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WHAT'S NEXT FOR CHAN

- Electronic posting of charges from encounter data
- Patient entry of data for medical history, demographic data
- Secure messaging between consultants' offices and PCP's
- Patient access of chart from home
  - health summary
  - on-line referrals and medication refills
- Reimbursable virtual visits

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CHAN ACCOMPLISHMENTS

- Network-wide implementation of common clinical standards using EMR
- Instituted population-based chronic illness care programs with outcome improvements
- Positioned in marketplace as a vehicle for program delivery to the underserved
- Comprehensive IT infrastructure to support 5 Centers and shared service programs
- Implemented interactive Network Website / intranet
- Established reporting standards and production resources
- Forged working relationship with key community partners

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WHY CHAN MODEL WORKS

- High degree of trust within Board
- Dissemination of Best Practice Models
- Shared Staffing
- Sharing of Tools
- Facilitated Member Buy-in
- Shared IT Infrastructure
- Leveraged Resources
- Centralized Data

CHAN CONTACTS and RESOURCES

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- *Technical Assistance / Consultation*
- *EMR Implementation Guidebook*

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