



# Moving Healthcare into the 21<sup>st</sup> Century

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Calvin Wright

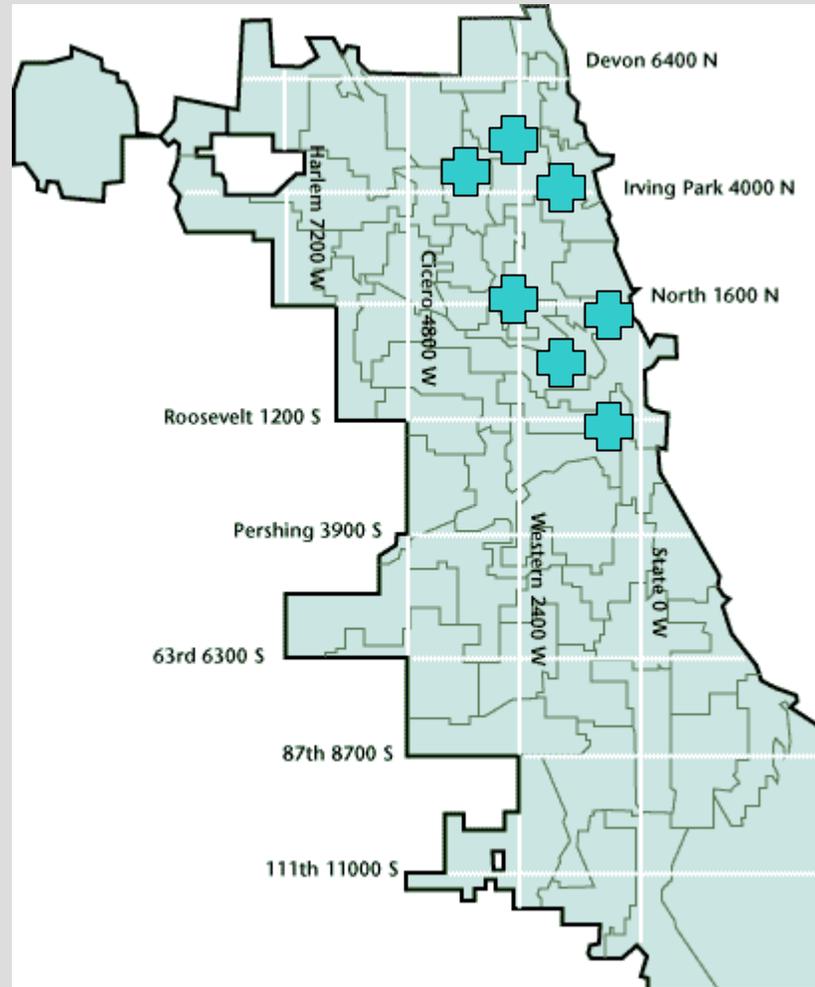
Fred Rachman, MD

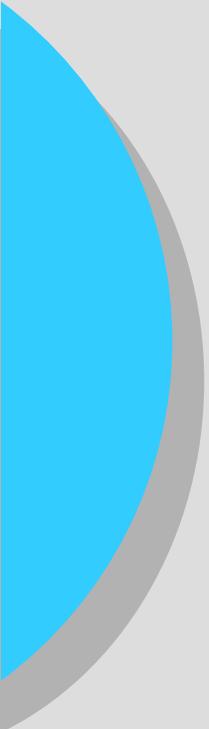


# Alliance Overview

- Network of 4 Health Centers located on the Near North Side of Chicago
- Founded based upon long standing history of collaboration and close relationship among Medical Directors
- Health Centers target Latino, African American, Gay and Lesbian, and Immigrant and Homeless populations
- Services encompass comprehensive Primary Care, Dental, Mental Health and Social Services, Health Education, and Research

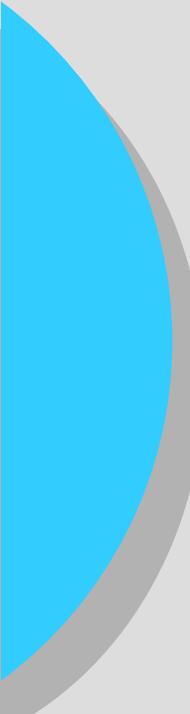
# Map of Sites





## Mission

- The mission of the Alliance of Chicago Community Health Services is to share resources and integrate services in order to more efficiently and effectively deliver accessible quality health care to the communities we serve.



# EQUIP project goals

1. Implement EHRs in a network of Community Health Centers in a manner that ensures consistency and accuracy of health information across all practitioners, sites and populations.
2. Develop a data warehouse that will monitor, aggregate, and provide data to be used for clinical and system quality improvement.
3. Utilize the EHRs/data warehouse to facilitate and encourage the use of evidence-based practice measures at the point of care.



## EQUIP project goals

4. Utilize the EHRS/data warehouse to facilitate continuous improvement of health care quality and safety and develop its function as a patient registry.
5. Promote and support the realization of the full potential of EHRS use in ambulatory care settings, particularly among safety net providers, to improve health care quality and safety.



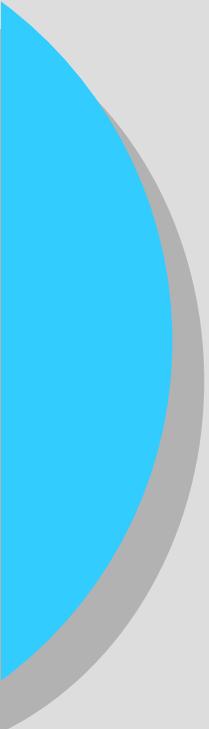
# EQUIP Partnership

- American Medical Association
- Health Information Management Systems Society
- GE Healthcare Clinical Data Services
- First Consulting Group
- Health Research and Education Trust
- Funders:
  - HRSA
  - AHRQ
  - Chicago Community Trust
  - Illinois Department of Public Health
  - Commonwealth Fund
  - Robert Wood Johnson
  - Michael Reese Health Trust
  - Chicago Department of Public Health



# Challenges encountered with IT

- Budget for operations exceeded available resources – majority of functions outsourced
- Inability to meet deadlines on IT related tasks
- Network operations affected by challenges within individual health centers
- Conflicting consultant recommendations
  - Redundancy
  - Security
  - Equipment – network and end user
  - Bandwidth



## Challenges encountered with IT

- No one managing contracted services
- Lack of leadership/direction for IT committee



## The call for help

- IT summit with participation from HIMSS volunteers
- Experts in project management, hosting, communications/security
- Set of recommendations covering people, process and technology

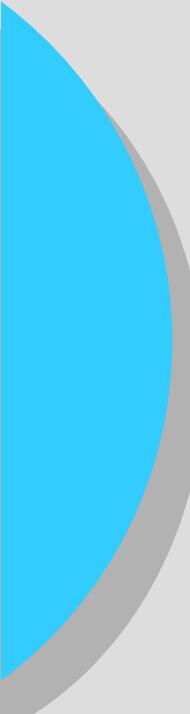


## Staffing before ...

Applications Software Director

Data Specialist

Nurse Informaticist



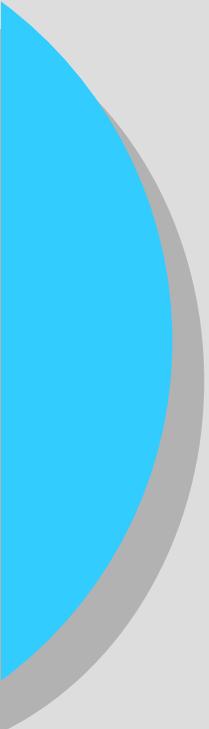
..... and after

Chief Technical Officer

Senior Systems Engineer

Data Specialist

Nurse Informaticist



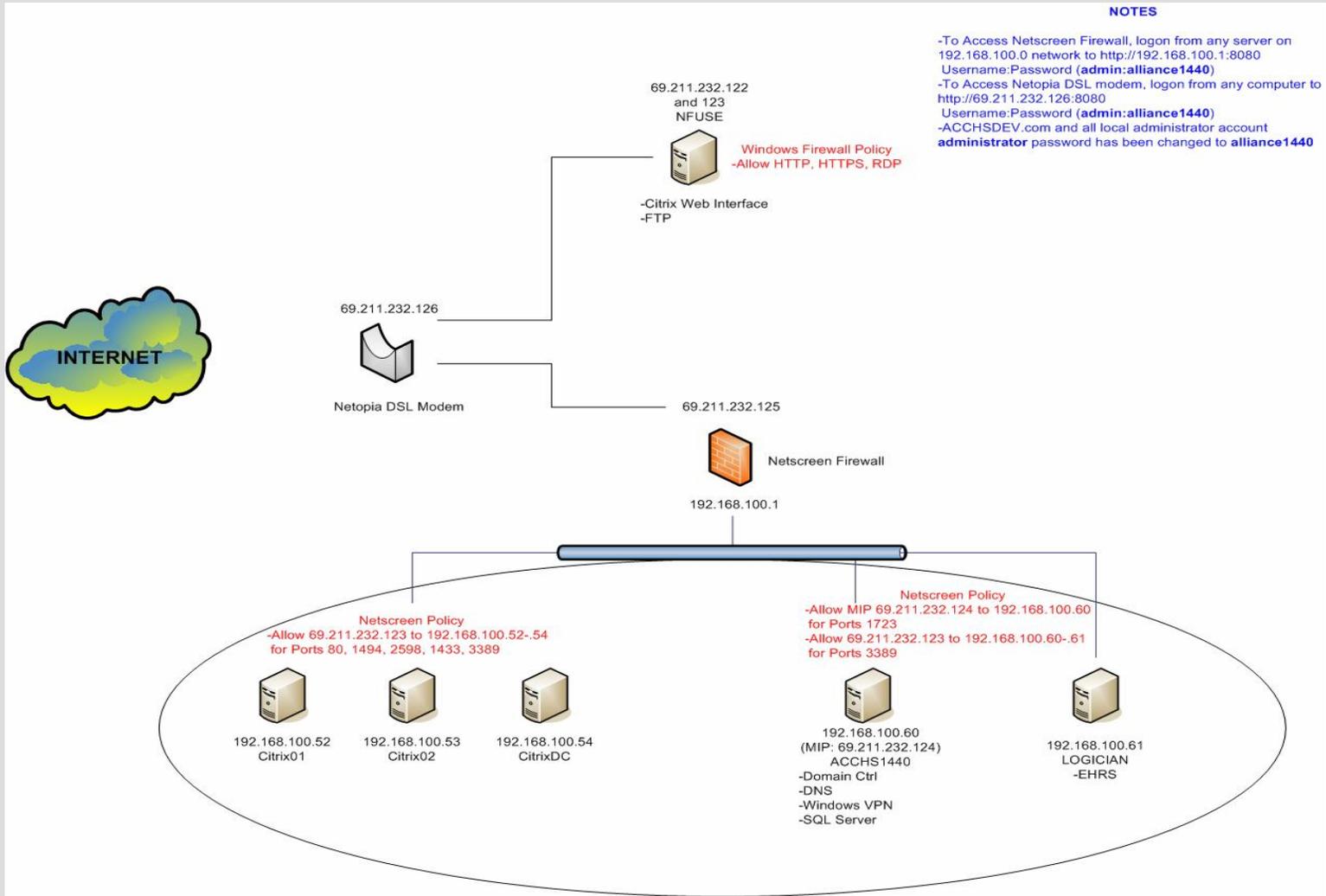
## Process and technology before...

- Single Machine Access
- Not Integrated
- Multiple Databases
- Single Load
- Information was Not Networked/Shared
- Demographics not standardized or centralized



and after...

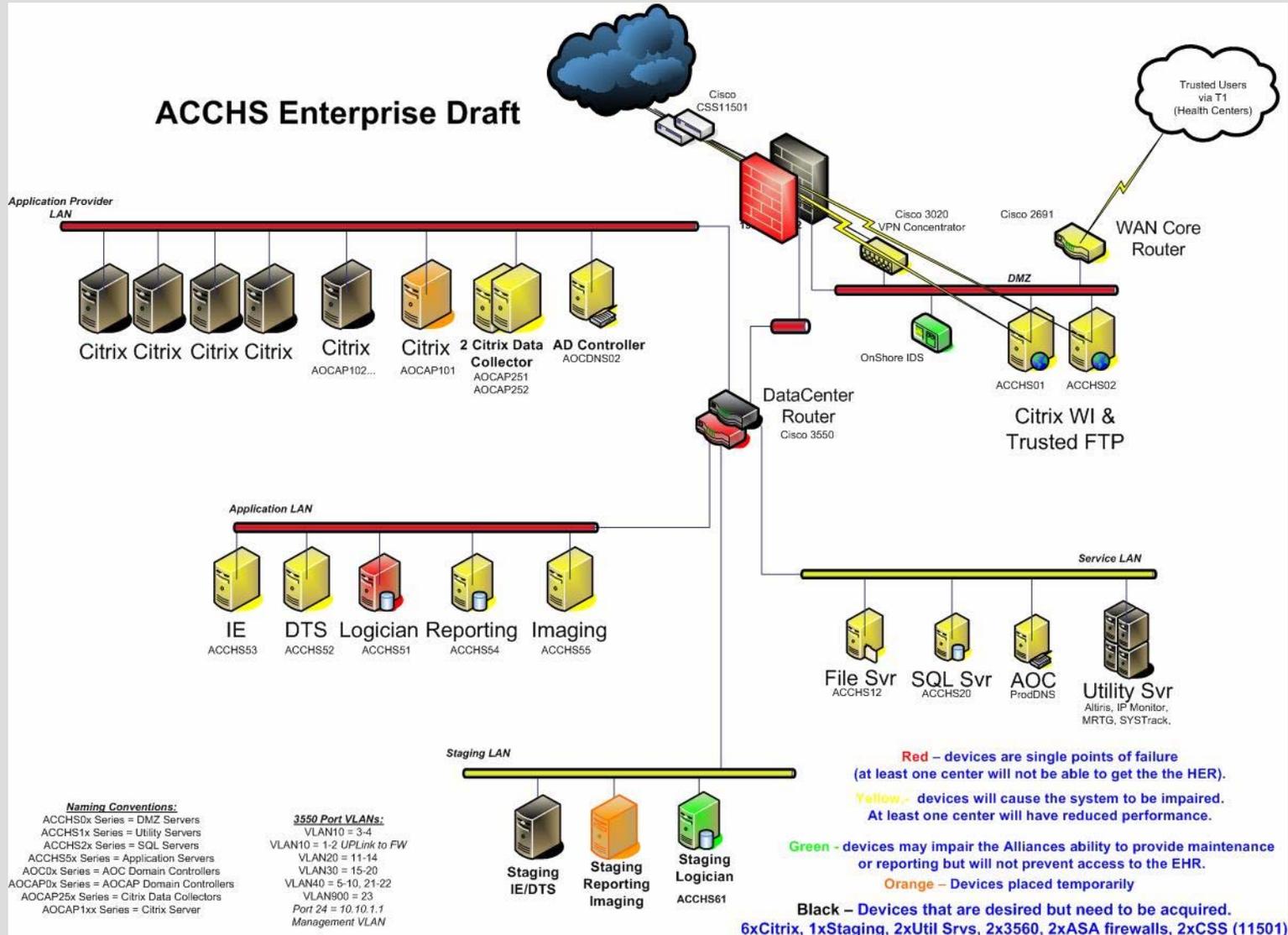
- Centralized Enterprise Database
- Intranet / Internet Accessible
- Full Security Implementation (HIPAA Compliant)
- From Disparate to One Front End from anywhere
- PMS used as the single point of entry for demographics



**NOTES**

- To Access Netscreen Firewall, logon from any server on 192.168.100.0 network to <http://192.168.100.1:8080>  
Username:Password (**admin:alliance1440**)
- To Access Netopia DSL modem, logon from any computer to <http://69.211.232.126:8080>  
Username:Password (**admin:alliance1440**)
- ACCHSDEV.com and all local administrator account **administrator** password has been changed to **alliance1440**

# ACCHS Enterprise Draft

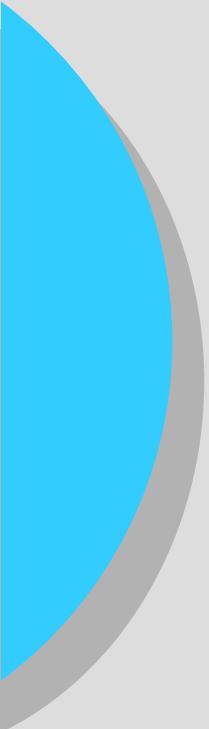


### Naming Conventions:

ACCHS0x Series = DMZ Servers  
 ACCHS1x Series = Utility Servers  
 ACCHS2x Series = SQL Servers  
 ACCHS5x Series = Application Servers  
 AOC0x Series = AOC Domain Controllers  
 AOCAP0x Series = AOCAP Domain Controllers  
 AOCAP25x Series = Citrix Data Collectors  
 AOCAP1xx Series = Citrix Server

### 3550 Port VLANs:

VLAN10 = 3-4  
 VLAN10 = 1-2 UPLink to FW  
 VLAN20 = 11-14  
 VLAN30 = 15-20  
 VLAN40 = 5-10, 21-22  
 VLAN900 = 23  
 Port 24 = 10.10.1.1  
 Management VLAN



## Contracted services brought in house

- IT Project management
- Infrastructure build
- Citrix Implementation
- Capacity Planning / Monitoring
- Backup / Recovery
- Security Management



# Summary

- Securing the right IT expertise is a challenge in EHRS design and implementation particularly in safety net
- IT infrastructure design must balance goals and resources - there is no “one right answer”
- “Disinterested” technical advice is of great value
- Strategies which allow multiple users to share precious resources should be encouraged
- Development of in house expertise decreases dependency on external resources and promotes sustainability
- Networks allow individual entities to access more sophisticated resources and take advantage of economies of scale.