

# Using EMR as a tool for Quality Measurement and Improvement

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Community Care Network of Virginia



# About Community Care Network of Virginia (CCNV)

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- Since 1996, CCNV has provided integrated network-based services and programs including:
  - Centralized practice management system, help desk and support infrastructure - transitioned to EMR
  - Managed Care Contracting/ Group Purchasing for health centers
  - Central Billing Office
  - NCQA-accredited Credentials Verification Organization (CVO)
  - Performance Improvement Program; Center for Data and Informatics
  - E&M Coding, Compliance and Privacy Consulting

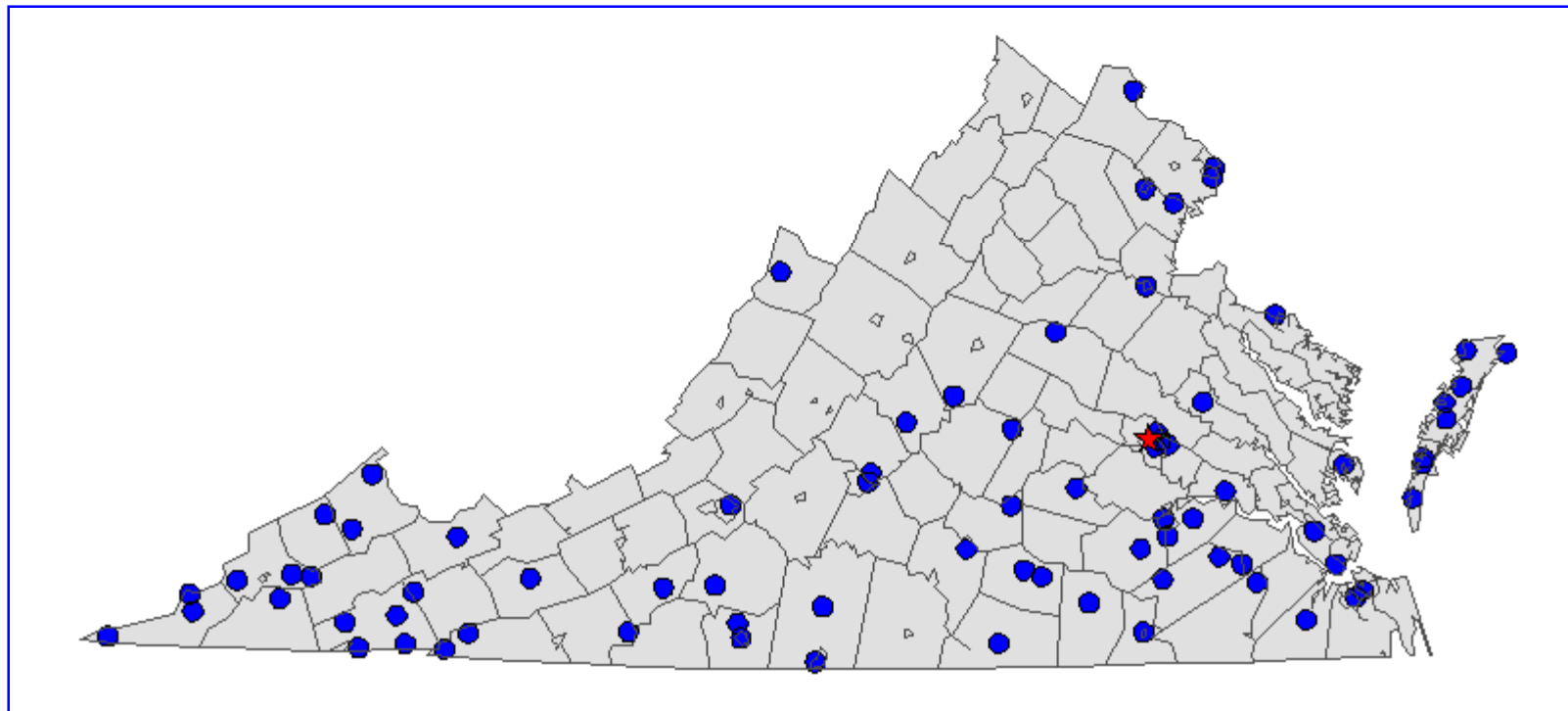


# Network Reach

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- CCNV represents **25** Network health center members, consisting of 100% of the Section 330 grantees in the Commonwealth
- The network consists of **88** access points across the state serving **217,000** patients through **792,234** annual encounters

# CCNV Network Locations





# HRSA Goals:

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- Improve access to Health Care
- Improve Health Outcomes
- Improve the Quality of Health Care
- Eliminate Health Disparities
- Improve the Public Health and Health Care Systems
- Enhance the Ability of the Health Care System to Respond to Public Health Emergencies
- Achieve Excellence in Management Practices



# Mission of the Bureau of Primary Health Care:

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- To increase access to comprehensive primary and preventive healthcare
- *To improve the health status of underserved and vulnerable populations*



# Role of EMR in Quality

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- Plan and deliver evidence-based care to individuals and groups of patients
- Improve timeliness of patient tracking and follow-up
- Identify and track patients with chronic disease
- Compare practice performance with other benchmarks



# Objectives: Network Clinical Performance Improvement Program

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- Establish evidence-based approaches for patient care to improve outcomes by decreasing variation and systemizing “best practices”
  - CCNV Clinical Practice Guidelines
    - Diabetes
    - Pre-Diabetes
    - Hypertension
    - Cholesterol
    - Obesity



# Objectives: Network Clinical Performance Improvement Program

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- Develop core clinical measures of quality based on processes and outcomes of care according to evidence-based guidelines
  - CCNV Core Clinical Measures
    - Blood Pressure
    - BMI
    - HbA1c
    - Lipids
    - Aspirin/Antithrombotic Use
    - Tobacco Use
    - Self-Management Goal Setting



# Objectives: Network Clinical Performance Improvement Program

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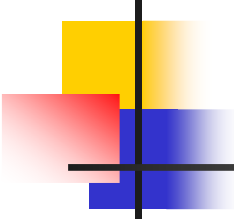
- Set Network treatment goals/targets for clinical performance improvement
  - EMR data reports provide:
    - Network roll-up performance data by measure
    - Site-level performance data by measure
    - Provider-level performance data by measure



# Objectives: Network Clinical Performance Improvement Program

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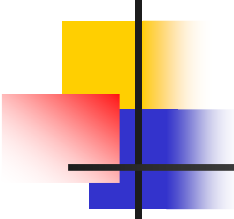
- Establish a performance monitoring system to gather data and measure progress on core measures
  - Health Centers participating in the pilot EMR data group have recently received baseline data for their first 12 months on the EMR system
  - Additional centers are being added based on a prerequisite of 12 months of EMR data



# A Closer Look: Controlled Hypertension

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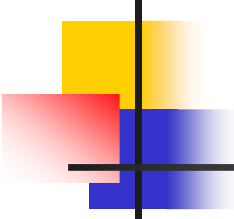
- CCNV Measure: % of CVD and DM/CKD patients with BP in most recent visit in appropriate control
  - CVD patients = less than 140 systolic AND less than 90 diastolic
  - DM/CKD patients = less than 130 systolic AND less than 80 diastolic



# A Closer Look: Controlled Hypertension

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- CCNV Measure Denominator (Encounter) exclusions:
  - Invalid BP readings (systolic <60 or >300; diastolic <35 or >200)
  - ICD-9: 642.0-642.9 (pregnancy-induced HTN, pre-eclampsia)
  - ICD-9: 796.2 (elevated BP reading without diagnosis of HTN)
  - ICD-9: 800-999.9 (injury and poisonings)



# A Closer Look: Controlled Hypertension

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- SVCHS Roll-up = 58% (n=4,678)
  - Site #1 = 52% (n=225)
  - Site #2 = 62% (n=1,861)
  - Site #3 = 48% (n=511)
  - Site #4 = 52% (n=577)
  - Site #5 = 59% (n=1,346)
  - Site #6 = 61% (n=158)
- **CNNV Roll-Up (Benchmark) = 61% (n=7,696)**

# A Closer Look:

## Aspirin/Antithrombotic Use

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- CCNV Measure: % of patients  $\geq 40$  years with CAD or CAD risk factors who have a current prescription for aspirin or other antithrombotic agent
  - Conscious decision to greatly expand measure denominator to include all populations amenable to ASA therapy **EVEN THOUGH** this would negatively impact measure compliance results



# A Closer Look: Aspirin/Antithrombotic Use

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- Health Disparities Collaborative denominator:
  - CAD: 410-414
- CCNV denominator:
  - DM: 250-250.99
  - Heart Failure w/ HTN: 402.0-402.9
  - Heart Failure w/ HTN & CKD: 404.0-404.9
  - CAD: 410-414
  - Stroke: 433-436
  - Atherosclerosis: 440-440.29
  - AAA: 441.02, 441.3, 441.4
  - Other PVD: 443.9
  - Arterial Embolism/Thrombosis: 444.0-444.9



# A Closer Look: Aspirin/Antithrombotic Use

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- SVCHS Roll-up = 57% (n=1,623)
  - Site #1 = 34% (n=53)
  - Site #2 = 64% (n=658)
  - Site #3 = 50% (n=153)
  - Site #4 = 60% (n=228)
  - Site #5 = 50% (n=492)
  - Site #6 = 51% (n=39)
- **CNNV Roll-Up (Benchmark) = 61% (n=2,763)**



# A Closer Look: Aspirin/Antithrombotic Use

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# A Closer Look: Aspirin/Antithrombotic Use

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With HDC Definition:

- SVCHS Roll-Up = 80% (n=338)

- **CCNV Roll-Up (Benchmark) = 83% (n=574)**

With CCNV

Definition:

- SVCHS Roll-Up = 57% (n=1,623)

- **CCNV Roll-Up (Benchmark) = 61% (n=2,763)**



# A Closer Look: Aspirin/Antithrombotic Use

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- Limitations:
  - Simple QI measurement methods using IT are inaccurate because they do not capture
    - Medical reasons (adverse reactions, contraindications), and/or
    - Patient reasons (refusals, inability to afford tests and treatments)
  - ...for not performing a recommended test or prescribing a recommended medication
  - No ability to document adverse reactions, contraindications or patient refusal/non-compliance in current EMR version



# Other Findings:

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## BMI >30

- SVCHS Roll-up = 44% (n=11,299)
  - Site #1 = 38% (n=1,143)
  - Site #2 = 43% (n=1,861)
  - Site #3 = 44% (n=1,250)
  - Site #4 = 42% (n=1,511)
  - Site #5 = 45% (n=3,003)
  - Site #6 = 59% (n=481)
- CNNV Roll-Up (Benchmark) = 44% (n=18,207)

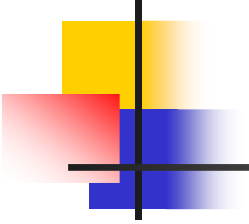


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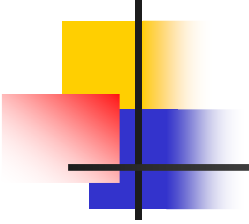
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# Quality Improvement Implications

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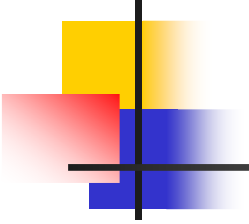
- Provider education on CCNV guidelines and affected health center populations
- Primary care provider validation of blood pressure readings
- Education related to LDL testing in fasting and non-fasting patients
- Education related to BMI assessment and documentation



# Quality Improvement Implications

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- Provider education on ASA/Antithrombotic use in expanded CCNV population
- Identification of patients non-compliant with LDL and HbA1c testing in need of testing and outreach
- Identification of patients followed by endocrinologists where PCP does not have lab and associated treatment data



# Quality Improvement Implications

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...and this is just with our **baseline**  
data...

The best is yet to  
come!



# Questions?

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