Enabling Healthcare in Out-Patient Settings and The Patient Centered Medical Home of the Future

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Objectives

• List the importance of **primary care** to overall health goals and objectives
• Describe the **Patient-Centered Medical Home** model focusing on unique data needs
• Discuss the use cases of **Ambulatory HIT** including **Performance Dashboard, Disease Registry, patient portal, Secure messaging, e-visits**
• Describe **SEHA’s journey toward improved Population Health**
Start with the “Why?”
SEHA Vision

To provide our customers and communities with world-class healthcare.
SEHA

• 12 hospitals
• 62 ambulatory and primary healthcare centers
• 2 blood banks
• More than 17,000 professional staff
• SEHA’s operations expand across the entire Emirate of Abu Dhabi, from the Western Region to the Eastern Region through the Middle and Island Regions
• Largest healthcare network providing a continuum of care to Abu Dhabi’s residents and utilizing leading-edge medical technologies
• SEHA’s facilities accommodate 100,000 inpatients annually
• 41,000 surgeries
• Five million outpatients
Geographical Distribution of Facilities

- **Island region:**
  - 2 hospitals
  - 14 centers & clinics

- **Middle region:**
  - 2 hospitals
  - 13 centers & clinics

- **Eastern region:**
  - 3 hospitals
  - 24 centers & clinics

- **Western region:**
  - 5 hospitals
  - 6 centers & clinics

**Total:**
- 12 hospitals
- 62 centers & clinics
IT Environment

• Live at most sites on Cerner Millenium 2010
• A few remaining rollouts roadmapped
• HIMSS ME level 5-6
• CPOE, Physician Documentation
It’s A Journey...
Not A Destination....

One-stop patient information hub
Goals of Health Systems worldwide

- High quality
- Lower cost
- Institute of Medicine
  - Safe
  - Effective
  - Patient-Centered
  - Timely
  - Efficient
  - Equitable
Goals

• Triple AIM
  – Better Care
  – Better Population Health
  – Lower cost
Primary Care

• Primary care leads to important improvements in quality, cost, and patient satisfaction

• Ambulatory Health Information systems must address the needs of robust primary care as well as ambulatory specialty care
The Evidence: Primary Care Improves Population Health Outcomes

✓ Primary care improves quality and effectiveness.
✓ Primary care decreases costs.
✓ Primary care improves equity.
✓ Multiple outcomes are better in systems with stronger primary care.

No study shows otherwise.
Patient-Centered Medical Home

• Advanced Primary Care
• Brief overview of the model
  – Comprehensive
  – Patient-Centered
  – Coordinated Care
  – Accessible Services
  – Quality and Safety
The patient-centered medical home—one of modern health care’s most important innovations—is a model of care that emphasizes care coordination and communication to transform primary care into “what patients want it to be.”
Primary Care to PCMH

- Improved **Access**: Extended Hours, *Secure messaging*, *on-line access to information (Personal Health Record, Patient Education, Med list, Lab Results)*
- Focus on ongoing continuous healing relationships—not just episodic care
- Team approach—everyone working to the top of their license. *Good communication* with all members of the care team
  - New members of care team—case managers, educators
- Robust use of **Information systems** to *benchmark, identify care gaps, outreach, improve care processes, and improve individual and population health*
- Identifying high risk patients and providing proactive care in less expensive settings
Advanced Primary Care for the Information Age
The Patient-Centered Medical Home: Show Me the Evidence!
Benefits of Implementing the Primary Care Patient-Centered Medical Home:

A REVIEW OF COST & QUALITY RESULTS, 2012

Prepared by:
Marci Nielsen, PhD, MPH
Barbara Langner, PhD
Carla Zema, PhD
Tara Hacker, MPH
Paul Grundy, MD, MPH
Summary of Results

• 55 articles evaluated PCMH models from 2007-2010. Results showed:
  – Strong associations between implementation of the PCMH and improved health care quality
  – Decreased use of high-cost services, such as the ED
Summary

• The PCMH model of health care delivery has been well studied over the past decade.

• Consistent results indicate an increase in the quality of patient care and a decrease in overall health care costs; and an increase in patient satisfaction with care.

• In order to maximize the benefits of the PCMH, implementation needs to include several key components, including care management, population management, coordination of care across the health care system, and reporting on quality measures.
Supporting the PCMH
Patient-Centered Medical Home Checklist

Build your medical home with a strong foundation in family medicine. Apply this checklist to your practice.

QUALITY CARE
Do you and your staff foster a culture of improvement?

- Establish core performance measures
- Collect and analyze data for better clinical management and efficiencies
- Discuss best practices and ways to improve
- Conduct regular clinical team meetings

Do your care plans include these components?

- Regularly updated problem list
- Patient involvement to address risks, circumstances, goals, expectations, and values
- Updated health risk assessment

Do you utilize risk-stratified care management principles to manage your patient population?

- Methodology to identify each patient’s risk status
- Planned care for chronic conditions and preventive services
- Intensive care management for high-risk patients
- Tools to track patient populations by risk category

Do you incorporate patient safety into your clinic practice?

- Assess patient safety in your office
- Reconcile patient medications at each visit and post-hospitalization
- Have processes in place to report and address errors

Do you coordinate care across the medical neighborhood?

- Manage care transitions and build linkages to community-based resources
- Coordinate and monitor exchanges of information with specialists and other facilities
- Evaluate a care transition process

PATIENT-CENTERED CARE
Do you have processes to ensure patients’ access to care?

- Same-day appointments and extended hours
- Physician access to medical charts 24/7 to inform care decisions
- Ability for patients to select their own physician
- Utilization of secure email for communication with patients
- Web portal for patients to request Rx refills, schedule appointments, etc.
- Procedures to accommodate barriers to patient care (transportation, physical, and cognitive barriers)
- Linguistically and culturally appropriate services

Do you engage patients in shared decision-making?

- Discuss treatment options in an unbiased way
- Consider the patient’s health goals and priorities
- Understand the patient’s psychosocial barriers to accessing and receiving care
- Create care plans in collaboration with the patient/caregiver
- Contact patients between visits to monitor progress toward treatment goals

Does your practice support patient self-management?

- Assess patient and caregiver self-management abilities
- Utilize motivational interviewing to coach patients
- Consider home monitoring for chronic conditions
- Engage family and caregivers in care plan
- Offer health coach support

Do you assess and improve experience of care for your patients?

- Conduct patient satisfaction surveys on a regular basis
- Establish a patient advisory panel to guide practice and quality improvement activities
- Conduct patient focus groups periodically

Practice Organization
Quality Care
Health Information Technology
Patient-Centered Care
Family Medicine
HEALTH INFORMATION TECHNOLOGY

Do you have a sound technology infrastructure in place?
- Secure user access, patient consent, and data breach protocols
- Compatibility with multiple device types (desktop, laptop, tablet, smartphone, etc.)
- Proven processes for system updates and full data recovery

Is your practice digitally connected to the medical neighborhood?
- Health information exchanges
- Secure messaging with patients and health professionals
- Electronic medication and diagnostic ordering/management
- Consult/referral management and follow-up communications

Have you considered these attributes in your EHR system?
- Population health management through patient registries
- Proactive health management of each patient
- Pre-built and customized reports for quality measures

Do you utilize evidence-based clinical decision support tools?
- Point-of-care answers to clinical questions
- Evidence-based data collection, documentation, and order sets
- Clinical terminology and coding tools (ICD, CPT, SNOMED)
- Pre-built and customized point-of-care alerts and reminders

FAMILY MEDICINE FOUNDATION
- Continuous healing relationships
- Whole person orientation
- Family and community context
- Comprehensive and coordinated care

PRACTICE ORGANIZATION

Do you have a disciplined financial management approach?
- Budget and forecast for the future, utilizing cost-benefit analysis
- Manage cash flow and seek revenue enhancing opportunities for your practice
- Optimize coding and billing procedures
- Contract and negotiate with payers from an informed position

Do you embrace a culture of change in your medical practice?
- Establish a PCMH leadership team to plan the transformation process
- Develop a timeline for PCMH implementation and monitor progress
- Engage all team members in a shared vision
- Value each team member by involving them in the change management process
- Provide staff education and training opportunities to support patient-centered care

Do you have a staffing model and practice environment that supports a PCMH?
- Personal physician that leads the team to coordinate efficient patient care
- Utilize team-based care to meet your patients’ overall health care needs
- Defined roles for team members that encourage staff to perform at the highest level
- Flexible staffing schedules and cross-trained staff members to improve access
- Health coach and care coordination functions
- Patient-friendly environment that accommodates special needs
Ambulatory EHR Functionality

Critical for success:

• Problem list, Med list, Histories
• Health Maintenance, Disease Management expectations
  – Actively managed
• Nurse and physician both contributing
• Communication:
  – Doctor «—> Consultant
    • Closed loop referrals
  – Primary Care Physician (PCP) notifications (Admit, ED Visits)
  – Physician «—> Patient
    • Visit summary
    • Secure messaging (with portal)
### Health Maint and Disease Mgt Reminders

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Ambulatory Summary

**ZZTEST, MED**  
**Female** 38 years  
**DOB:** 01/01/1975  
**MRN:** AA10-078-289  
**FIN:** 001-877-643  
**Isolation:**  
**Visit Reason:**

### Patient Information
- **Chief Complaint:** No results found
- **Advance Directive:** No results found
- **Last Visit:** 05/06/13 (Inpatient)
- **Emergency Contact:** (1)
- **TEST, TEST:** 056-456-6464

### Visits (23)

### Diagnoses (4)
- **Foot pain** (725.5)
- **Headache** (794.0)
- **Localized osteoarthritis** (715.20)
- **Type 2 diabetes** (253.60)

### Problems (18)

### Health Maintenance (3 Overdue | 23 Due)

#### Expectation  
#### Next Due
- **Coronary Artery Disease Management Beta Blocker Prescribed**  
  06/12/11
- **Coronary Artery Disease Management-ACE Inhibitor/ARB Prescribed**  
  20/12/11
- **Healthy Adult - Weight Management/BMI>30**  
  20/06/12
- **Coronary Artery Disease Management-Glucose Fasting**  
  09/11/13
- **Coronary Artery Disease Management-LFT**  
  09/11/13
- **Coronary Artery Disease Management-Lipid Lowering Therapy**  
  09/11/13

### Vital Signs

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Ambulatory EHR—Interfaced

• Interfacing required if not integrated
• Occurs with “best in breed” approach, with Healthcare organization mergers, or when hospital and ambulatory started with siloed strategy in the past
• Difficult in identifying single med list, single problem list for patient
• Interfacing is not easy
• Data from Enterprise Data Warehouse
Ambulatory EHR—Integrated

• Preferable
• Single medical record
• Decision support and rules across the healthcare organization
• May need to compromise if vendor product not as strong in ambulatory space
• Sharing record with in/outpatient providers—etiquette and rules needed
• Changes to one system effect many others—not as agile
Supports Communication

• Clinician to Clinician
• Patient ↔ Clinician
• Constant attention to accuracy of record

• With eHealth, including patient portal:
• Patient Self-service (Appt Scheduling, Record request, Education materials)
Physician Performance Dashboard

- Comparative
- Key Performance Indicators
- Promotes thinking outside the box (clinic)
- Transparency
- Eyes on the data → improved accuracy
- Access and design important
The PCMH Dashboard is meant to provide meaningful analysis or information on doctors' performance driven by Patient Results.
Registry functionality

- Drilling down to the provider/patient level
- Creates panel view of data
## Detailed CDC Analysis Report

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The important step: How to respond to the data

• Find areas of weakness
• Investigate reasons and options
• Trial new process
• Review data again
• PDSA cycle

• First thing to improve is data quality
PDSA (PDCA) cycle

Plan → Do → Study/Check → Act → Plan
Possible Strategies

• Outreach:
  – Case manager or nurse calls patients with care gaps
  – Secure message through portal
  – Automation—invitations functionality

• Standard protocols to review care gaps and take action on all diabetics at each visit
  – Health maintenance/Disease mgt function of EHR

• Use Point of care testing to fill gaps at each visit: funduscopic photo, HbA1c, LDL...
These involve the team!
Design guide for high impact Dashboard and Registry

- Visual data (graphs) easier to interpret
- Transparency
- Targets
- Meta data (date report run)
- Use landing page to link to:
  - Details on measures
  - Clinical documentation instructions (“grades are teachable moment)
  - Feedback email on report errors
  - Requesting view access
Design guide for high impact Dashboard and Registry

- Allow export to spreadsheet
- Sort comparison data
- Show by individual and practice to enhance competition
- Summary columns helpful (meaningful user, patient with all measures acceptable)
- Labels, colors, consistency
Chronic Kidney Disease (CKD) Program

• Example of Population Health
Early Detection of CKD
Dr Nick Richards
Problem

• Cr level insensitive to kidney function
  - not abnormal until 50% of kidney function is lost
  - eGFR much more sensitive

• Patients identified late in kidney disease losing opportunity to intervene earlier
  - 95% of patients present to dialysis as an emergency
  - Higher cost, mortality, poor rehab, no chance for prevention/intervention

• Simple interventions (avoid NSAIDS, start ACE Inhibitor) can prolong kidney function

• A year of postponing dialysis saves patients and AED 234,000

• Of 1000 patients with Stage 5 CKD, 600 are unknown to dialysis services
The Early Detection Programme

- Automated eGFR reporting for all OPD serum creatinine results
- Automated flagging of CKD ICD 9 code in Malaffi
- 4 Nurse educators
  - Patients
  - Doctors
  - Ensure follow up and address disease denial
- Pre ESRD clinics
Chronic Kidney Disease Flowchart

References:
Early Detection of CKD

- Automated eGFR reporting of all OPD creatinine levels
- Majority of patients will remain with AHS
- 4 SDS Renal Nurse educators within AHS
  - Patient education
  - Medical education
- Automatic flagging of CKD with ICD 9 code
- Algorithm for referral and monitoring
- How do we know if it is working?
  - You will tell us
  - Patients will be followed up
  - Timely referral for CKD 4 – 5 – emergency presentation rate will fall
  - Delay in need for dialysis
HIT Support for this Clinical Initiative

• Initial data came from EHR extracts
• Report eGFR when reporting ambulatory Cr. Level
• Automate adding to problem list based on sustained lab abnormalities
• Disease Registry for physicians and nurse case managers
• Clinical Alerts for Ambulatory physicians
• Links to algorithm
• Order sets for CKD
Patient Portal

• Enables communication education

• Functions
  – Secure messaging patients $\leftrightarrow$ physician
    • Notifications per patient preference: email, SMS, etc.
  – Access to electronic Patient Health Record
  – Educational materials available or pushed
  – Outreach for patients with care gaps
  – On-line scheduling, reminders
  – Can support E-visits, telehealth opportunities

• Subject of another HIMSS ME session
Focus on Doctor-Patient Relationship
Additional Resources

- Patient Centered Medical Home (PCMH) also known as advanced primary care
  - Videos can be viewed here:
  - Standards can be found here
    - [http://www.ncqa.org/Programs/Recognition/PatientCenteredMedicalHomePCMH.aspx](http://www.ncqa.org/Programs/Recognition/PatientCenteredMedicalHomePCMH.aspx)
    - [http://pcmh.ahrq.gov/](http://pcmh.ahrq.gov/)
  - Evidence can be found here:
  - Triple AIM, Institute for Healthcare Improvement
    - [http://www.ihi.org/offerings/Initiatives/TripleAIM/Pages/default.aspx](http://www.ihi.org/offerings/Initiatives/TripleAIM/Pages/default.aspx)
  - Disease Registry
    - Video for Disease registry and their application available at AAFP PCMH site above
  - Integrating Mental Health into Primary Care: