Disease Management –
The Role of HIEs and Patient Portals

Dial-in information:
1.800.908.8370

November 22, 2011

About eHealth Initiative (eHI)

- Since 2001, only national, non-partisan group that represents all the stakeholders in health care.
- Mission to promote use of information and technology in healthcare to improve quality, safety and efficiency.
- Focused on education and advocacy.
- Coalition of over 200 organizations is one of most influential groups in data issues, HIT and HIE.
- eHI is the only group tracking the progress of over 260 regional, state and local initiatives working on health information exchange for 8 years.

What Does eHI Do?

- Work with our members to influence policy

- Convene multi-stakeholders to build consensus

- Members contribute through virtual forums:

  - Meaningful Use and Health Reform Policy

  - Connecting Communities through Health Information Exchange

  - HIT Infrastructure for Accountable Care

  - Using Health IT to Coordinate Care

  - Data Analytics and Research

- Inform and mobilize reports, weekly newsletters, educational events and policy alerts.

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Housekeeping Issues

- All lines are muted
  - To ask a question or make a comment, please submit via the chat feature and we will address them in the order received at the appropriate time
- The webinar is being recorded.
  - Members can access slides and replays of any webinar for free from eHI's store
  - Non-members can purchase access to any webinar replay for $25.00
  - eHI Store
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Thank You to Our Sponsor

Overview of Our Agenda

- **Introduction and Welcome (3:00 – 3:10 PM)**
  - Jennifer Covich Bordenick, Chief Executive Officer, eHealth Initiative
- **Self-management Education (3:10 – 3:25 PM)**
  - Dr. Kate Lorig, Director, Stanford Patient Education Research Center
- **Disease Management – The Role of HIEs and Patient Portals (3:25 – 3:55 PM)**
  - Peggy Denness, MSW, Client Manager, Orion Health
  - Dr. Chris Hobson, Chief Medical Officer, Orion Health
- **Questions and Final Thoughts (3:55 – 4:25 PM)**
- **Closing (4:25 – 4:30 PM)**
  - Jennifer Covich Bordenick, Chief Executive Officer, eHealth Initiative

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Dr. Kate Lorig

Professor Emeriti, Stanford University School of Medicine, Director, Stanford Patient Education Research Center

Self-Management Education: More than a nice extra

Kate Lorig, DrPH

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http:// patienteducation.stanford.edu

STANFORD UNIVERSITY

So Why Should We Care?

- **Self-management programs focus on preparing people with arthritis for the 99% of the time they live outside of the health care system.**

- **These programs give individuals the skill to improve physical and mental health, health behaviors and quality of life as well as the confidence to use these skills.   Such improvements can lead to improved quality of life and reduced need for health care.**

Foundation of Better Choices, Better Health - Diabetes

As with all of Stanford's Programs:

- Built on structured patient and professional needs assessments

- Systematically use strategies to enhance self-efficacy:
  - ✓ *Goal Setting*
  - ✓ *Modeling*
  - ✓ *Reinterpretation of Symptoms*
  - ✓ *Peer support*
  - ✓ *Social Networking*

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Characteristics of Better Choices, Better Health - Diabetes

- **Six-week workshop (entirely on-line anywhere there is Internet access – even dial up)**

- **Online curriculum same content as small group community workshops**

- **20-25 participants**

- **New workshop session starts each week**

- **No "real-time" commitment – any time/any day**

- **Peer-led by two trained facilitators– supervised by online CDE mentor/safety monitor (most of whom are CDEs)**

- **Highly interactive (discussion boards)**

- **Participants asked to log on 2-3 times a week for a total of 1-2 hours**

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Diabetes Self-Management
What is Taught?

6 weeks	**Sharing/Problem Solving**		1 week	**Preventing Complications**
6 weeks	**Action Planning**		1 week	**Foot care**
6 weeks	**Healthy Eating**		2 weeks	**Communication Skills**
3 weeks	**Monitoring Glucose**		1 week	**Sick Days**
1 week	**Weight Management**		1 week	**Sleep**
2 weeks	**Exercise**		1 week	**Working with Providers**
1 week	**Preventing Hypoglycemia**		2 weeks	**Understanding Test Results**
3 weeks	**Stress/Depression**		1 week	**Cholesterol**
1 week	**Medications**		1 week	**High Blood Pressure**

What makes BCBH-Diabetes Safe

- **All Facilitators have six weeks of training and work from detailed manuals**

- **All Facilitators have rapid access to a mentor who is a CDE who has also been trained in the program**

- **Posts with erroneous information and disrespectful posts can be removed**

- **Participants are never given individual clinical advice**

The Evidence

Randomized six months N=395 (w/100 Native Americans)*

- ✓Reduced A1c - For those with a baseline of 7 or above there was a -.6 difference at six months between treatment and control groups
- ✓Improved self-efficacy to manage conditions
- ✓Improved patient activation
- ✓Telephone reinforcement at 18 months did not improve outcomes

*Lorig K, Ritter PL, Laurent DD, Plant K, Green M, Jernigan VBB, Case S. Online Diabetes Self-Management Program: A randomized study. *Diabetes Care,* 33(6):1275-1281, 2010.

The Evidence

Albert Longitudinal study

277 people for all over Canada (mostly Alberta)

Took part in one of 12 on-line workshops

Male   24%

Mean Age   47.7 years

Significant 6 month improvements

- **Depression**
- **Fatigue**
- **Role Function**
- **Medication Adherence**
- **Self-Efficacy**

- **MD visits in past six months -14% (.89 visits)**

Conclusions

- **Self-Management Programs that include social networking can improve medical, role and emotional management**

- **May be cost effective and at best cost neutral**

- **Differs from case management in that it allows people to self-manage rather than being managed.**

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Agenda

I. DM Overview

II. DM Trends

III. Transforming DM via HIE Integration

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DM OVERVIEW

Why is DM Needed?

Cardiovascular (CVD) Disease Statistics

★49.7% of U.S. adults (an estimated 107.3 million persons) have at least one of the three risk factors, 21.3% had two of the three risk factors, and 2.4% had all three

★CVD is the leading cause of death in the United States and is responsible for 17% of national health expenditures

★Annual direct and overall costs resulting from CVD are estimated at $273 billion and $444 billion

★By 2030, 40.5% of the US population will have some form of CVD, costing the healthcare system an estimated $1 trillion every year

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Disease Management Overview

- ★ DM evolved to:
    - ★ Enhance quality of care for chronic disease
    - ★ Improve outcomes for patients with chronic disease
    - ★ Establish protocols and best practice guidelines to manage chronic disease
    - ★ Manage costs associated with chronic disease, specifically:
        - ★ Inpatient admissions
        - ★ Re-admission
        - ★ Emergency Department utilization
        - ★ Specialty service utilization
    - ★ Drive prevention programs to reduce chronic disease population

DM TRENDS

Current DM Stakeholder Models
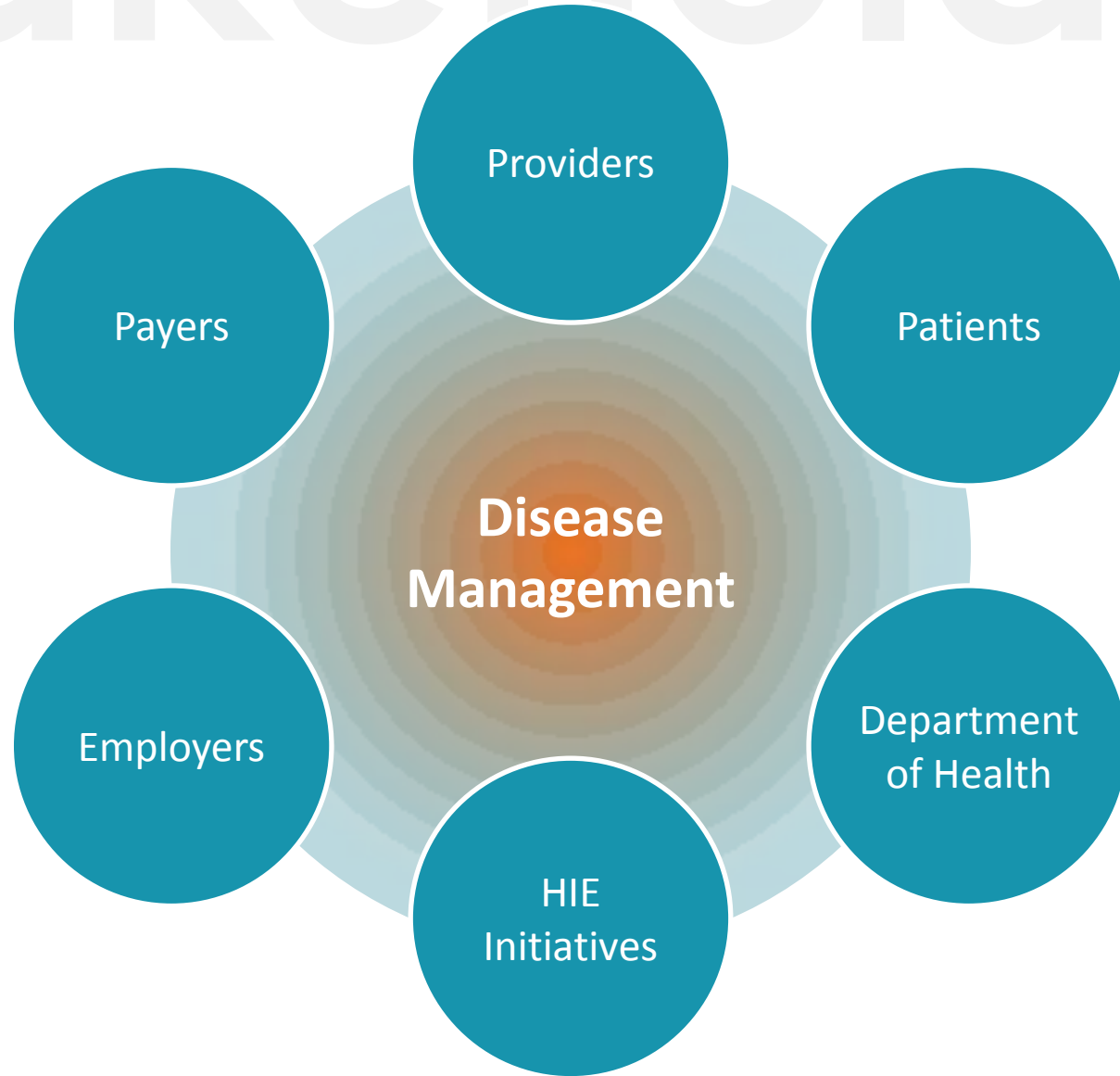
Provider Models

- Motivation
  - Improve quality of care
  - Comply with payer standards
  - Protect against liability
- Implementation Methods
  - Implement professional organization standards for care
  - Implement payer care protocols and standards
- Technical Approach
  - Practice-centric EMR with DM modules
  - Participate with HIE
  - Utilize EMR based patient portals
- Limitations
  - Reliance on practice-centric EMR
  - Complying with multiple payer centered DM protocols

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Patient Models

* Motivation
  * Experience a better, healthier lifestyle
  * Maintain employment and productivity
  * Financial benefits via reduced medical costs
* Implementation Methods
  * Participate in community–based programs
  * Engage with plan centered DM programs
* Technical Approach
  * Use of patient portals – payer-based and provider-based
  * Use of tools like Health Vault and other consumer driven solutions
  * Medical device based solutions
* Limitations
  * Connecting the patient-based solutions to providers and treatment teams
  * Access to technology to engage in programs
  * TIME – So many solutions, so little time

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Department of Health (DOH) Models

* Motivation
    * Improving health within the community
    * Prevent the spread of disease
    * Address the growth of non-communicable disease
* Implementation Methods
    * Implement reporting programs with Providers
    * Via community-based programs (Immunizations, etc.)
    * Drive legislation for healthier citizens
* Technical Approach
    * DOH portals
    * Reporting mechanisms
    * Use of social media and other forms of media
* Limitations
    * Inability to connect with the systems providers use most often to document care
    * Unable to link directly to patients
    * Moving beyond communicable illness to chronic non-communicable disease

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HIE Models

- ★ Motivation
  - ★ Improve community health via centralized method to track and manage care
  - ★ Engage with government support of HIEs and technology to improve health and outcomes
  - ★ Create value via an HIE to ensure sustainability
- ★ Implementation Methods
  - ★ Connect providers regionally
  - ★ Ensure access to patient information across providers
- ★ Technical Approach
  - ★ Through web–based HIE capabilities
  - ★ Integrate additional services such as DM protocols and patient portals
- ★ Limitations
  - ★ Achieving acceptance of HIE by providers and patients
  - ★ Liability and privacy concerns regarding data sourced from the exchange
  - ★ Redundancy with other tools – payer portals, member portals, EMR capabilities, etc.

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Employer Models

★ Motivation

  ★ Engage employees in healthier choices
  ★ Control escalating benefit costs
  ★ Increase productivity among employees

★ Implementation Methods

  ★ Work with Payers to create DM focused programs
  ★ Offer employee-focused programs (EAP, industrial medicine, health club membership incentive)

★ Technical Approach

  ★ Use of employer tools to track employee utilization tools
  ★ Use of other patient focused solutions and tools

★ Limitations

  ★ Cost of running employer-centered programs
  ★ Employee engagement and privacy concerns
  ★ Demonstrating results to organization and employees

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Payer Models

- ★ Motivation
  - ★ Improve health of members
  - ★ Offer programs that differentiate via engagement and outcomes
  - ★ Manage cost containment
- ★ Implementation Methods
  - ★ Create and implement care protocols and standards
  - ★ Target specific chronic conditions
  - ★ Monitor adherence to protocols
  - ★ Offer member focused case management services and member based incentives
  - ★ Develop programs targeted to employers, members and providers
- ★ Technical Approach
  - ★ Utilize plan-sponsored portals targeted to members, providers and employers
  - ★ Introduce data analytic tools to assess outcomes and manage reporting
- ★ Limitations
  - ★ Payer marketshare
  - ★ Timeframes and relevance of information delivered
  - ★ Time!

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CURRENT DM TRENDS

New Models for Care Delivery

- ★ New Trends in DM
  - ★ Patient Centered Medical Home (PCMH)
  - ★ Accountable Care Organizations (ACO)
  - ★ Bundled Payments
- ★ Each of these models drive to:
  - ★ Improve management of chronic disease
  - ★ Increase compliance with best-practices
  - ★ Enhance methods of engaging patients in their care
  - ★ Improve outcomes
  - ★ Cost management associated with treating patients with chronic disease
- ★ Data management – capture, share, analyze and report is key
- ★ Technology is essential to the success of the new DM Models

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How Will These Models Work Together?

PCMH
- Care coordination focused on outpatient population-PCP mode

ACOs
- Care coordination focused on care continuum model
- Shared risk taken by extended care organization

Common Characteristics
- Driven by payers and providers
- Emphasis on DM via case management and prevention
- Communication among care team essential
- Reporting is essential to track utilization, adherence to protocols, outcomes, and financial data

Bundled Payments
- Care coordination similar to ACO
- Episode of care reimbursement model
- Incentive-based provider and patient

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Guideline Measures Are Only Partially Followed

Evidence-based guideline adherence, by chronic conditions

Quality Indicators	# of eligible patients	% of patients receiving recommended care		
		All	Commercially Insured	Medicare
Coronary artery disease (CAD) patients with ACE inhibitor	26,220	35%	36%	29%
Hyperlipidemia patients with statin or acceptable alternative	622,110	36%	38%	27%
Congestive heart failure (CHF) patients with beta blocker	5,883	50%	53%	39%
Congestive heart failure (CHF) patients with ACE inhibitor	5,883	55%	58%	44%
Depression patients with SSRIs or SNRIs	26,068	56%	56%	45%
Depression patients with any antidepressants	26,068	85%	85%	72%
Migraine patients with narcotics	33,984	57%	57%	66%
Adult persistent asthma patients with ICS	53,470	78%	79%	58%
Diabetes patients with oral diabetes therapy	162,394	80%	81%	74%
Pediatric persistent asthma patients with ICS	8,378	97%	97%	96%*

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* Medicaid Pediatric Population Data

Source: Thier, Sara MPH1 et al, In Chronic Disease, Nationwide Data Show Poor Adherence by Patients to Medication And by Physicians to Guidelines, *Managed Care*, Feb 2008

Focus on the Integration of Care

As healthcare systems face rising costs from the aging population and burden of chronic illnesses, all stakeholders will be called upon to:

* Engage and empower patients

* Streamline care and eliminate duplication of healthcare services

* Control costs

* Collaborate together and focus on a shared care plan

* Maximize the use of technology for information sharing, especially HIEs

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How Can this be Done?

★ Technical mechanisms to support comprehensive DM:

   ★ Provision of single best patient record

   ★ Technology is vendor agnostic

   ★ Every member of the care team including patients has appropriate access to patient record

   ★ Shared care plan

   ★ Reporting based on comprehensive data

Disease Management — surrounded by: Providers, Patients, Department of Health, HIE Initiatives, Employers, Payers

Building Blocks for Integrated DM

Integration Level ↑

Patient-centric BI

Patients	Technology	Professionals
Active Patient Involvement	**Patient & Caregiver Integration**	Shared Responsibility for Healthcare
Coordinated Cost-effective Quality Care	Patient Portal Integrated with Disease Mgt **Workflow Integration** Disease & Case Management	MDT Workflow & Decision Support
Improved Quality of Care	**Process Integration** Administrative/Billing/OE / Med. Rec. / Prescribing	Process Automation and Standardization
Shared Information	**Information Integration** Clinical and Patient Portal – EPR / EHR / HIE	Shared Single View of Best Patient Record
Quality Data	**Application Integration** Integration Engine & Standards	Resource Optimization

← **Cross Boundary Integration** →

Building Blocks for Integrated DM

Payers

Technology

Professionals

Integration Level

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
Cross Boundary Integration

Single Best Patient Record

Clinical Process

Workflow Integration

- ★ Can now address the big issues of chronic disease management, by coordinating care across the patient journey

- ★ Application that supports the complete continuum of care

  - ★ Patient centric

  - ★ Multi-disciplinary care teams

  - ★ Implements use of evidence based guidelines across the continuum of care

  - ★ Integrated clinical decision support

- ★ Better outcomes on a population basis

Patients	Technology	Professionals
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Integration Level — Patient-centric BI

Cross Boundary Integration

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Workflow Integration

Care Management Tools

- Care coordination and involvement of multi-disciplinary care teams
- Clinical pathways that extend across silos of care
- Shared care plans
- Meaningful patient involvement including patient education and patient self management
- Real-time clinical data accessed and captured at the point of care
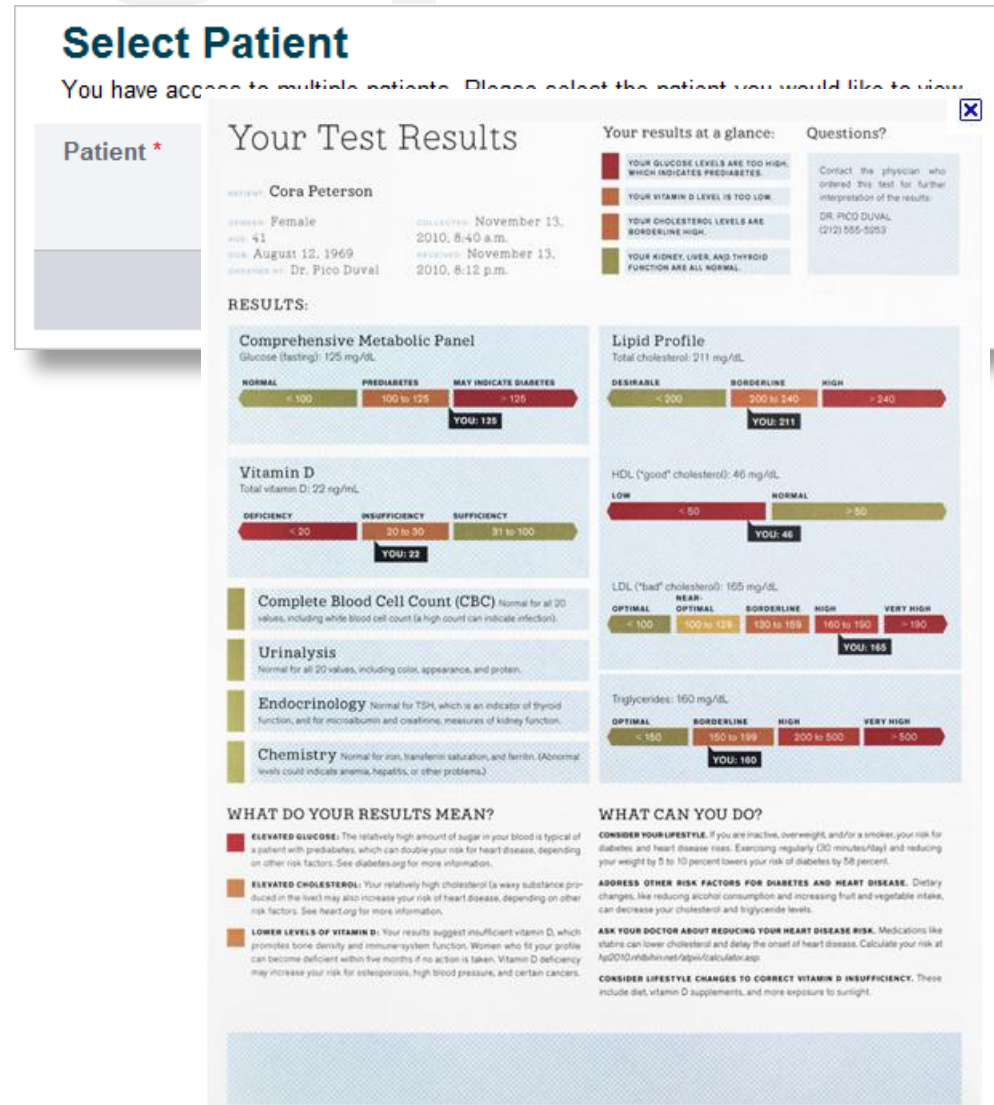- Integrated clinical decision support

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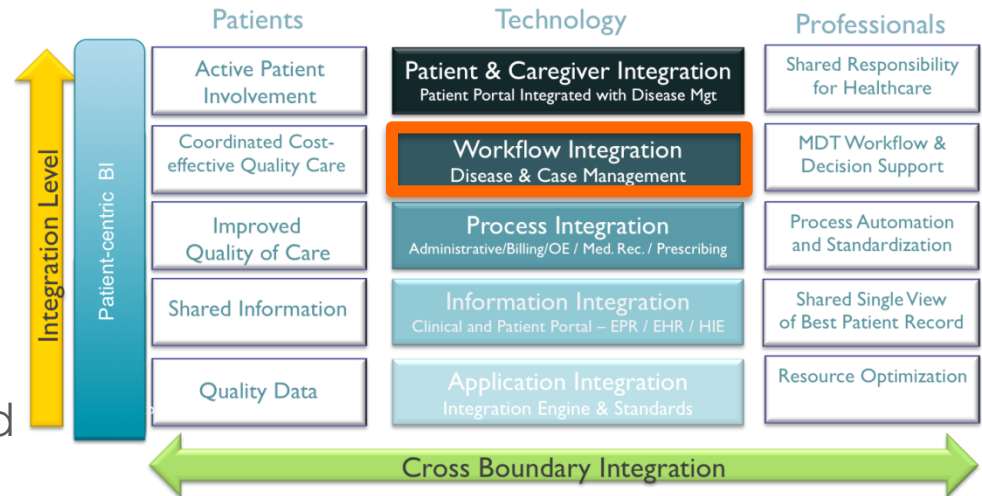
Clinical Process

Patient Integration

★ More engaged, self managing population

★ Remote monitoring

★ Patient self management education
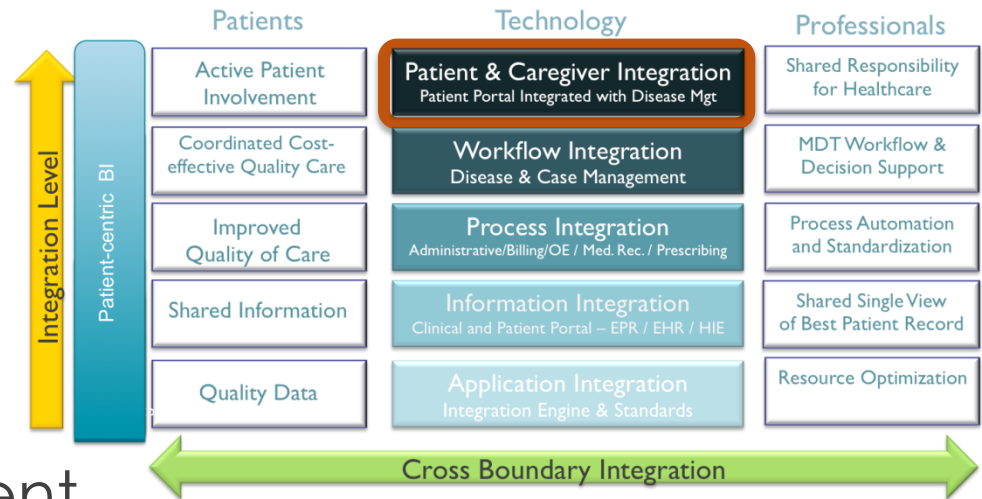
Making Patients (and Circle of Care) part of Care Delivery Team

★ Patient portals need to be sophisticated yet simple if Patients and families are to effectively use them

★ Patients change their behavior when they see a path to better health

★ Patients need feedback on how they are doing

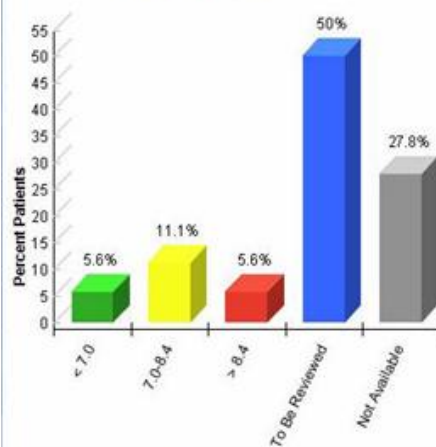# Dashboard Reporting

* Clinical quality and outcomes presented in real time

Alberta Health Services
Edmonton/Calgary, Alberta, Canada

Alberta Health Services

CUSTOMER OVERVIEW

- Chronic Disease Management (CDM) solution
- CDM has been a key strategic initiative since 2002
- Population of 3.7 million
- 117,000 employees
- More than 60,000 patients enrolled on CDM pathways

CHALLENGES/OPPORTUNITIES

Alberta Health Services required an Chronic Disease Management (CDM) solution to improve the clinical outcomes for patients living with chronic conditions and to reduce the cost of managing the long term care for these patients.

ORION HEALTH SOFTWARE COMPONENTS

- Clinical Portal
- Medical Templates
- Disease Management

DISEASE MANGEMENT PROGRAMS

- 25 pathways at Calgary Health, two pathways at Capital Health and two pathways Alberta-wide
- Pediatric (Type 1) Diabetes, Gestational Diabetes, Adult (Type 2) diabetes, Anti-coagulation, Living well (Stanford program for living with a chronic disease), Hypertension, Dyslipidemia, Atrial fibrillation, Community management of chronic disease

RESULTS

The Chronic Disease Management model of care in Alberta Health Services – Calgary area has been effective in improving clinical outcomes and likely has significantly reduced acute care utilization.

- 19,735 fewer bed days in one year period @ $855-$1600 = $16.9 – 31.6M
- Current annual penetration into chronic disease population » 7%*
- Potential cost avoidance if 100% annual penetration » $240-450M
- Estimated penetration since CDMIS inception = 25-30%
- 34% reduction in ER visits
- 42% reduction in ER visits with Asthma
- 31% reduction in - client bed days
- 16% improvement in A1c (diabetics)
- 12% improvement in cholesterol

Summary

Now is the time to:

★ Collaborate with stakeholders to leverage our experience and assets we have invested in previously

★ Work to develop agnostic integration that can equally impact stakeholders

★ Utilize the tremendous improvements in technology to ensure that new models for DM can be successful

★ Create a level of transparency that develops trust and engagement across all stakeholders

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Questions
Final Thoughts

Thank You to Our Speakers

- Dr. Kate Lorig, Director, Stanford Patient Education Research Center

- Peggy Denness, MSW, Client Manager, Orion Health

- Dr. Chris Hobson, Chief Medical Officer, Orion Health

Slides/Recording for Sale

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- **Upcoming Conferences**
  - 2012 eHI Annual Conference – Cancer, Diabetes and Heart Disease: Improving Care Through eHealth
    - January 11 and 12, 2012 - Washington, D.C.
- **Upcoming Webinars**
  - *Private Health Information Exchange: Enterprise and Proprietary Data Exchange*
    - Thursday, December 1, 2011
- **Reports and Directories**
  - Vendor Report
  - List of HIEs and Selected Vendors
  - Sustainability Report

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