



# **Health Information Technologies**

## Essential Tools in the Evolving Health Care Environment



# Today's Presentation: Key Elements of Health Reform and Why You Should Care

- Universal (or close to it) coverage for specific health services, with expanded Medicaid eligibility
- Payment reform, with provider groups becoming more accountable for cost and quality of care
- Greater participation and interest of the population in their own health and well being through social networks
- **Generation, collection, and use of more electronic health data**
- **Care process innovation (i.e., who does what with whom, when and how)**
- **Goal: a Person Focused system of integrated health and care**

# The Challenge: Healthcare is Changing. Is Your Organization?

- Patient engagement focus
- Data driven and outcome oriented
- Provider implications for structural changes
- Organizational readiness planning
- Identification of core competencies in the use of health information technologies
- Helping organizational leaders take action on something they often don't understand





# CHALLENGES

I EXPECTED TIMES LIKE THIS - BUT I NEVER THOUGHT  
THEY'D BE SO BAD, SO LONG, AND SO FREQUENT.

[www.despair.com](http://www.despair.com)

# National Strategy for Quality Improvement in Health Care: 3 Aims

Better Care



Affordable Care



Healthy People/Healthy Communities

# National Strategy for Quality Improvement in Health Care: 6 Priorities

- Safer
- Patient and family are engaged partners
- Communication and coordination
- Prevention and treatment
- Healthy living
- New delivery models





## Question?

**How comfortable are you and your staff with addressing physical health risk issues with patients?**

- Very comfortable and have experience doing so
- Comfortable with some issues but not others
- Needs improvement

# Changes in How Health Care is Provided

- Holistic view of the person and needed interventions to improve health status
- Care provided by inter-professional teams
- No more segregation of mind and body
- Quality metrics become the norm
- All care is integrated



# What issues will drive attention to holistic care?

- Legislative mandates
- Structural changes in how care is delivered
- New financing models
- Quality metrics





# Question?

Have you designed strategies to reduce the cost of health care for the population you serve?

Based on survey responses:

- 44% address either smoking cessation or weight management
- 47% do not
- 9% don't know

# What Processes and Tools Might Need to Change?

- Assessment tools
- Documentation
- Data systems
- Actionable information
- Data input
- Interoperability and partnering
- Addressing health risks and disease management





# How Will Health Care Delivery in West Virginia Change?



# Important Policy and HIT Initiatives

- Accountable Care Organizations
- Health Homes
- Health Information Exchange
- All Payer Claims Data Bases
- Beacon Communities and Medicaid Innovation grants
- Medicaid Expansion
- Health Insurance Exchange
- MMIS Changes
- Meaningful Use Stage 2

# What Does the Survey Tell Us?

- Readiness Planning:
  - 36% have, 38% haven't, 28% don't know – in other words, no.
  - One comment: *MH provider organizations haven't been informed of changes that will impact us.*
- Data Strategy for Meaningful Use Requirements:
  - 86% don't have one
- Certified EHR:
  - Almost 75% don't have one
- Working to establish partnership agreements with local health providers and health systems and payers:
  - Have ranges from 18% - 36%
  - Have not ranges from 52% to 80%

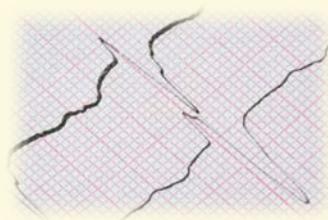


## Why is HIT Essential to Quality Health Care?



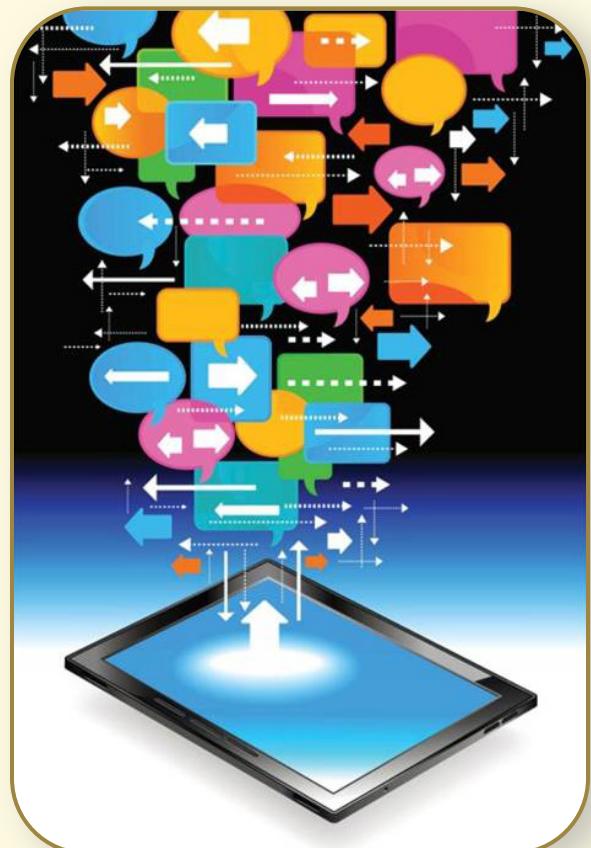
# Prerequisites for Post-Health Reform Patient Care

Health reform will require an unprecedented use of data to inform practice



# Expectations for Post-Health Care Reform Use of Data

- Use real time decision support tools
- Manage treatment adherence
- Exchange clinical data sets with other entities
- Use structured data taxonomies
- Electronically generate and individualize patient education materials





# Question?

How knowledgeable are you about the concept of clinical decision support and the ways it will be operationalized?

- Think I understand it pretty well
- Have some idea about what is involved
- What???



# Question?

Do you know what a structured data taxonomy is?

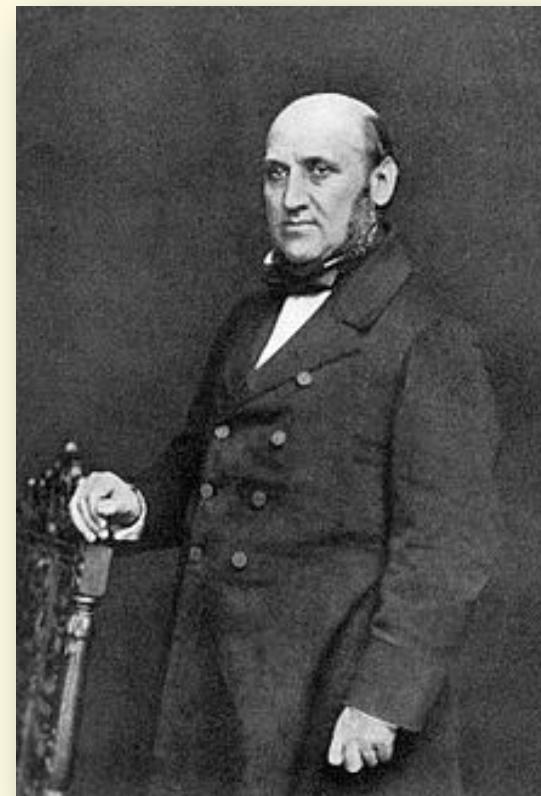
- Yes
- No



# Terminology Challenges

*“Each disease has, in many instances, been denoted by three or four terms, and each term has been applied to as many different diseases: vague, inconvenient names have been employed, or complications have been registered instead of primary diseases.”*

William Farr (England) 1839



# TOP 8 ZANIEST ICD-10 CODES

A Collection of the Craziest Codes You Hope Never to Encounter

|| especially after Oct. 1, 2014 ||

Problems with the  
**in-laws**

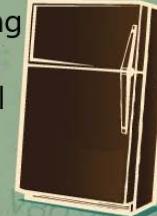
Z63.1



1

Asphyxiation due to being  
trapped in a **discarded  
refrigerator**, accidental

T71.231D



2

Sucked into  
**jet engine**

V97.33XD

3

Burn due to  
**water-skis  
on fire**

V91.07XD

5

Fall into **bucket of  
water**, causing  
drowning &  
submersion

W16.221



4

6

Walked into  
**lamppost**

W22.02XD



7

**Hair** causing  
external  
**constriction**

W49.01XA



8

Animal-rider injured in  
collision with **trolley**

V80.730A

# National Committee on Vital and Health Statistics (NCVHS) 2003 Recommendations to the HHS

Standardized terminologies for storing patient medical record information:

- ✓ SNOMED CT (clinical concepts)
- ✓ LOINC (laboratory values)
- ✓ RxNorm (medications)

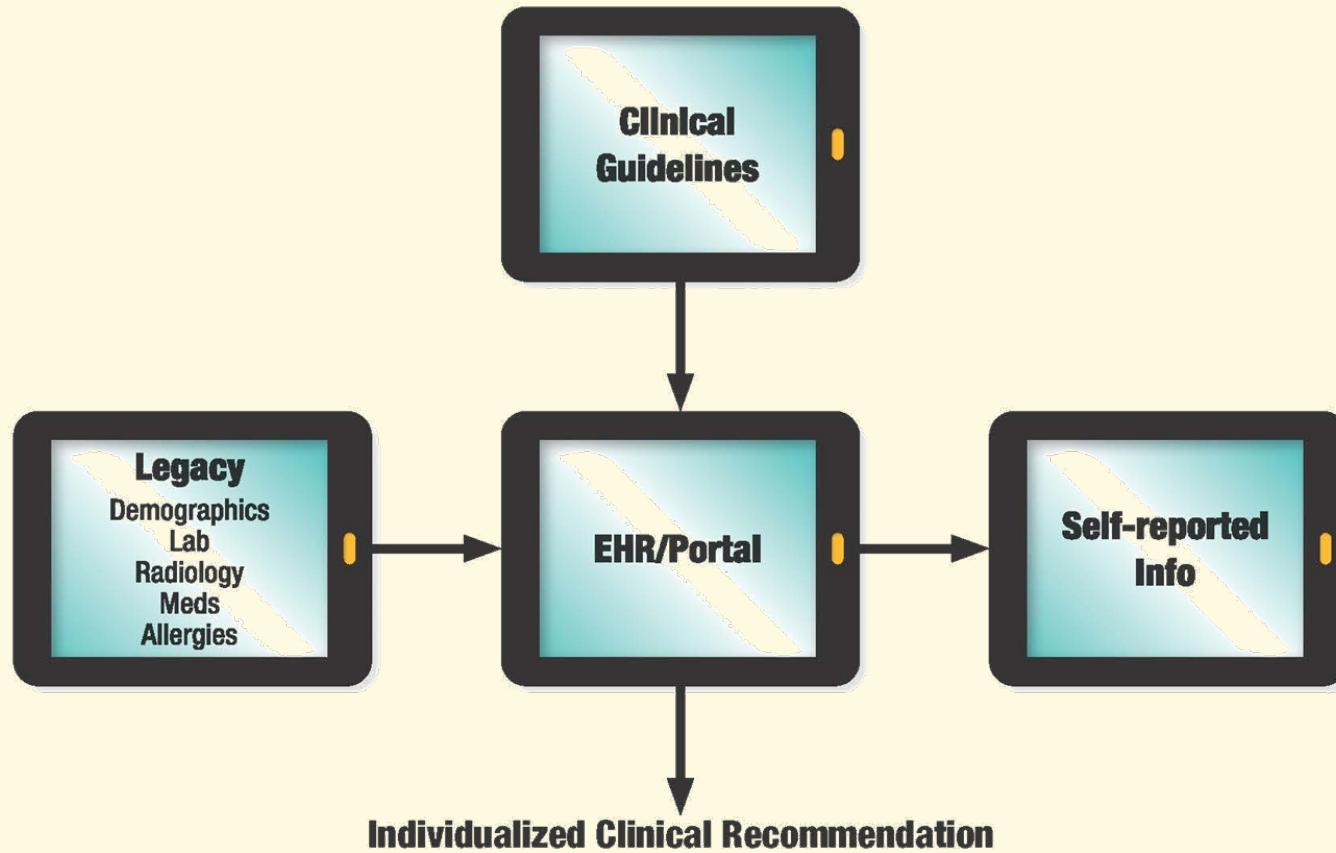


# Patient Centered Care Requires Patient Centered Information

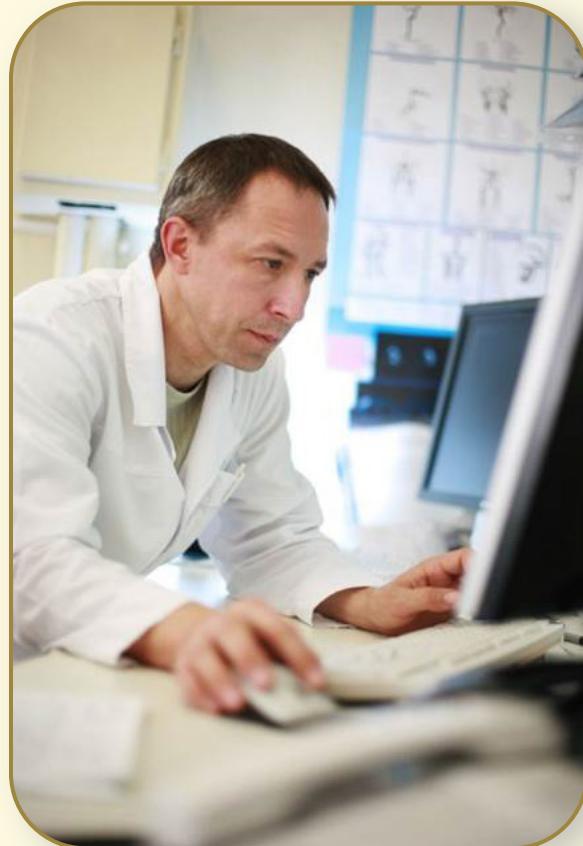
- Adherence to treatment
- Lifestyle assessments
- Screenings
- Clinical preventive service history
- Medication reconciliation



# Knowledge and Information Integration



# Tech Enabled Performance Improvement in Clinical Workflow Processes



- Patient Summary
- Clinical Decision Support
- Ability to monitor performance “on-the-fly”
- Presenting information in the EHR the way the clinician thinks
- Extensive use of mobile technologies and remote monitoring
- 2-way communication with the patient the 99% of the time they are not in your office

# Diabetes Summary-Single Patient

Status	Goal	Last	Date	Next Due
Green	HbA1c <9.1%	6.8%	5/12/2011	11/12/2011
Green	LDL <130	106	5/12/2011	11/12/2011
Green	BP <140/90	128/88	5/12/2011	11/12/2011
Red	Kidney check	Overdue!	5/12/2010	Now!
Red	Eye check	Not done!		Now!

Select a date range From: 11/01/2008

To: 11/01/2011

Submit

Reset

Select Clinic: Test Super Group A

Select Provider: <ALL PROVIDERS>

Diabetes



Tobacco Use



Recent Cigarette Quitter

16.67%

Current Cigarette User

46.67%

Ready to Quit Cigarettes

28.57%

Vaccines



Cancer Screening



Heart Attack and Stroke Risk



Weight Management



## Current Cigarette User

Current Cigarette User

46.67% Match criteria: 7  
Total population: 15

### GENDER DISTRIBUTION

Female

33.33% (2 of 6)

Male

55.56% (5 of 9)

### AGE GROUP DISTRIBUTION

18 - 34

40.00% (2 of 5)

35 - 49

60.00% (3 of 5)

50 - 64

33.33% (1 of 3)

65+

50.00% (1 of 2)

### RACE/ETHNICITY DISTRIBUTION

American Indian or Alaska Native, NH

50.00% (1 of 2)

Asian, NH

33.33% (1 of 3)

Black or African American, NH

66.67% (2 of 3)

Hispanic, any race

40.00% (2 of 5)



## HIT As a Series of Policy and Business Decisions



# HITECH Act – Short Version



You really  
need an  
EHR!

# Meaningful Use Implementation Stages

<b>Stage 1 2011</b>	<b>Transmit screening data EHR to elsewhere</b>	<b>X of my clients were screened for tobacco use</b>
<b>Stage 2 2014</b>	Transmit cumulative data through EHR to HIE to payer	X clients screened positive for tobacco and I intervened with Y
<b>Stage 3 2016</b>	Transmit data through EHR to HIE to payer and link quality metric and payment information	X clients screened, Y clients intervened and as a result Z quit smoking

# Meaningful Use and Health Information Exchange

- Meaningful Use will require sending linked claims and quality data through HIEs for claims payment and other purposes.
- The quality measures will be applicable to all.
- Linking claims and quality data will require flexible and scalable technology.



# Performance Measurement Expectations

- Structural measures
- Process measures: CMS PQRS
- Overuse/efficiency measures
- Outcome measures: CMS PQRS
- Patient experience measures



# Health Home Quality Measures

1. Adult Body Mass Index (BMI) Assessment
2. Ambulatory Care
3. Care Transition
4. Follow-up After Hospitalization for Mental Illness
5. Plan- All Cause Readmission
6. Screening for Clinical Depression and Follow-up Plan
7. Initiation and Engagement of Alcohol and Other Drug Dependence Treatment
8. Controlling High Blood Pressure

# NQF Endorsed Behavioral Health Quality Measures

- Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (NCQA)
- Medical Assistance With Smoking and Tobacco Use Cessation (NCQA)
- Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention (AMA-PCPI)
- Adherence to Antipsychotic Medications for Individuals with Schizophrenia ([CMS](#))
- Diabetes screening for people with schizophrenia or bipolar disorder who are prescribed antipsychotic medications (SSD) (NCQA)
- Cardiovascular health screening for people with schizophrenia or bipolar disorder who are prescribed antipsychotic medications (NCQA)
- Cardiovascular health monitoring for people with cardiovascular disease and schizophrenia (SMC) (NCQA)
- Diabetes monitoring for people with diabetes and schizophrenia (NCQA)
- Follow-Up After Hospitalization for Schizophrenia (7- and 30-day) (NCQA)
- Follow-Up After Hospitalization for Mental Illness (NCQA)

# CMS and ONC Endorsed Behavioral Health Measures

- Bipolar Disorder (BD) and Major Depression (MD): Appraisal for alcohol or chemical substance use
- BBD and MD: Assessment for Manic or hypo-manic behaviors
- BD: Suicide Risk Assessment
- Maternal Depression Screening
- Follow-up after Hospitalization for Mental Illness
- Risky behavior assessment or counseling by age 13 – Alcohol, Tobacco, Substance Abuse, Sexual Activity
- Risky behavior assessment or counseling by age 18– Alcohol, Tobacco, Substance Abuse, Sexual Activity
- Alcohol Screening and Alcohol Brief Intervention



# Question?

Has your organization planned for the technical and policy issues associated with linking healthcare information for individual patients through Health Information Exchanges?

- Yes
- No



# Continuity of Care Document Based on the Clinical Document Architecture

- A patient summary document for health information exchange (HIE)
- Required for meaningful use
- Health Level 7 (HL7)
  - Produces standards for clinical data exchange, vocabulary and document architecture
  - Most widely implemented standard for healthcare information in the world
- Standards for Meaningful Use increased from stage 1 to stage 2
- Continuity of Care Document that meets stage 2 requirements is referred to as the Consolidated Continuity of Care Document Architecture (C-CCDA)

# C-CCDA Domains

## Domains include

- Client Demographics
- Episode of Care
- Document Management
- Assessments
- Problems
- Substances of Abuse
- Procedures
- Social History with sub domains
  - Criminal Justice
  - Education
  - Homelessness
  - Veteran Status
  - Income
  - Trauma/Domestic Violence
  - Peer Group Support

# The Vision for Patient Centered HIT

- **Level 1.** Collects self-reported patient information (i.e., symptoms, diagnoses, meds)
- **Level 2.** Integrates patient and clinical information through links to the EHR and/or claims
- **Level 3.** Interprets clinical info for the patient by translating findings into lay language and delivering via a user friendly interface
- **Level 4.** Provides individualized clinical recommendations, such as screening reminders, based on risk profile and evidence-based guidelines
- **Level 5.** Facilitates informed patient action integrated with primary and secondary care through the provision of vetted health info resources, decision aids, risk calculators, personalized motivational messages, and support for appointments and follow up

# Patient Portals

## MU Stage 2 Requirements

- Clinical summaries
- Ability to view/download/transmit information
  - Secure messaging
  - Patient reminders
  - Educational content



# Patient Portals

- Patient engagement is a major component of Stage 2 of the Meaningful Use program, but patient portal vendors vary in their ability to meet the requirements, according to a new study released September 17 by Orem, Utah-based KLAS Research.
- Patient portal interoperability with EHR systems was a top concern, with 84 percent of respondents noting that this was their main criterion in a portal.
- The requirements for Stage 2 and proposed requirements for Stage 3, likely will require increasing patient portal functionality, such as requiring providers to offer patients the capability of submitting patient-generated information, the ability to request amendments of their records online, and include caregiver name and contact information.

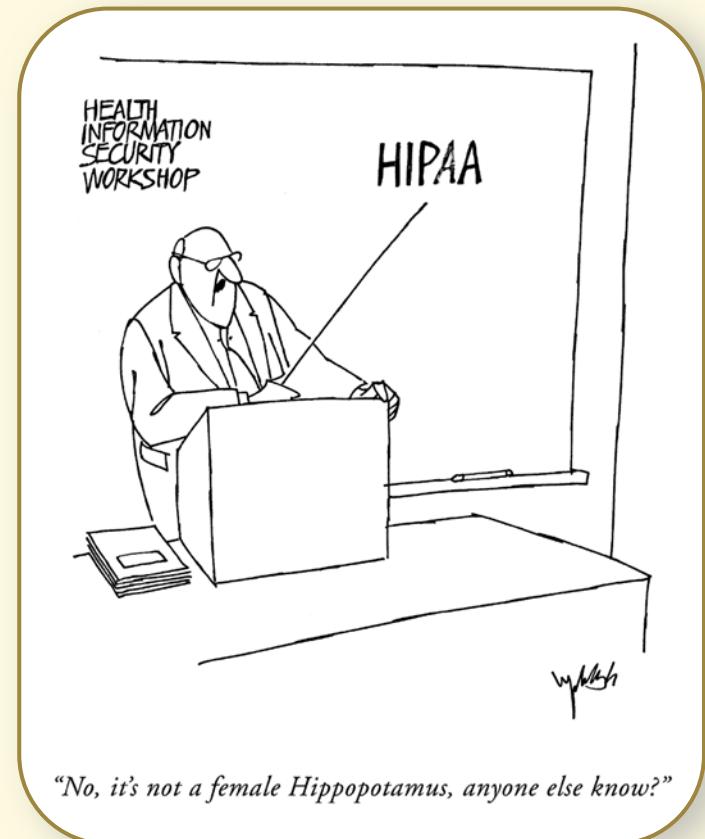
# New HIPAA Regulations

- Confidentiality and breach notification are elevated in importance
- Business associates and their subcontractors liable for breaches of personal health information
- Right for patients to obtain electronic copies of their records



# New HIPAA Regulations

- An enhanced right for individuals to request restrictions regarding disclosure of their PHI
- A change to the breach notification rule in which any disclosure of PHI is presumed to be a breach



# Current Informed Consent Laws; 42 CFR Part 2

- The legislation was enacted more than 30 years ago
- Consent specifications are very specific
- Health Information Exchanges will find it hard to track re-disclosure and to notify originator
- Expectations for the use of integrated teams adds to the complexity





# Organizational Readiness Assessment



# 3 Interrelated Levels of Readiness Assessment

- Health Reform Readiness
- Organizational Capacity
- HIT Readiness

What does a readiness assessment look like?

- ✓ Does the organization understand why action is needed?
- ✓ Does the organization have a vision for where they need to be in the next 3-5 years?



## Question?

Based on your current and planned implementation of EHRs and participation in new care delivery models, where might you need additional assistance?

- Planning for upgrading or selecting an EHR at some point in the future
- Issues with implementation and Meaningful Use and certification with an existing HER
- Meeting Meaningful Use stage 2 requirements and augmenting clinical decision support functionality
- Increased capabilities in analytics
- My organization is in good shape in these areas

# What Needs to Be Evaluated in an Organizational Assessment?

- Unknowns
- Anticipated threats
- Most difficult aspects of change
- Preparedness – when will you be ready and who will do it?
- What information is needed to demonstrate accountability, outcome achievement and delivering value?



# Issue 1

## Engagement

- Tracking issues associated with engagement
- Workflow improvements
- Scheduling and post intake treatment initiation
- Staff performance measures
- Survey: 1/3 have developed strategies to improve access, engagement and adherence to treatment



## Issue 2

# How Will You Assure Quality And Efficiency?

- Clinical Decision Support
- Consumer directed care
- Evidence-based practices and clinical guidelines
- Quality measures
- Workflows and processes



# Issue 3

## Change Management

- Leadership
- Planning
- Execution
- Data informed decisions



# Issue 4

## Workforce Issues

- Capabilities
- Experience
- Technology and analytics skills
- Communication skills



# Issue 5

## Patient Centered Care

- Patient access to healthcare provider outside scheduled times
- Provider access to information
- Interpersonal skills
- Follow up care
- Educating patients
- Integration of guidelines and best practices



# Issue 6

## Data/Information Strategic Planning

- How to be capable of providing service remotely via patient portals, mobile devices and telehealth
- How to offer patient portals to pre-populate information into assessments and flag needed interventions
- How to do a Health Risk Assessment to know if patients have had all required immunizations and also know about health risk issues
- How to provide best practice patient educational materials
- How to use CDS tools to know if treatment is working in real time
- How to purchase technology with future needs in mind



# **Health Information Technologies**

## **Essential Tools in the Evolving Health Care Environment**



# Data Strategy

## Sources

- MMIS
- All-Payer Claims
- Eligibility

- Mental Health Center Utilization
- Benefits Utilization System

- Public Health Agencies
- Regional Health Info Exchanges

- CO Information Marketplace
- Dept of Education
- Dept of Corrections

## Data

Claims

Encounters/  
Assessments

Surveys/Registries/  
Clinical Data

Social  
Determinants

## Delivery Systems

Medicaid  
ACC

Behavioral &  
Long-term  
Supports

Public  
Health

Community  
Supports &  
Services

## Person

Sick Care

Wellness

# Recap

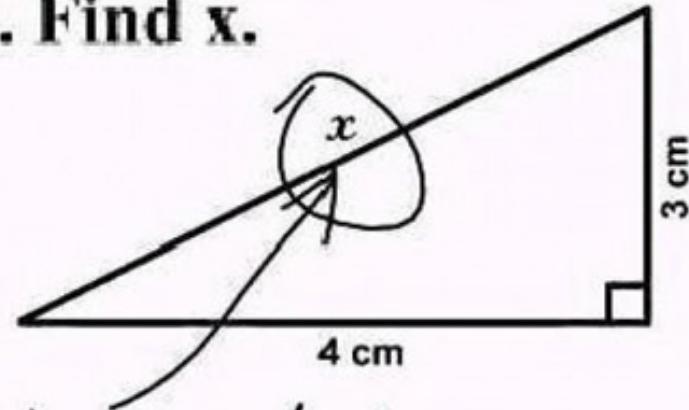
- The data you currently collect is not going to be sufficient
  - You collect a lot of data but virtually no health status indicators
  - You need to track the effect of addressing an identified health risk, intervention – and the resulting outcome
- The various systems that provide you data will require significant upgrading for (not just some time during) the next several years.
- Reporting of required health quality metrics must be accomplished and utilize standardized data taxonomies (i.e., HL7 compliant CCDA)

# How Complicated is This to Do?

- Pretty complicated – but it is very important to do it anyway
- Think about a matrix of issues and the organizational capabilities or vulnerabilities that need to be assessed
- Issues
  - Governance understanding and support for transformation
  - Strategic plan is focused and has measureable milestones
  - Financial capacity to invest in new technologies and manage economies of scale and potential revenue loss
- Vulnerabilities
  - Payment reform
  - Data integration
  - Data exchange
  - Process improvement
  - Culture change

# There Are No Simple Answers

3. Find  $x$ .



*Here it is*

## S I M P L I C I T Y

The simplest solutions are often the cleverest  
They are also usually wrong

## Summary: Do You and Your Team Understand Health Reform and HIT Implementation in Context?

- The requirements for EHRs, HIEs and ACA are inextricably intertwined.
- HIT and quality reporting mandates are now linked.
- Trying to maintain the ground you hold means you will lose ground.
- Have you identified EHR requirements for
  - Payment?
  - Eligible populations?
  - Care coordination?



# Questions?

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