Using Real Time Health Data Analytics to Drive Health Treatment
But Before We Get to Data Analytics ...

- A Few US Health Facts
- State of Healthcare Data Capture
- Current Happenings in Reimbursement
- CMS’s Drive of Practice Transformation
- Chronic Care Management
- Integration of Behavioral Health with Primary Care
- Population Health – Advancing Data Efforts
- Implications
And before we jump in ...

Thank You!
# A Few US Health Facts

<table>
<thead>
<tr>
<th>Chronic care for mental health/substance abuse disorder 2-3 pts times higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘15 estimated per capita healthcare costs &gt; $10,000</td>
</tr>
<tr>
<td>4 mod. health behaviors (tobacco, alcohol/drugs, physical activity, nutrition) drive early deaths</td>
</tr>
<tr>
<td>98% of M’care readmissions driven by beneficiaries with 2 or more chronic diseases</td>
</tr>
<tr>
<td>29% of adults with medical conditions have mental disorders</td>
</tr>
<tr>
<td>~50% adults have 1 or more chronic diseases</td>
</tr>
<tr>
<td>Chronic care accounts for over 86% of all healthcare costs</td>
</tr>
<tr>
<td>&gt; 2/3 of M’care beneficiaries have 2 or more chronic diseases</td>
</tr>
<tr>
<td>Treatment non-compliance 3 times greater for depressed patients</td>
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</table>
A Few US Health Facts

Total U.S. Healthcare Spending by Number of Chronic Conditions in 2010

- 35.0% for persons with more than 5 chronic conditions
- 14.2% for persons with no chronic conditions
- 14.8% for persons with 1 chronic condition
- 13.0% for persons with 2 chronic conditions
- 11.8% for persons with 3 chronic conditions
- 11.2% for persons with 4 chronic conditions

DATA HIGHLIGHTS

86% of healthcare spending is for patients with one or more chronic conditions.

71% of healthcare spending is for patients with multiple chronic conditions.

- Said another way, 71¢ of every dollar of healthcare spending goes to treating people with multiple chronic conditions.

Source: ARHQ Publication Q14-0038
A Few US Health Facts

Source: National Comorbidity Survey Replication, 2001-2003
So ...

- Healthcare costs growing over $10,000 per capita
- Chronic Conditions dominate $$
- A lot of patients with chronic conditions have mental health issues
- Severe mental health comorbidities drive poorer outcomes and 2-3 times higher patient medical costs

Sounds like your specialty will be busy for a while ...
State of Healthcare Data Capture

- EHRS growing
- Primary care very high usage
  - Over 80%+
  - Data mostly stuck
- Mental Health
  - Over 50%+
  - Data may be even more stuck

Figure 13. Electronic health record system components in physician offices, by selected component type: United States, 2010 and 2013

Excel and PowerPoint: http://www.cdc.gov/nchs/hus/contents2015.htm#fig13
Healthcare Data Capture

- Behavioral Health EHRs
  - Some using primary care systems – how to handle therapy notes, do workflows work?
  - Some use specialized systems – likely better workflows, can they interoperate

- Health Information Exchange
  - Starting to move biomedical data, although progress very slow – assume some growth with move to value-based care
  - Behavioral health data rarely moving
    - Sensitivity of behavioral health data
    - What is the value, and who gets rewarded
Healthcare Data Completeness

“EHRs providing incomplete picture of behavioral data” (Source: HealthData Management)

- PC EHR Data vs. Claims
- Issue – Pts seek BH/ Specialty care outside PC
- True for most non-integrated specialties/providers
- Choices
  - Integrate into same EHR
  - Utilize HIE to move data, and then move data
  - Have true EHR interoperability
  - Have patients be responsible for their health data
Current Happenings in Reimbursement

Shifting from VOLUME to VALUE

CMS Goals for Medicare PFFS Payments*

- End of 2016
  - 85% tied to quality or value
  - 30% via APMs
- 2018
  - 90% tied to quality or value
  - 50% via APMs

Other Industry Progress

- United Health Group: Committed $65B to value-based arrangements by the end of 2018
- Aetna: Intends 45% of spending to be via value-based agreements by 2017

*01/26/2015. CMS Press Release Better Care, Smarter Spending, Healthier People: Paying Providers for Value, Not Volume
CURRENT FRAMEWORK

Category 1
Fee-for-service with no link of payment to quality

Category 2
Fee-for-service with link of payment to quality

Category 3
Alternative payment models built on fee-for-service architecture

Category 4
Population-based payment

Foundational fee-for-service billing:
- DRGs, PFS
- VBP, HACs, VBM, MIPS
- ACOs, Bundles
- Patient Capitation

Non-FFS Billing:
- DRGs, PFS
- VBP, HACs, VBM, MIPS
- ACOs, Bundles
- Patient Capitation
Current Happenings in Reimbursement

So What About the Major Payors

- Medicare – making the shift through 4 categories
  - Introducing MIPS – more to come
- Medicaid – shift is anticipated, but no details in IN yet
- Private Pay – accelerating the shift, negotiating risk contracts with big providers

Interesting … emerging integration of primary care into behavioral health in Community Mental Health Centers has payments which are more medical home (per member per month) than either FFS or value
Current Medicare Payments/Incentives

- Current multiple Medicare Part B quality reporting programs into a single program

<table>
<thead>
<tr>
<th>Medicare EHR Incentive Program (MU)*</th>
<th>Physician Quality Reporting System (PQRS)</th>
<th>Value-Based Payment Modifier (VM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligibility</td>
<td>MU</td>
<td>PQRS</td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Psychologists</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>LCSWs</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*MACRA does not alter or remove the Medicaid EHR Incentive Program
Overview

In April 2015, the Medicare Access & CHIP Reauthorization Act of 2015 (MACRA) was signed

3 Important Changes

- Repealed the Medicare Part B Sustainable Growth Rate (SGR) formula used for determining Medicare payments for provider services
- Established new framework for rewarding providers for providing better care, not more care
- Combined existing quality reporting programs into a new, singular system

In April 2016, CMS issued a NPRM to put in place key parts of the MACRA through a single framework called the “Quality Payment Program”

2 Streamlined Paths (“Tracks”)

- Track 1: Merit-Based Incentive Program System (MIPS)
- Track 2: Advanced Alternative Payment Models (APMs)
**What is MIPS?**

- Combines multiple Medicare Part B quality reporting programs into a single program

- This new, single program is based on:
  - Quality (PQRS/VM-Quality Program)
  - Resource Use (VM-Cost Program)
  - Meaningful Use of CEHRT (Medicare MU)
  - Clinical Practice Improvement

*MACRA does not alter or remove the Medicaid EHR Incentive Program*
**TRACK 1: MIPS**

**Who is Eligible?**

**2017-2018**
- Physicians
- Physician Assistants
- Nurse Practitioners
- Clinical Nurse Specialists
- Nurse Anesthetists

**2019+**
- Physicians
- Physician Assistants
- Nurse Practitioners
- Clinical Nurse Specialists
- Nurse Anesthetists
- Physical Therapists
- Occupational Therapists
- Speech/Language Pathologists
- Audiologists
- Nurse Midwives
- **Clinical Social Workers**
- **Clinical Psychologists**
- Dietitians

**Who is Exempt?**

- Qualifying APMs (Track 2)
- EPs in 1\textsuperscript{st} year of Medicare Part B participation
- EPs that do not meet the low volume threshold

*MIPS does not apply to hospitals or providers that do not bill Medicare Part B*
**TRACK 1: MIPS**

**Base Payment Adjustments**

Positive adjustments applied on a linear sliding scale:

<table>
<thead>
<tr>
<th>Payment Year</th>
<th>Base Adjustment</th>
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</thead>
<tbody>
<tr>
<td>2019</td>
<td>4x%</td>
</tr>
<tr>
<td>2020</td>
<td>5x%</td>
</tr>
<tr>
<td>2021</td>
<td>7x%</td>
</tr>
<tr>
<td>2022+</td>
<td>9x%</td>
</tr>
</tbody>
</table>


Negative adjustments applied on a linear sliding scale:

<table>
<thead>
<tr>
<th>Payment Year</th>
<th>Base Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>-4%</td>
</tr>
<tr>
<td>2020</td>
<td>-5%</td>
</tr>
<tr>
<td>2021</td>
<td>-7%</td>
</tr>
<tr>
<td>2022+</td>
<td>-9%</td>
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x is capped at 3.0
TRACK 2: QUALIFYING APMs

Non-MIPS Pathway

- Participants are required to meet the following criteria:
  1. Use Certified EHR Technology (CEHRT)
  2. Base payment on quality measures comparable to those in the MIPS quality performance category
  3. Either:
     - Bear more than nominal financial risk for monetary losses
     OR
     - Is a Medical Home Model expanded under CMMI authority

- Excluded from MIPS Participation (Track 1)

- Does not change how APMs function or rewards value – It creates extra incentives for Advanced APM participation:
  - Potentially receive annual lump-sum 5% bonus on MPFS payments (2019 – 2024)
## CMS’ $685M Drive for Practice Transformation

### TCPI AIMs/Goals

1. Support more than 140,000 clinicians in their practice transformation work.
2. Build the evidence based on practice transformation so that effective solutions can be scaled.
3. Improve health outcomes for millions of Medicare, Medicaid and CHIP beneficiaries and other patients.
4. Reduce unnecessary hospitalizations for 5 million patients.
5. Sustain efficient care delivery by reducing unnecessary testing and procedures.
6. Generate $1 to $4 billion in savings to the federal government and commercial payers.
7. Transition 75% of practices completing the program to participate in Alternative Payment Models.

### Primary Drivers

<table>
<thead>
<tr>
<th>Patient and Family-Centered Care Design</th>
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</thead>
<tbody>
<tr>
<td>1.1 Patient &amp; family engagement</td>
</tr>
<tr>
<td>1.2 Team-based relationships</td>
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<tr>
<td>1.3 Population management</td>
</tr>
<tr>
<td>1.4 Practice as a community partner</td>
</tr>
<tr>
<td>1.5 Coordinated care delivery</td>
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<tr>
<td>1.6 Organized, evidence based care</td>
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<tr>
<td>1.7 Enhanced Access</td>
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</table>

<table>
<thead>
<tr>
<th>Continuous, Data-Driven Quality Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Engaged and committed leadership</td>
</tr>
<tr>
<td>2.2 Quality improvement strategy supporting a culture of quality and safety</td>
</tr>
<tr>
<td>2.3 Transparent measurement and monitoring</td>
</tr>
<tr>
<td>2.4 Optimal use of HIT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sustainable Business Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Strategic use of practice revenue</td>
</tr>
<tr>
<td>3.2 Staff vitality and joy in work</td>
</tr>
<tr>
<td>3.3 Capability to analyze and document value</td>
</tr>
<tr>
<td>3.4 Efficiency of operation</td>
</tr>
</tbody>
</table>
Focus on Chronic Care Management

- Quality measures become important
  - Today, most biomedical measures are around chronic conditions
- Cost also becomes important
  - Earlier stats that chronic care is driving costs

- So ... much emphasis will be on ADDRESSABLE high/emerging high risk/cost patients – and they have chronic diseases, many with severe mental illnesses

- Implications
  - What outcomes? What measures impact them?
  - How can behavioral health help manage chronic patients?
  - How to increase patient engagement?
Integration of Behavioral Health/Primary Care

- High prevalence of BH illnesses
- Costs of care w/BH illness high
- Significant access issue
- 70% of PC visits stem from psychosocial issues (Robinson/Reider, 2007)

NCBH 3 Steps of Integration
1. Close the gap
2. More integration Behavior/Med Health/SUD
3. Expand use of evidence-based practices

- Difference between collaboration/integration
Integration of Primary Care into Behavioral Health

- Efforts have shown promise
- “The Business Case for Effective Mental Health Treatment”, NCBH
- $26-48B could be saved (Milliman, 2014)
  - Primarily keeping patients out of the hospital
- “Excellence in Mental Health Act”
  - Phase 1: 24 states with planning grants (IN is in)
  - Phase 2: 8 states will be selected for 2 year implementation
- Interesting – doesn’t follow the value-based care model
  - Recognition of how “broke” the payment system is for BH
Starting to Use Data

- What is your driver to better utilize data?
  - Quality improvement?
    - BH measures more difficult than biomedical
      - Assessment/behavioral (CANS/ANSA) state vs. blood pressure
  - Overall patient cost improvement?
  - Efficiency improvement?
  - Service expansion?
- And who is going to pay you for the investment?
  - Insurer?
  - CMS?
Early Data Usage Today in Primary Care

- EHRs/Registries starting to be used to improve care gaps
  - Typically these are quality measures (biomedical)
  - When do we get to measuring success of care plans?
- Primary care efforts to use ED/ADT alerts to implement interventions to keep patients out of the hospital
  - Helpful to CMHCs?
- E.G., Patients screened for major depressive disorder
  - Registry/list of patients who have not been screened and should be
  - Developing action plans for these patients
    - Outreach to patients
    - Reminders in EHR
Population Health/Segments

Source: E&Y

Exhibit 4. Fact-based analytics model: managing member health and medical resources

Provider matching service

Stages of care

- Preventive (35%)
  - Physician pay-for-performance
  - Automated messaging
  - Patient portal

- Mild disease (30%)
  - Evidence-based education
  - Patient portal
  - Disease management
  - Lifetime radiation exposure

- Moderate/chronic disease (25%)
  - Evidence-based education
  - Automated biometric collection, reporting, analysis
  - Behavioral modification efforts, appropriate messaging
  - Bundled payment programs

- Trauma/catastrophic (10%)
  - Automated biometric collection, reporting, analysis
  - Home monitoring
  - Health coaching
  - PCMH

Tools

- HEDIS guidelines
  - Breast screening
  - Immunizations
  - Colonoscopy
  - Percent healthy members

- Imaging events per member per month
- HEDIS guidelines
- Percent members with disease under control
- Incidence of back surgery

- Incidence of hospitalization
- Percent follow-up three days after discharge
- HEDIS guidelines
- 30-day readmission
- Out-of-network utilization
- Cost per procedure

- Incidence of hospitalization
- Percent utilization month-over-month, year-over-year
- Internal resource utilization
- Percent members with do-not-resuscitate orders
- HEDIS guidelines

Too Many Patients for Intense Care
How Can We Begin to Target Patients?

- Key questions analytics might help with
  - Which patients are driving high costs AND can be addressed?
  - Which patients will begin to drive high costs AND can be addressed?
  - Which patients can be impacted (evidence)?
  - Which patients have gaps in care?
  - If behavior oriented, which patients will likely change?
  - Do the improved outcomes pay for the costs?
Data Sources

- Typically the more *good* data, the better the analytics
- Providers are beginning to put together disparate data sources
  - Claims
  - Patient clinical data
  - ED/ADT alerts
  - Behavioral health – therapy/patient notes
  - Social determinants

And now what ...
Stages of Analytics

- First Level – Descriptive Statistics
  - “What’s going on?”
- Second Level – Diagnostic Statistics
  - “What’s the root cause?”
- Third Level – Predictive Analytics
  - “What will happen in the future?”
- Fourth Level – Prescriptive Analytics
  - “What is the best course of action I can take to optimize my outcome(s)?”
Advanced Analytics

- Need good models that predict outcomes and/or help us make better decisions
- Models must be validated
- Models used in an ongoing fashion must keep being validated
- Behavioral Health Concern: Can analytics help with finding trends/patterns in therapy notes?

But keep in mind ...
- What outcomes are you trying to improve?
Are Analytics Enough?

- No!
- Need to also include:
  - Care teams
  - Team roles/responsibilities
  - Patient engagement
  - Use of evidence
- Processes to integrate all of the above with the analytics
Analytics Summary

1. Start with defining the question you’re trying to answer
2. Assemble data that you believe is needed/related
3. Use the appropriate stage of analytics (tools/capabilities)
4. Make sure your team, clinical/staff roles, patients, evidence, processes, and EHR alerting are all aligned
Great Lakes Practice Transformation Network (GLPTN)

- Serves 11,500 Midwest-based clinicians
- Prepares for value-based care
- Provides 4 years of no-cost assistance

Healthy Hearts in the Heartland (H3)

- Focuses on heart attack & stroke prevention research
- Serves 250 Midwest-based, small practices
- Provides 1 year of guidance with heart-health measures and related clinical decision support rules

CMS/FSSA-Supported MU Assistance

- Serves Indiana ambulatory providers eligible to participate in the Medicaid MU Program
- Provides no-cost MU assistance, including security risk assessment

CLICK FOR MORE INFO
Purdue Healthcare Advisors

- Services:
  - Process/Quality Improvement – Lean First
  - Practice Transformation
  - Quality Reporting – MU, PQRS, VBM, MIPS
  - Health IT Security

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Please Reach Out ...

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