Population Health Roundtable
Integrated Care

Presented by:
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Deputy CMO, Adult Services
Overview of Talks

• Population Health
• Attending to the Whole Population
• Social Determinants of Health
• Promoting Health Wellness and Self Determination
• Integrated Care Strategies- Early Intervention and Prevention
Population Health Roots

• Inter-disciplinary framework:
  Complex pathways contribute to health outcomes of communities

• Social Conditions and Health Equity

“The condition of truth is always to allow suffering to speak and it has to be the condition of everybody...

Justice is what love looks like in public...
Tell the truth and bear witness to justice....”

-Dr Cornel West
1**st WAVE: Building the Foundation**
- De-institutionalization *(Getting people into the community)*
- Expanding Network of Providers
- Creating CBH (Administrative Infrastructure)
- Creating the Department & a single payer system

2**nd WAVE: Transformation Decade**
- Improving quality of life *(recovery, resilience, self-determination)* *(Helping people to be a part of the community)*
- Creating Learning Organization

3**rd WAVE: Population Health**
- Promoting Health & Wellness for the population *(Promoting Healthy Communities)*
- Single unifying framework for all services and populations
- Reaching everyone
- Efficiency and Effectiveness
What does it mean to take a Population Health Approach?

• Focusing on the health of a community

• Improving the health status of everyone in a community, not just those who are “sick”

• Providing excellent clinical care AND

• Community level interventions and services
“...through community-level interventions and services, population approaches help to create communities in which every member—not just those who seek out health services—can thrive.”
PARADIGM SHIFT

PERSON
TRADITIONAL MODEL

POPPULATION
AS A WHOLE
The 5 Principles Needed for a Population Health Approach

1. Attend to the whole population
2. Promote health, wellness, and self determination
3. Provide prevention and early interventions
4. Address the social determinants of health
5. Empower individuals and communities to keep themselves healthy
Factors that Influence Health Status

- **Lifestyle (51%)**
  - Smoking
  - Obesity
  - Stress
  - Nutrition
  - Alcohol
  - Drug Use

- **Human Biology (20%)**

- **Environment (19%)**

- **Health Care (10%)**
Addressing the Social Determinants of Health

- Income and Income Distribution,
- Education, Unemployment and Job Security,
- Employment and Working Conditions,
- Early Childhood Development,
- Food Insecurity,
- Housing,
- Social Exclusion,
- Social Safety Network,
- Health Services,
- Aboriginal Status,
- Gender Race and Disability
Population Health Systems

Unit of Intervention
- Population
- Individual

Focus of Intervention
- Core Services
- Health Improvement

Integrated Care Models
Coordinated services for defined populations

Improve outcomes across whole populations

Care Management

Health Promotion

Alderwick, H.
**Rationale for Integrated Care**

- High rates of physical illness and premature mortality among individuals with mental health challenges vs those without\(^1\)
- High cost of physical illness with MH and SA
- People with mental health issues may receive a lower quality of care in traditional primary care settings\(^2\)
- Access to care may be a barrier for some populations
- Health behaviors make significant contribution to health outcomes\(^3\)
  - Poor self care, lower adherence, substance use, diet, activity
- Different personalities in medical settings

\(^1\)-Kessler et al, 2003
\(^2\)-Mitchell et al, 2009
\(^3\)-Unutzer et al, 2013
Mental Illness Increases Overall Costs of Medical Conditions

Studies have found that when asthma, cardiovascular disease, and diabetes have comorbid psychiatric and substance abuse diagnoses, the cost of care can double or triple, according to the TAC Tool Kit. These data reflect the impact of behavioral health comorbidities on per capita costs for Medicaid-only beneficiaries.

Source: Cynthia Boyd, M.D., M.P.H., et al., Center for Health Care Strategies Inc, December 2010 (Reprinted in TAC Tool Kit)
PA Medicaid Data

- All inpatient medical admissions through Medicaid in 2013 studied
- Findings:
  - 38.8% of all physical health index stays had a primary BH diagnosis within 1 year prior to the index stay
  - There is a significant difference in medical inpatient readmission rates between those with a primary diagnosis of a behavioral health condition - 4% higher (p<0.001)
    - Those with multiple chronic conditions, a BH condition and SUD have the highest readmission rate (22.2% vs 15% without)
    - Initiation and Engagement of individuals in treatment of SUD is suboptimal

Source: DHS, OMAP / OMHSAS - Behavioral Health/Physical Health Readmission Study
Why Integrate?

- Majority of primary care encounters are behavioral health related (Blount, 2007)
- <20% of visits to PCP are for symptoms with a discoverable organic cause (Kroenke, 1989)
  - 10% are clearly psychiatric in nature
- Only 10-15% of the most common physical complaints in primary care have a corresponding diagnosis (Kroenke, 1989)
- 75% of those with depression present with physical symptom as reason for visit (Unutzer et al, 2006)
Current Depression Care

• 2/10- see a psychiatrist or psychologist (Unitzer et al, 2013)
• 4/10- receive treatment in primary care
  • Only 20% of those receiving medications in usual primary care show improvement
  • PCP education ineffective (Unutzer et al, 2006)
• 2/10- no treatment
Barriers to BH Treatment

- Medical providers may be reluctant to refer out and staff do not follow-up with referrals for treatment
- Stigma may be associated with MH Treatment and facilities
- $\frac{1}{2}$ people referred by PCP don’t go (Grembowski et al, 2002)
- Multiple administrative hurdles with traditional treatment
  - Longer intake process
  - Stricter no show and late policies
## Cultural Issues

<table>
<thead>
<tr>
<th>Primary Care</th>
<th>Behavioral Health</th>
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</thead>
<tbody>
<tr>
<td>Flexible boundaries</td>
<td>Firmer boundaries with more neutrality</td>
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<tr>
<td>Time limited encounters</td>
<td>Spend more time with individuals</td>
</tr>
<tr>
<td>Shifting Roles</td>
<td>Consistent Roles</td>
</tr>
<tr>
<td>Less likely to discharge or close case</td>
<td>More rigid no show policies and case closing</td>
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<tr>
<td>Greater data sharing culture</td>
<td>Confidential records</td>
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<tr>
<td>Disease management</td>
<td>Recovery and quality of life focused</td>
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<tr>
<td>“Fix-it” mentality</td>
<td>Help individual through change</td>
</tr>
<tr>
<td>Less defined complaints</td>
<td>Usually have defined complaints</td>
</tr>
<tr>
<td>Less comfortable with nuance</td>
<td></td>
</tr>
<tr>
<td>More targeted outcome measures</td>
<td>Outcomes less quantifiable traditionally</td>
</tr>
</tbody>
</table>

Adapted from Raney, L. Integrated Care: Working at the Interface of Primary Care and Behavioral Health, APA, 2015
59% of psychiatrists are 55 or older

1995 - 2013, the total number of adult and child psychiatrists in the US rose by just 12 percent, from 43,640 to 49,079 (vs 45% other physicians)

US population increased by about 37%

4,000 areas nationwide where there is only 1 psychiatrist per 30,000 individuals
• 33.9 licensed psychologists per 100,000 in US

• Lower in certain areas (11.9) corresponding with worse health indicators in the population (American Psychological Association, 2014 Data)

• Current system incapable of meeting needs of the population (Kazdin, 2011)
Barriers to BH Treatment

• Motivation to engage in treatment may be limited

• Not all with SUD and MH issues are in preparation stage of change - traditional BH treatments do not address this well

• Mean number of MH visits = 2 (Simon, 2012)

• Not everyone in primary care has a diagnosable, treatable mental illness, but could benefit from behavioral interventions by staff with expertise - at-risk population and healthy individuals who need assistance with health behavior interventions
Integrated Care

- Not all people with a diagnosis are seeking, engaged and connected with treatment
- Not all with those with challenges want traditional treatments
- Being sad does not mean you have depression
- Using alcohol or other drugs does not always mean you are appropriate for traditional treatment
- Health behaviors are vital to health - diet, Exercise, Smoking cessation, minimizing alcohol use
- TRADITIONAL TREATMENT is not designed for the at-risk and healthy populations
Coordinated Services or Silos?

- Primary Care
- Community Mental Health Centers
- Addiction Treatment
- Social Services
- Other Community Based Social Services
Integrated Care and Population Health

Traditional Focus

Diagnosed

At Risk

Healthy
The care that results from a practice TEAM of primary care and behavioral health clinicians, working with patients and families, using a SYSTEMATIC and cost-effective approach, to provide PATIENT-CENTERED care for a DEFINED POPULATION.

- This care may address:
  - Mental health and substance abuse conditions
  - Health behaviors (including their contribution to chronic medical issues)
  - Life stressors and crisis
  - Stress related physical symptoms
  - Ineffective patterns of health care utilization

Source: http://integrationacademy.ahrq.gov/lexicon
Models of Care Delivery

- **Patient-Centered Medical Home (PCMH)** Target is all primary care patients who are comprehensively assessed, cohorts are identified and managed
  - Screenings with standardized tools, intervention and treatment are embedded based on population needs;
- **Health Home** Comprehensive/Integrated Care for a defined population(s)
  - Ex- SMI-CCBHC or “behavioral health home”; SUD health homes
- **System-Wide Integration** across agencies, departments
How Does Integrated Care Support Population Health?

- Universal screening - SUD, MH
- Care guidelines - evidenced based care
- Intervention and Referral Protocols based on assessment
- Develop Population Focus:
  - Benchmarking and metrics used to establish priorities for care delivery, identify high utilizers and those not responding to treatment and engage in quality improvement
  - Emphasis on population outcomes/VALUE not Volume
- Professionals working in non traditional settings
- Promote health for the diagnosed, the un-diagnosed, at-risk and healthy
How Does Integrated Care Support Population Health?

• Teach medical staff to deliver behavioral interventions that promote good clinical outcomes and foster engagement
• Greater role in health behavior change and identifying barriers to managing physical illness
  – Ex- non-adherence
• Motivational Interviewing/MET, behavioral activation for health behaviors
• Providing education and guidance on other health issues such as sleep hygiene, diet, exercise, and medication adherence
• SHARED accountability for ALL population outcomes
• TEAM based care with WHOLE person orientation
How Does Integrated Care Support Population Health?

• Shape behavioral healthcare for a defined populations in primary care

• Consulting indirectly through care team on a defined caseload in primary care

• STEPPED CARE:
  – Care is offered that causes minimal disruption - least extensive, intensive, and expensive care needed to yield positive outcomes; and is the least expensive in terms of staff training to provide effective care
  – Intensity of care is stepped up when needed

• EHRs
Four Quadrant Model

- Developed to help consider the location and types of services that could be provided to best meet the needs of patients.
- Quadrant IV represents the population in public settings with SMI

**Quadrant II**
- BH ↑ PH ↓
  - BH Case Manager w/ responsibility for coordination w/ PCP
  - PCP (with standard screening tools and BH practice guidelines)
  - Specially BH
  - Residential BH
  - Crisis/ER
  - Behavioral Health IP
  - Other community supports

**Quadrant IV**
- BH ↑ PH ↑
  - PCP (with standard screening tools and BH practice guidelines)
  - BH Case Manager w/ responsibility for coordination w/ PCP and Disease Mgr
  - Care/Disease Manager
  - Specially medical/surgical
  - Specially BH
  - Residential BH
  - Crisis/ER
  - BH and medical/surgical IP
  - Other community supports

**Quadrant I**
- BH ↓ PH ↓
  - PCP (with standard screening tools and BH practice guidelines)
  - PCP-based BH*

**Quadrant III**
- BH ↓ PH ↑
  - PCP (with standard screening tools and BH practice guidelines)
  - Care/Disease Manager
  - Specially medical/surgical
  - PCP-based BH (or in specific specialties)*
  - ER
  - Medical/surgical IP
  - SNF/home based care
  - Other community supports

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*PCP-based BH provider might work for the PCP organization, a specialty BH provider, or as an individual practitioner, is competent in both MH and SA assessment and treatment.
Integrated Care Models Improve Population Health

• More than 70 randomized controlled trials have shown collaborative care for common mental disorders such as depression to be more effective and cost-effective than usual care in primary care, across diverse practice settings and populations (Unützer, J et al. May 2013)

• Medical outcomes better vs usual care
  – Reduced costs\(^1\) (ED visits)
  – Better experience of care\(^1\)
  – Improvements in self management of chronic medical conditions
  – Improvements in overall functioning (occupational, social)\(^2\)
  – Increased physical activity


2-Raney, Integrated Care, Working at the Interface of Primary Care and Behavioral Health
# Integrated Care Model Outcomes

<table>
<thead>
<tr>
<th>Study</th>
<th>Effect Size (95% CI)</th>
<th>Weight (%)</th>
</tr>
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<tbody>
<tr>
<td>Reductions in Depression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unützer et al., 2002 (51)</td>
<td>0.60 (0.50, 0.69)</td>
<td>9.75</td>
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<tr>
<td>Swindle et al., 2003 (55)</td>
<td>0.19 (0.08, 0.45)</td>
<td>7.26</td>
</tr>
<tr>
<td>Liu et al., 2003 (110)</td>
<td>0.07 (-0.14, 0.28)</td>
<td>8.53</td>
</tr>
<tr>
<td>Oslin et al., 2003 (87)</td>
<td>0.63 (0.23, 1.04)</td>
<td>5.88</td>
</tr>
<tr>
<td>Datto et al., 2003 (53)</td>
<td>0.45 (0.14, 0.96)</td>
<td>4.29</td>
</tr>
<tr>
<td>Bruce et al., 2004 (57)</td>
<td>0.08 (-0.11, 0.28)</td>
<td>8.72</td>
</tr>
<tr>
<td>Asarnow et al., 2005 (63)</td>
<td>0.19 (-0.02, 0.40)</td>
<td>8.49</td>
</tr>
<tr>
<td>Callahan et al., 2006 (89)</td>
<td>0.50 (0.18, 0.83)</td>
<td>6.98</td>
</tr>
<tr>
<td>Smith et al., 2006 (90)</td>
<td>0.15 (-0.13, 0.42)</td>
<td>7.65</td>
</tr>
<tr>
<td>Richards et al., 2008 (69)</td>
<td>0.72 (0.57, 0.88)</td>
<td>5.15</td>
</tr>
<tr>
<td>Kilbourne et al., 2008 (81)</td>
<td>0.00 (-0.52, 0.52)</td>
<td>4.71</td>
</tr>
<tr>
<td>Ross et al., 2008 (70)</td>
<td>0.05 (-0.25, 0.35)</td>
<td>7.16</td>
</tr>
<tr>
<td>Kroenke et al., 2009 (71)</td>
<td>0.77 (0.51, 1.03)</td>
<td>7.88</td>
</tr>
<tr>
<td>Davidson et al., 2010 (73)</td>
<td>0.48 (0.17, 0.80)</td>
<td>7.06</td>
</tr>
<tr>
<td>Subtotal (I-squared=79.4%, p=0.000)</td>
<td>0.31 (0.16, 0.47)</td>
<td>100.00</td>
</tr>
</tbody>
</table>

| Mental Quality of Life | | |
| Druss et al., 2001 (85) | -0.15 (-0.51, 0.21) | 13.62 |
| Asarnow et al., 2005 (63) | 0.15 (-0.04, 0.34) | 26.96 |
| Richards et al., 2008 (69) | 0.49 (-0.27, 0.88) | 6.27 |
| Ross et al., 2008 (70) | 0.10 (-0.21, 0.41) | 16.53 |
| Kilbourne et al., 2008 (81) | 0.40 (-0.12, 0.92) | 6.68 |
| Druss et al., 2010 (93) | 0.37 (0.17, 0.57) | 26.53 |
| Subtotal (I-squared=40.1%, p=0.138) | 0.20 (0.04, 0.36) | 100.00 |

| Physical Quality of Life | | |
| Druss et al., 2001 (85) | 0.66 (0.29, 1.02) | 13.59 |
| Richards et al., 2008 (69) | 0.03 (-0.45, 0.51) | 8.90 |
| Ross et al., 2008 (70) | 0.30 (-0.01, 0.61) | 17.29 |
| Kilbourne et al., 2008 (81) | 0.28 (-0.27, 0.77) | 7.79 |
| Kroenke et al., 2009 (71) | 0.46 (0.21, 0.71) | 22.73 |
| Druss et al., 2010 (93) | 0.21 (0.01, 0.40) | 29.71 |
| Subtotal (I-squared=31.1%, p=0.203) | 0.33 (0.17, 0.49) | 100.00 |

| Overall Quality of Life | | |
| Unützer et al., 2002 (51) | 0.26 (0.17, 0.36) | 75.74 |
| van Orden et al., 2009 (92) | 0.00 (-0.28, 0.28) | 24.29 |
| Subtotal (I-squared=41.8%, p=0.190) | 0.20 (-0.02, 0.42) | 100.00 |

| Global Mental Health | | |
| Druss et al., 2001 (85) | 0.11 (-0.25, 0.47) | 52.81 |
| van Orden et al., 2009 (92) | 0.00 (0.0, 0.0) | 45.19 |
| Subtotal (I-squared=0.0%, p=0.889) | 0.09 (-0.17, 0.35) | 100.00 |

| Social Role Function | | |
| Kroenke et al., 2009 (71) | 0.21 (-0.04, 0.45) | 32.91 |
| Unützer et al., 2002 (51) | 0.34 (-0.25, 0.93) | 34.02 |
| Kilbourne et al., 2008 (81) | -0.18 (-0.70, 0.33) | 13.07 |
| Subtotal (I-squared=56.2%, p=0.102) | 0.23 (-0.02, 0.44) | 100.00 |

- Comparison model is better
- Chronic care model is better

Raney, L. Integrated Care: Working at the Interface of Primary Care and Behavioral Health, APA, 2015- meta-analyses
Integrated Care

- Integrated Care Models can help achieve the Triple Aim of improved health outcomes, improved quality of care and reduced costs (Berwick, 2008)

- For $1 spent on collaborative care, $6.50 savings in health care costs overall (Unutzer, 2013)
71% of those receiving services, even the most severe

- Those with more severe impairment at baseline improved faster than less severe
- Those receiving just 2-3 visits showed broad improvement in sx, functioning, well-being
- These changes were robust and stable during 2-year follow-up
Among women who had three or more BHC encounters during pregnancy:
- Lower estimated blood loss for C-sections,
- Fewer admissions to the Prenatal Emergency Center
- Fewer infections, including STDs and UTIs
- Fewer maternal fetal medicine appointments
- Significantly fewer overall pregnancy related medical visits
- Lower average BMI at delivery

Women with only one or no BHC encounters were more likely to have a baby with an intrauterine growth restriction than those with three or more visits.

Source: Eneniziaogochukwu Okocha, MD, Sara L. Komfield, PHD, C. Neill Epperson, MD. University of Pennsylvania
BHC Outcomes- HIV

FIGURE 1: PRE AND POST-BHC INTERVENTION FINDINGS, N=471

- Retention in Care: Pre-Intervention 80.7%, Post-Intervention 91.3%
  - *p < .05*

- ART Prescription: Pre-Intervention 87.1%, Post-Intervention 93.6%
  - *p < .05*

- Viral Suppression: Pre-Intervention 65.0%, Post-Intervention 75.2%
  - *p < .05*
Local Integrated Care Initiatives

• Provider Models:
  – Behavioral Health Consultant model in medical settings (>20 FQHCs)
  – CCBHCs- SMI Health Homes
  – SUD Health Homes- “Centers of Excellence”

• Collaboration with PH-MCOs
  – Community Based Care Management Program with HPP
  – ICP Initiative

• Collaboration with PDPH
  – Joint clinical guidelines and protocols

• PDMP

• Embedding other BH Professionals in alternative settings (peers)
Integrated Care Plan- PA

- Collaboration between PH and BH Medicaid managed care organizations in PA
- Target: Individuals with SMI diagnosis
- Both parties accountable for all outcome measures
- Required daily data exchange of information regarding all cause admissions, and ER visits
- Coordination of care- shared care plans to be developed
- Shared system level interventions
- Screening for Social Determinants of health
1. Initiation and Engagement of Alcohol and Other Drug Dependence Treatment

2. Adherence to Antipsychotic Mediations for Individuals with Schizophrenia

3. Combined BH-PH Inpatient 30 Day Readmission Rate for Individuals with Serious Persistent Mental Illness (SPMI)

4. Emergency Department Utilization for Individuals with Serious Persistent Mental Illness

5. Combined BH-PH Inpatient Admission Utilization for Individuals with Serious Persistent Mental Illness (PSMI)
• ROUND TABLE