Evidence-Based Behavioral Health Integration

A New Perspective on Chronic Care

Erik Vanderlip MD MPH
Assistant Professor
University of Oklahoma School of Community Medicine
Medical Informatics and Psychiatry

Disclosures: With respect to the following presentation, I have no financial or monetary conflicts of interest, pharmaceutical industry ties or Swiss bank accounts. I will not be discussing the use of any off-label treatments, therapies, medical devices or scooters. I won't be discussing drugs to make people feel better. I'll be discussing people making people feel better. I don't own any people. My wife owns me.

my bosses...
Who am I?

Roots: Me and Gerry Clancy, Oklahoma
us and them

http://www.americashealthrankings.org/states
Who am I?

Evidence-Based Behavioral Health Integration

A New Perspective on Chronic Care

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What are some current models for better integrating mental health and primary care services?
...the most effective talks seem to be those that emphasize practical issues with bottom-line advice...

Objectives

1 2

I have 2 objectives with this talk.
What’s in the (final) Mix?

Physiological:
- PHQ-9
- PCL-C
- GAD-7

Psychosocial:
- PANSS
- YMRS
- Internal State

Substance Use Disorders:
- Cig Eq./Day
- AUDIT
- Opiate Scale

Biological:
- A1c
- SBP
- LDL
- BMI
- Viral Load
- PFT/FEV
- Peak Flow
- Pain Questionnaire

Sociological:
- Residential Time
- Line Feed
- Back Scale
- Employment Measure
- WHO-DAS
- Legal
- Financial
- Interpersonal Relations
- Social Support Questionnaire
- Recovery Instrument (Milestones)

Patient PHQ-9 Cigs/Day A1c SBP LDL Housing Status Recovery Scale

<table>
<thead>
<tr>
<th>Patient</th>
<th>PHQ-9</th>
<th>Cigs/Day</th>
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</table>

Why discuss the chronic care model?

1. Applicable: Common problems
2. Disable: Directly affect health/outcome
3. Reliable: Interdependent
4. Changeable: Treatment exists
5. Doable: "Measurable, Screenable, Trackable, Reliable"

The Chronic Care Model

1. Why discuss the chronic care model?
We are living with and dying of chronic conditions.

Mental illnesses AND unhealthy behaviors account for greatest burden of disease.

Behavioral health conditions account for the largest proportion of years of productive life lost (YPLL).
Leading Determinants of Overall Health are Behavioral

- Behavioral: 15%
- Genetic: 30%
- Socioeconomic: 40%
- Environment: 10%
- Health Care: 5%


DIABETES
The quintessential chronic disease.

The Chronic Care Model

Iterations of the Chronic Care Model: “Collaborative Care”

1995 “CC”
2001 IMPACT
2010 TEAMcare

Collaborative Management to Achieve Treatment Guidelines

Impact on Depression in Primary Care

Wayne Katon, MD; Michael Von Korff, MD; Elizabeth Lin, MD; MPH; Edward Walker, MD; Greg E. Simon, MD, MPH; Terry Bush, PhD; Patricia Robinson, RNC; Joan Reas, PhD

Objective—To compare the effectiveness of a multifaceted intervention in the treatment of depression in primary care with the effectiveness of usual care by the primary care team.

Design—A randomized controlled trial among primary care patients with major depression or minor depression.

Patients—Over 1200 primary care patients were randomized to one of three teams: one group received enhanced treatment (IMPACT), one group received usual care (TEAMcare), and one group received no treatment (control). The groups were compared on a variety of outcome measures, including depression severity, quality of life, and healthcare utilization.

Impact—The IMPACT group showed significant improvements in depression severity and quality of life compared to the other two groups. The TEAMcare group also showed improvements, but not as significant as the IMPACT group. The control group did not show any improvements.

Ahead of the game...

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Billboard Year-End Hot 100 singles of 1995

From Wikipedia, the free encyclopedia

This is a list of Billboard magazine's Top Hot 100 songs of 1995.[1]

<table>
<thead>
<tr>
<th>No</th>
<th>Title</th>
<th>Artist(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&quot;Groove Is In The Heart&quot;</td>
<td>Koos Kortje</td>
</tr>
<tr>
<td>2</td>
<td>&quot;Nothing's Gonna Stop Us Now&quot;</td>
<td>TLC</td>
</tr>
<tr>
<td>3</td>
<td>&quot;What a Girl Wants&quot;</td>
<td>Seal</td>
</tr>
<tr>
<td>4</td>
<td>&quot;I'll Be Waiting for You&quot;</td>
<td>Bryan Adams</td>
</tr>
<tr>
<td>5</td>
<td>&quot;I'll Be Waiting for You&quot;</td>
<td>Bryan Adams</td>
</tr>
<tr>
<td>6</td>
<td>&quot;I'll Be Waiting for You&quot;</td>
<td>Bryan Adams</td>
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<td>7</td>
<td>&quot;I'll Be Waiting for You&quot;</td>
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</tr>
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<td>&quot;I'll Be Waiting for You&quot;</td>
<td>Bryan Adams</td>
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</table>
"Core Principles of Effective Collaborative Care"

Patient-Centered Care Teams
- Team-based care: effective collaboration between PCPs and Behavioral Health Providers.

Population-Based Care
- Patients tracked in a registry: no one 'falls through the cracks'.

Measurement-Based "Treat to Target"
- Measurable treatment goals clearly defined and tracked for each patient.
- Treatments are actively changed until the clinical goals are achieved – "treat to target".

Evidence-Based Care
- Treatments used are 'evidence-based'.
- Pharmacology, brief psychotherapeutic interventions, models.

IMPACT Collaborative Care Model *Incarnate*

Collaborative Team Approach

The IMPACT Data

Doubles Effectiveness of Care for Depression

50% or greater improvement in depression at 12 months

Participating Organizations

Figure 1: Percentage improvement in depression using IMPACT model and care as usual.


http://uwaims.org


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**IMPACT Data, Savings**

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>6-year costs in $</th>
<th>Intervention group cost in $</th>
<th>Usual care group cost in $</th>
<th>Difference in $</th>
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</thead>
<tbody>
<tr>
<td>IMPACT program cost</td>
<td>522</td>
<td>0</td>
<td>522</td>
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</tr>
<tr>
<td>Outpatient mental health costs</td>
<td>661</td>
<td>558</td>
<td>757</td>
<td>-210</td>
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<tr>
<td>Pharmacy costs</td>
<td>7,284</td>
<td>6,942</td>
<td>7,638</td>
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<tr>
<td>Other outpatient costs</td>
<td>14,316</td>
<td>14,180</td>
<td>14,456</td>
<td>-276</td>
</tr>
<tr>
<td>Inpatient medical costs</td>
<td>8,452</td>
<td>7,179</td>
<td>9,757</td>
<td>-2578</td>
</tr>
<tr>
<td>Inpatient mental health / substance abuse costs</td>
<td>114</td>
<td>61</td>
<td>166</td>
<td>-108</td>
</tr>
<tr>
<td>Total health care cost</td>
<td>31,082</td>
<td>29,422</td>
<td>32,785</td>
<td>-3363</td>
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</table>

**Iterations of the Chronic Care Model: “Collaborative Care”**

1995 “CC” → IMPACT → TEAMcare

The evolution of collaborative care to envelop multiple chronic conditions.
Mary (new) 9.5 – 21 – 125 – 115 –

Todd 9.2 7.3 15 4 145 135 245 150

John 10.7 8.2 13 6 155 138 195 122

Gregor 8.9 7.1 22 11 135 137 168 110

Lucy 11.2 9.4 18 13 163 132 213 145

Bess 9.8 7.4 25 8 149 137 218 125
When treated in harmony with mental health, chronic physical health improves significantly. 1


Overall quality of life and physical health improve consistently. 2


Intelligent Integration Breeds Synergy

After 12 months of care, multi-condition collaborative care improved patient satisfaction in depression AND diabetes care. 1

Collaborative Care: Evidence Beyond Evidence

“Seventy-nine RCTs (including 90 relevant comparisons) involving 24,308 participants in the review.”

“Collaborative care is associated with significant improvement in depression and anxiety outcomes compared with usual care, and represents a useful addition to clinical pathways for adult patients with depression and anxiety.”

Archer, 2012, Cochrane

What are some current models for better integrating mental health and primary care services?

Two models to choose from...

BHC  CC

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BHC: Co-Located Behavioral Health (Helps Reduce Stigma)

- Behavioral health in the same space with primary care
- Involvement by referral
- Separate behavioral health and medical treatment plans

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access improved at first</td>
<td>Referrals don’t show</td>
</tr>
<tr>
<td>Improved patient &amp; provider satisfaction</td>
<td>Case-loads fill up</td>
</tr>
<tr>
<td>Cost effective (cheaper to implement)</td>
<td>Slow primary care physician learning curve</td>
</tr>
<tr>
<td>Improved clinical outcomes?</td>
<td>Communication still difficult</td>
</tr>
</tbody>
</table>

Collaborative Care

- Behavioral health not necessarily in the same space with primary care
- Involvement through caseload review
- Integrated treatment plans

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access greatly improved</td>
<td>More complicated intervention</td>
</tr>
<tr>
<td>Improved patient &amp; provider satisfaction</td>
<td>Workforce retraining required</td>
</tr>
<tr>
<td>Cost effective</td>
<td>Needs top-down support</td>
</tr>
<tr>
<td>Improved clinical outcomes!</td>
<td>Payment reform is lagging</td>
</tr>
<tr>
<td>Increased learning curves</td>
<td>Not all recommendations are passed through</td>
</tr>
<tr>
<td>True to chronic care model</td>
<td></td>
</tr>
</tbody>
</table>

In Summation  CC is hard to implement but highly effective.

Cost is often a limiting factor.
Cost-Effectiveness of On-Site Versus Off-Site Collaborative Care for Depression in Rural FQHCs

Jeffrey M. Payne, M.D., John C. Fontney, Ph.D., Bip Moudian, M.S., C.R.E.C., Lita Li, M.S., Teresa J. Hullborn, Pharm.D., Omeesh Patel, M.D.

Objective: Collaborative care for depression in primary care settings is effective and cost-effective. However, there is minimal evidence to support the choice of on-site versus off-site models. This study examined the cost-effectiveness of on-site practice-based collaborative care (PBCC) versus off-site telephonic collaborative care (TCC) for depression in federally qualified health centers (FQHC).

Methods: In this multi-center randomized, pragmatic, comparative, cost-effectiveness trial, 1,365 patients were screened for depression (PHQ-2/PHQ-9 screened positive) and were randomized. Telephone interviews were conducted at baseline and at 12, 24, and 36 months. Rate case analysis used the Cost Analysis Model for Collaborative Care (CASC) to generate an empirical joint distribution of incremental cost and QALYs, and acceptability curves.

Results: The PBCC intervention resulted in more depression-free days and QALYs but at a greater cost than the TCC intervention. The dose-specific depression-free days and QALYs were lower for the PBCC intervention when compared to the TCC intervention. The incremental Cost/QALY was lower for the PBCC intervention than the TCC intervention.

Conclusions: These results support the cost-effectiveness of PBCC in medically underserved primary care settings in comparison to TCC. This study found that primary care depression care management is important, even the current interest in patient-centered medical homes, value-based purchasing, and bundled payments for depression care.

Perspective

Setting Value-Based Payment Goals — HHS Efforts to Improve U.S. Health Care

John H. Sample

In the Affordable Care Act (ACA), the federal government has set ambitious goals to improve the quality and efficiency of health care. These goals are part of a broader strategy to transform the U.S. health care system to be more patient-centered, to reduce waste, and to make health care more affordable for all Americans.

In particular, the ACA established the Center for Medicare and Medicaid Innovation (CMMI) to test new payment models and to develop a framework for value-based payment. These models aim to shift the focus of payment from the volume of services provided to the outcomes achieved.

The CMMI has implemented several payment models, including the Advanced Alternative Payment Model (A-APM) for Medicare, which test new payment models for specialty care, population health, and other areas. These models are designed to encourage providers to deliver care that is more efficient, more effective, and more patient-centered.

To support these efforts, the Health and Human Services (HHS) has established the Health Care Payment Learning and Action Network (PALN), which brings together a wide range of stakeholders to share best practices, learn from each other, and help advance the transition to value-based payment.

These efforts are part of a broader effort to transform the U.S. health care system to be more efficient, more effective, and more patient-centered.

3/20/2016
Perhaps even more important, our target is to have 30% of Medicare payments tied to quality or value through alternative payment models by the end of 2016, and 50% of payments by the end of 2018. Alternative payment models include accountable care organizations (ACOs) and bundled-payment arrangements under which health care providers are accountable for the quality and cost of the care they deliver to patients.

Setting Value-Based Payment Goals — HHS Efforts to Improve U.S. Health Care

Though not prime time just yet, CC is growing.

...the most effective talks seem to be those that emphasize practical issues with bottom-line advice...
Objectives

I have 2 objectives with this talk.

What's in the (final) Mix?

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<tr>
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"What gets paid attention to, gets paid attention to."
"Core Principles of Effective Collaborative Care"

Patient-Centered Care

- Team-based care: effective collaboration between PCPs and Behavioral Health Providers.

Population-Based Care

- Patients tracked in a registry: no one 'falls through the cracks'.

Measurement-Based "Treat to Target"

- Measurable treatment goals clearly defined and tracked for each patient
- Treatments are actively changed until the clinical goals are achieved - "treat to target"

Evidence-Based Care

- Treatments are evidence-based
- "Already Doing It"

<table>
<thead>
<tr>
<th>Name</th>
<th>A1c (initial)</th>
<th>A1c (recent)</th>
<th>PHQ9 Initial</th>
<th>PHQ9 Recent</th>
<th>SBP Initial</th>
<th>SBP Recent</th>
<th>Non-HDL Initial</th>
<th>Non-HDL Recent</th>
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</thead>
<tbody>
<tr>
<td>Mary (new)</td>
<td>9.5</td>
<td>--</td>
<td>21</td>
<td>--</td>
<td>125</td>
<td>--</td>
<td>115</td>
<td>--</td>
</tr>
<tr>
<td>Todd</td>
<td>9.2</td>
<td>7.3</td>
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<td>195</td>
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<td>Gregor</td>
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<td>22</td>
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A demonstration of population-focused care and "treat-to-target".

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<table>
<thead>
<tr>
<th>Six Components of Effective Measurement</th>
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<tr>
<td>1. Measurement alone is not enough; outcomes must be incorporated into the clinical encounter.</td>
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<tr>
<td>2. Patient-reported outcomes are more accurate than clinician-reported outcomes.</td>
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<td>3. Measures must be collected frequently to accurately assess the most recent clinical state.</td>
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<td>4. Measures must be tightly correlated to the illness state and are typically diagnosis-specific.</td>
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<td>5. Instruments must be reliable and sensitive to change.</td>
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<td>6. Methods must be relatively simple to implement and low cost.</td>
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Vanderlip et al. APM Report on Dissemination of Integrated Care, August 2015.
Measurement alone is not enough, outcomes must be incorporated into the clinical encounter.

“Bad rulers”

Patient-reported outcomes are more accurate than clinician-reported outcomes.

Measures must be collected frequently to accurately assess the most recent clinical state.
Measures must be tightly correlated to the illness state and are typically diagnosis-specific.

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Six Components of Effective Measurement

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Absolutely NOT a good measure.

What’s in the Mix?
Current Model

Psychological Constructs/Measures

Biological Measures

It's not by accident...
1) Common problems
2) Directly impact QoL and Health Outcomes and FUNCTIONING
3) Interdependent: Depression
4) We can change them (apply TREAT TO TARGET guidelines)
5) Easily “able”: “Measurable, Screenable, Trackable, Reliable”
   a. We have good (valid, reliable) instruments for all of these!
**What’s in the Mix?**

**Community/Safety-Net Settings**

1. Applicable: Common problems
2. Disable: Deficits in Functioning
3. Relatable: Interdependent
4. Changeable: Treatment Exists, "TTT"
5. Doable: "Measurable, Screenable, Trackable, Reliable"

---

**Biological**
- A1c
- SBP
- LDL
- BMI
- Viral Load
- PFT/FEV/Peak Flow
- Pain Questionnaire?

**Psychological**
- PHQ-9
- PCL-C
- GAD-7
- SMI: PANSS, YMRS/Internal State
- MMPI

**Substance Use Disorders:**
- Cig Eq./Day
- AUDIT
- Opiate Scale?
- More...

---

**Sociological**
- Residential Time-Line Feed-Back Scale
- Employment Measure
- WHO-045
- Legal
- Financial
- Interpersonal Relations
- Social Support Questionnaire
- Recovery Instrument (Milestones)
- Patient Developed Scales

---

**What to Include? Psychological**

**Problem/Morbidity**

**Outcome/Measure**

**Psychological:**
- Depression
- Trauma, PTSD
- SMI: Bipolar, Schizophrenia
- Personality Disorders

**Substance Use Disorders:**
- Tobacco
- Alcohol
- Opiates
- More...

---

**What to Include? Biological**

**Problem/Morbidity**

**Outcome/Measure**

**Biological:**
- Diabetes
- Hypertension
- Cholesterol
- Obesity
- Hepatitis
- COPD
- Chronic Pain

---

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What to Include? **Sociological**

<table>
<thead>
<tr>
<th>Problem/Morbidity</th>
<th>Outcome/Measure</th>
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<tr>
<td>Sociological:</td>
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</tr>
<tr>
<td>Housing</td>
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<tr>
<td>Employment</td>
<td></td>
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<td>Disability</td>
<td></td>
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<td>Legal</td>
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<td>Financial</td>
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<tr>
<td>Interpersonal</td>
<td></td>
</tr>
<tr>
<td>Relations</td>
<td></td>
</tr>
<tr>
<td>Social Support</td>
<td></td>
</tr>
</tbody>
</table>

**Sociological:**
- Residential Time-Line Feed-Back Scale
- Employment Measure
- WHO‐DAS
- Legal
- Financial
- Interpersonal Relations
- Social Support Questionnaire
- Recovery Instrument (Milestones)
- Patient-Developed Scales

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What’s in the Mix? **Community/Safety-Net Settings**

1) Applicable: Common problems
2) Disable: Directly Effect Health/QoL
3) Relatable: Interdependent
4) Changeable: Treatment Exists, "TPP"
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<table>
<thead>
<tr>
<th>Modularity</th>
<th>(bio)</th>
<th>(social)</th>
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<td>Cigs/Day</td>
<td>A1c</td>
</tr>
<tr>
<td>0 Churns</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>0 Bums</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>0 Work</td>
<td>10</td>
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These materials provided for reference use at the 43rd Annual Family Medicine Refresher Course for the Family Physician. Permission from the author must be sought before reuse or redistribution.
...the most effective talks seem to be those that emphasize practical issues with bottom-line advice...

**Bottom Line**: Just Start Measuring*

*Something Worth Measuring*

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**“Core Principles of Effective Collaborative Care”**

**Patient-Centered Care Teams**
- Team-based care: effective collaboration between PCPs and Behavioral Health Providers.

**Population-Based Care**
- Patients tracked in a registry: no one ‘falls through the cracks’.

**Measurement-Based “Treat to Target”**
- Measurable treatment goals clearly defined and tracked for each patient
- Treatments are actively changed until the clinical goals are achieved – “treat to target”

**Evidence-Based Care**
- Treatments used are ‘evidence-based’
- Pharmacology, brief psychotherapeutic interventions, models
The Lexicon of Healthcare Reform

- Motivational Interviewing
- PCMH
- Behavioral Health Homes
- Co-located Care
- SBIRT
- Integrated Care
- Self-Management Support
- Cardiovascular Disease
- Health Information
- Health Behavior Change
- Patient-Centered
Evidence-Based Behavioral Health Integration

A New Perspective on Chronic Care

Erik Vanderlip MD MPH
Assistant Professor
University of Oklahoma School of Community Medicine
Medical Informatics and Psychiatry

The Chronic Care Model

Community
- Resources and Policies
- Self-Management Support

Health Systems
- Organization of Health Care
- Delivery System Design
- Decision Support
- Clinical Information Systems

Informed, Activated Patient
- Productive Interactions

Prepared, Proactive Practice Team

Improved Outcomes


Iterations of the Chronic Care Model:
“Collaborative Care”

1995
“CC”

2001
IMPACT

2010
TEAMcare
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<th>A1c (initial)</th>
<th>A1c (recent)</th>
<th>PHQ9 Initial</th>
<th>PHQ9 Recent</th>
<th>SBP Initial</th>
<th>SBP Recent</th>
<th>Non-HDL Initial</th>
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**Bottom Line:** Just Start Measuring* 

*Something Worth Measuring

**What's in the (final) Mix?**

1) **Applicable:** Common problems
2) **Disable:** Directly affect health/outcomes
3) **Reliable:** Interdependent
4) **Changeable:** Treatment exists
5) **Disable:** “Measurable, Screenable, Trackable, Reliable”

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<th>LDL</th>
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