Evidence-Based Integrated Care

"New" Concepts of Prevention and Recovery

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...
Define the problem.
re-Define the problem.
The candlestick-maker did not invent the lightbulb.
The final slide.
Who am I?
Roots: Me and Gerry Clancy, Oklahoma
Left brain

I am the left brain.
I am a scientist. A mathematician.
I love the familiar. I categorize. I am accurate. Linear.
Analytical. Strategic. I am practical.
Always in control. A master of words and language.
Realistic. I calculate equations and play with numbers.
I am order. I am logic.
I know exactly who I am.

Right brain

I am the right brain.
I am creativity. A free spirit. I am passion.
Yearning. Sensuality. I am the sound of roaring laughter.
I am taste. The feeling of sand beneath bare feet.
I am movement. Vivid colors.
I am the urge to paint on an empty canvas.
I am everything I wanted to be.
Erik Vanderlip
American, 1979 – Present

Integration of Primary Care and Behavioral Health, 2011
Finger on iPad
Exhibit 1
Wayne Katon, MD
Professor of Psychiatry
Director of Health Services and Epidemiology
University of Washington, Seattle

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

...really just a community psychiatrist...
Evidence-Based Integrated Care

“New” Concepts of Prevention and Recovery

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Oh yeah!
PSYCHIATRIC HELP 5¢

THE DOCTOR IS IN
Objectives

I have 2 objectives with this talk.
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

Why discuss the chronic care model?
We are living with and dying of chronic conditions.
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 (YP LL).

Martin et al., Lancet. 2007; 370:859-877
Leading Determinants of Overall Health are Behavioral

DIABETES

The quintessential chronic disease.
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

Improved Outcomes
- Informed, Activated Patient
- Productive Interactions
- Prepared, Proactive Practice Team

Developed by The MacColl Institute®
ACP-ASIM Journals and Books

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, ScD; Elizabeth Lin, MD, MPH; Edward Walker, MD; Greg E. Simon, MD, MPH; Terry Bush, PhD; Patricia Robinson, PhD; Joan Russo, PhD

Objective.—To compare the effectiveness of a multifaceted intervention in patients with depression in primary care with the effectiveness of “usual care” by the primary care physician.

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

Patients.—Over a 12-month period a total of 217 primary care patients who were recognized as depressed by their primary care physicians and were willing to take antidepressant medication were randomized, with 91 patients meeting criteria for major depression and 126 for minor depression.

Interventions.—Intervention patients received increased intensity and frequency of visits over the first 4 to 6 weeks of treatment (visits 1 and 3 with a primary

SIGNIFICANT advances in medical therapy are not always reflected in everyday clinical practice. Translating a treatment’s biomedical efficacy into practical effectiveness often requires significant changes in the knowledge and attitudes of both physicians and patients, as well as changes in the organization of health care delivery. Efforts to develop guidelines for clinical practice are a response to this gap between knowledge and practice.
### 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>№</th>
<th>Title</th>
<th>Artist(s)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>&quot;Gangsta's Paradise&quot;</td>
<td>Coolio featuring L.V.</td>
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<tr>
<td>2</td>
<td>&quot;Waterfalls&quot;</td>
<td>TLC</td>
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<tr>
<td>3</td>
<td>&quot;Creep&quot;</td>
<td>TLC</td>
</tr>
<tr>
<td>4</td>
<td>&quot;Kiss from a Rose&quot;</td>
<td>Seal</td>
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<tr>
<td>5</td>
<td>&quot;On Bended Knee&quot;</td>
<td>Boyz II Men</td>
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<td>6</td>
<td>&quot;Another Night&quot;</td>
<td>Real McCoy</td>
</tr>
<tr>
<td>7</td>
<td>&quot;Fantasy&quot;</td>
<td>Mariah Carey</td>
</tr>
<tr>
<td>8</td>
<td>&quot;Take a Bow&quot;</td>
<td>Madonna</td>
</tr>
<tr>
<td>9</td>
<td>&quot;Don't Take It Personal (Just One of Dem Days)&quot;</td>
<td>Monica</td>
</tr>
<tr>
<td>10</td>
<td>&quot;This Is How We Do It&quot;</td>
<td>Montell Jordan</td>
</tr>
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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

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IMPACT Collaborative Care Model *Incarnate*
The IMPACT Data

Doubles Effectiveness of Care for Depression

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

## IMPACT Data, Savings

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>4-year costs in $</th>
<th>Intervention group cost in $</th>
<th>Usual care group cost in $</th>
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<td>Outpatient mental health costs</td>
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<td>Other outpatient costs</td>
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<td>Inpatient medical costs</td>
<td>8,452</td>
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<td>Inpatient mental health / substance abuse costs</td>
<td>114</td>
<td>61</td>
<td>169</td>
<td>-108</td>
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<td>Total health care cost</td>
<td>31,082</td>
<td>29,422</td>
<td>32,785</td>
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Iterations of the Chronic Care Model: “Collaborative Care”
The evolution of collaborative care to envelop multiple chronic conditions.
# IMPACT 2.0 Incarnate

## Screenshot from CMTS/MHIP

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<td>8/15/2013</td>
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**Registries of patients.**
# TeamCare Summary Report

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<th>LDL</th>
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<td>Now</td>
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<td>130/80</td>
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<tr>
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<td>126/76</td>
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<tr>
<td>LYN</td>
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<td>3</td>
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<td>111/58</td>
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<tr>
<td>Name</td>
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<td>A1c (recent)</td>
<td>PHQ9 Initial</td>
<td>PHQ9 Recent</td>
<td>SBP Initial</td>
<td>SBP Recent</td>
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<td>8</td>
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</table>
Collaborative Care for Patients with Depression and Chronic Illnesses

Wayne J. Katon, M.D., Elizabeth H.B. Lin, M.D., M.P.H., Michael Von Korff, Sc.D., Paul Ciechanowski, M.D., M.P.H., Evette J. Ludman, Ph.D., Bessie Young, M.D., M.P.H., Do Peterson, M.S., Carolyn M. Rutter, Ph.D., Mary McGregor, M.S.N., and David McCulloch, M.D.
TEAMcare Data, Data on Collaborative Care

When treated in harmony with mental health, chronic physical health improves significantly\(^1\)

- Improved Diabetes\(^1\)
- Improved BP\(^1\)
- Improved Cholesterol\(^1\)

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

¹ Katon et al, NEJM, 2010:363:2611-2620
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
Setting Value-Based Payment Goals — HHS Efforts to Improve U.S. Health Care

Sylvia M. Burwell

Now that the Affordable Care Act (ACA) has expanded health care coverage and made it affordable to many more Americans, we have the opportunity to shape the way care is delivered and improve the quality of care systemwide, while helping to reduce the growth of health care costs. Many efforts have already been initiated on these fronts, leveraging across settings, and greater attention by providers to population health; and harnessing the power of information to improve care for patients.

By the end of 2016, 75% of Medicare payments will be linked to value, and 100% by 2018. 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 rewarded for outcomes and quality.
“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

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Though not prime time just yet, CC is growing.
CMS Announces Medicare Coverage of Psychiatric Consultations in Collaborative Care

Medicare will begin reimbursement next year for collaborative care services, according to an announcement by the Centers for Medicare and Medicaid Services (CMS).

CMS, in its proposed Medicare Physician Fee Schedule rule, has included coverage for “Psychiatric Collaborative Care Management Services.” The coding for those services will support payments to psychiatrists for consultative services they provide to primary care physicians in the collaborative care model (CoCM). The model was developed by the late Wayne Katon, M.D., and Jürgen Unützer, M.D., M.P.H., at the AIMS Center of the University of Washington. It is the only evidence-based model of its kind and has been proven effective in more than 80 randomized, controlled trials.
I have 2 objectives with this talk.
The Gini coefficient (sometimes expressed as a Gini ratio or a normalized Gini index) (/dʒɪnɪ/ jee-nee) is a measure of statistical dispersion intended to represent the income distribution of a nation's residents, and is the most commonly used measure of inequality. It was developed by the Italian statistician and sociologist Corrado Gini and published in his 1912 paper Variability and Mutability (Italian: Variabilità e mutabilità).[^1][^2]

The Gini coefficient measures the inequality among values of a frequency distribution (for example, levels of income). A Gini coefficient of zero expresses perfect equality, where all values are the same (for example, where everyone has the same income). A Gini coefficient of 1 (or 100%) expresses maximal inequality among values (e.g., for a large number of people, where only one person has all the income or consumption, and all others have none, the Gini coefficient will be very nearly one).[^3][^4]

However, a value greater than one may occur if some persons represent negative contribution to the total (for example, having negative income or wealth). For larger groups, values close to or above 1 are very unlikely in practice. Given the normalization of both the cumulative population and the cumulative share of income used to calculate the Gini coefficient, the measure is not overly sensitive to the specifics of the income distribution, but rather only on how incomes vary relative to the other members of a population. The exception to this is in the redistribution of wealth resulting in a minimum income for all people. When the population is sorted, if their income distribution were to approximate a well known function, then some representative values could be calculated.

The Gini coefficient was proposed by Gini as a measure of inequality of income or wealth.[^5] For OECD countries, in the late 20th century, considering the effect of taxes and transfer payments, the income Gini coefficient ranged between 0.24 and 0.49, with Slovenia the lowest and Chile the highest.[^6] African countries had the highest pre-tax Gini coefficients in 2008–2009, with South Africa the world's highest, variously estimated to be 0.63 to 0.7,[^7][^8] although this figure drops to 0.52 after social assistance is taken into account, and drops again to 0.47 after taxation.[^9] The global income Gini coefficient in 2005 has been estimated to be between 0.61 and 0.68 by various sources.[^10][^11]
Is there a way to build ourselves out of this?
“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

What’s in the (final) Mix?

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

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

**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-Developed Scales

### Patient Data

<table>
<thead>
<tr>
<th>Patient</th>
<th>PHQ-9</th>
<th>Cigs/Day</th>
<th>A1c</th>
<th>SBP</th>
<th>LDL</th>
<th>Housing Status</th>
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<td>10</td>
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</table>
“What gets paid attention to, gets paid attention to.”
“Core Principles of Effective Collaborative Care”

Getting There

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’.

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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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<td>10.7</td>
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<td>149</td>
<td>137</td>
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A demonstration of population-focused care and “treat-to-target”.

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<td>6.10%</td>
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What’s in the (final) Mix?

1) **Applicable**: Common problems
2) **Disable**: Directly Effect Health/QoL
3) **Relatable**: Interdependent
4) **Changeable**: Treatment Exists
5) **Doable**: “Measurable, Screenable, Trackable, Reliable”

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<th>A1c</th>
<th>SBP</th>
<th>LDL</th>
<th>Housing Status</th>
<th>Recovery Scale</th>
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<td>13</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

These four principles, together, allow for accountability and performance incentives.

Quality Improvement With Pay-for-Performance Incentives in Integrated Behavioral Health Care

Jürgen Unützer, MD, MPH, MA, Ya-Fen Chan, PhD, Erin Hafer, MPH, Jessica Knaster, MPH, Anne Shields, RN, MPH, Diane Powers, MA, Richard C. Veith, MD

Note. P4P = pay-for-performance.

FIGURE 1—Kaplan-Meier survival curve for time to the first improvement in depression before and after P4P-based quality improvement: Washington State Mental Health Integration Program, January 2008–December 2010.
*re-Define the problem.
Oh yeah!
This is not healthcare as we know it.
Neither is this.
The final slide.
Questions?