TEAMcare at The Polyclinic: Multi-Condition Collaborative Care for Diabetes, Heart Disease and Depression

Elise Ernst, MEd, MSW, MBA
Oren Townsend, MD
Paul Ciechanowski, MD, MPH
Multi-Condition Collaborative Care: An Effective Model for Integrating Behavioral Health in Primary Care and ACO Settings

Paul Ciechanowski, MD, MPH
Associate Professor
Dept. of Psychiatry
Diabetes Care Center
University of Washington
Seattle, WA
Mr. T.

64 yr. old married, naval shipyard worker
- Uncontrolled type 2 diabetes (A1c = 9.6%)
- Hypertension (BP = 174/94 mmHg)
- Hyperlipidemia (LDL = 141 mg/dL)
- Obesity (Weight = 269 lbs; BMI = 39.7 kg/m²)
- Hypothyroidism, psoriasis, gout
- History of diverticulitis, kidney stones

Medications: glyburide, lisinopril, atenolol, atorvastatin, levothyroxine
It gets worse...
Mr. T.

Primary complaint: ongoing fatigue

PHQ-9 = 19/27:
meets criteria for major depression
The Challenge of Multiple Comorbidity for the US Health Care System

Anand K. Parekh, MD, MPH
Mary B. Barton, MD, MPP

The aging of the US population, combined with improvements in modern medicine, has created a new challenge: approximately 75 million people in the United States have multiple (2 or more) concurrent chronic conditions, defined as “conditions that last a year or more and require ongoing medical attention and/or limit activities of daily living.” Is the 21st-century US health care system prepared to deal with the consequences of successfully treating patients who have conditions, often multiple, that they would not have survived in the early 20th century? Current indications suggest that it is not.

As the number of chronic conditions affecting an individual increases, so do the following outcomes: unnecessary hospitalizations; adverse drug events; duplicative tests; conflicting medical advice; and, most important, poor functional status and death. Approximately 65% of total health care spending is directed at the approximately 25% of US population who have multiple chronic conditions. Individuals with multiple chronic conditions also face financial challenges related to the out-of-pocket costs of their care, including higher prescription drug costs and total out-of-pocket health care spending.

The "Multi-Condition" Patient

JAMA, April 7, 2010
Study: 161,697 Patients

- $\text{HbA}_{1c} \geq 8.5\%$
- Systolic blood pressure $> 140$ mmHg
- LDL $> 130$ mg/dL

Study: 161,697 Patients

Adequate Adherence

20-23% Poor Adherence

Clinical Inertia: 30-47% lacked treatment intensification by healthcare team.

Patient Identification

• Automated data (ICD-9) of having:
  • diabetes and/or coronary artery disease

• Poor disease control:
  • $HbA1c \geq 8.5\%$
  • Blood pressure $> 140/90 \text{ mmHg}$
  • LDL $> 130 \text{ mg/dL}$

• PHQ-9 $\geq 10$
Program Goals

• Improve depression care
  • Behavioral activation
  • Antidepressants
• Improve medical disease control
  • HbA$_{1c}$, HTN, LDL
• Improve self-care
  • Diet, Exercise
  • Cessation of Smoking
• Glucose Monitoring
Program Goals

- A1c
- Blood Pressure
- Cholesterol (LDL)
- Depression
Collaborative Depression Care + Chronic Care Model + Treat-to-Target Approach

One Approach Across Different Chronic Illnesses

Wagner, 1996; Bodenheimer 2002; Katon 1995; Unutzer 2002; Riddles 2003
Core Components

- Identify Goals
- Support Self-Care
- Monitor Progress
- Treat-to-Target
- Systematic Case Review
- Care Coordination
Core Components

- Identify Goals
- Support Self-Care
- Monitor Progress
- Treat-to-Target
- Systematic Case Review
- Care Coordination
Improving Adherence

• Patient self-care materials: book and video on depression, patient manual
• Nurse support/education/motivational interviewing
• Medisets
• Simplifying medication regimen
• $4 generics to avoid $10 co-pays
Self-Monitoring Tools
Care Managers

- Motivational interviewing/enhancement
- Problem solving
- Behavioral activation
### Decisional Balance (e.g. smoking)

<table>
<thead>
<tr>
<th>Benefits (Pros)</th>
<th>Changing</th>
<th>Not changing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Less coughing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Wife will be happy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Socially acceptable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Faster healing</td>
<td></td>
</tr>
<tr>
<td>Costs (Cons)</td>
<td></td>
<td>• Higher risk of cancer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Poorer health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Wound will not heal</td>
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</table>
## Decisional Balance (e.g. smoking)

<table>
<thead>
<tr>
<th>Benefits (Pros)</th>
<th>Changing</th>
<th>Not changing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Less coughing</td>
<td>• Helps me deal with stress</td>
</tr>
<tr>
<td></td>
<td>• Wife will be happy</td>
<td>• Helps me think clearly</td>
</tr>
<tr>
<td></td>
<td>• Socially acceptable</td>
<td>• Keeps the weight off</td>
</tr>
<tr>
<td></td>
<td>• Faster healing</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costs (Cons)</th>
<th>Changing</th>
<th>Not changing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Lose friends who smoke</td>
<td>• Higher risk of cancer</td>
</tr>
<tr>
<td></td>
<td>• Gain weight</td>
<td>• Poorer health</td>
</tr>
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<td></td>
<td></td>
<td>• Wound will not heal</td>
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Core Components

Identify Goals
Support Self-Care
Monitor Progress
Treat-to-Target
Systematic Case Review
Care Coordination
<table>
<thead>
<tr>
<th>Initial</th>
<th>Clinic</th>
<th>Enroll Date</th>
<th>PHQ BL</th>
<th>PHQ Now</th>
<th>BP BL</th>
<th>BP Now</th>
<th>HbA₁c BL</th>
<th>HbA₁c Now</th>
<th>LDL BL</th>
<th>LDL Now</th>
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<tr>
<td>BRN</td>
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<td>8/11/2008</td>
<td>19</td>
<td>14*</td>
<td>152/86</td>
<td>140/100*</td>
<td>10.1</td>
<td>6.91</td>
<td>135</td>
<td>106*</td>
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<tr>
<td>OLY</td>
<td></td>
<td>5/19/08</td>
<td>19</td>
<td>19*</td>
<td>141/69</td>
<td>127/77</td>
<td>7.3</td>
<td>6.8</td>
<td>181</td>
<td>138*</td>
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<tr>
<td>EVM</td>
<td></td>
<td>11/12/07</td>
<td>14</td>
<td>9*</td>
<td>160/98</td>
<td>150/85*</td>
<td>6.4</td>
<td>6.8</td>
<td>108</td>
<td>67</td>
</tr>
<tr>
<td>NGT</td>
<td></td>
<td>10/30/07</td>
<td>13</td>
<td>2</td>
<td>209/119</td>
<td>126/76</td>
<td>9.2</td>
<td>8.3*</td>
<td>119</td>
<td>99</td>
</tr>
<tr>
<td>LYN</td>
<td></td>
<td>8/23/07</td>
<td>14</td>
<td>3</td>
<td>149/71</td>
<td>111/58</td>
<td>8.1</td>
<td>7.7*</td>
<td>85</td>
<td>82</td>
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</tbody>
</table>
Core Components

Identify Goals
Support Self-Care
Monitor Progress
Treat-to-Target
Systematic Case Review
Care Coordination
Treat-to-Target (TTT)

Treatment titration
– Frequent and consistent
– Relentless, incremental increases/changes

Always:
– Increase/change to next step
– If not, document why not!

TTT Algorithm
• Simplified and uniform approaches across conditions to achieve targets
  – Riddles et al., Diabetes Care, 2003
  – Kaiser Permanente, Care Management Institute
Start with Citalopram 20mg

Increase by 10mg increments to 40mg

If partial response, add Wellbutrin

If no response, change to Wellbutrin
Core Components

- Identify Goals
- Support Self-Care
- Monitor Progress
- Treat-to-Target
- Systematic Case Review
- Care Coordination
<table>
<thead>
<tr>
<th>Patient ID:</th>
<th>Date:</th>
<th>Suggested actions</th>
</tr>
</thead>
</table>
|            |       | **Medication changes:**  
|            |       | • Simplify, consolidate  
|            |       | • Check formulary  
|            |       | • Check lowest prices  
|            |       | • Assess adherence  
|            |       | • Assess side effects  
|            |       | **Behavioral activation:**  
|            |       | • Physical activation  
|            |       | • Social activation  
|            |       | • Pleasant events  
|            |       | **Motivational issues:**  
|            |       | • Stages of change  
|            |       | • Decisional balance  
|            |       | **Disease self-management:**  
|            |       | • BP cuff, BP record  
|            |       | • Pedometer  
|            |       | • Glucometer (new or 2\textsuperscript{nd})  
|            |       | • Sleep hygiene  
|            |       | • Nutritionist/Dietician  
|            |       | • Mediset  
|            |       | **Strategies for hard-to-reach:**  
|            |       | • Contact PCP  
|            |       | • Voicemail  
|            |       | • Letter  
<p>| | |
|            |       |</p>
<table>
<thead>
<tr>
<th>Patient ID: 870</th>
<th>Case Manager:</th>
<th>Updating</th>
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</thead>
<tbody>
<tr>
<td>200mg Zoloff - start c + 50mg 2-3 weeks then go up to 200mg</td>
<td>08/18/11</td>
<td>Chart</td>
</tr>
<tr>
<td>diabetes education - already has referral, talk this over with this intern, is she willing?</td>
<td>08/18/11</td>
<td>Supervision sheet</td>
</tr>
<tr>
<td>Next contact:</td>
<td>08/18/11</td>
<td>Labs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient ID: 744</th>
<th>Case Manager:</th>
<th>Checking</th>
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</thead>
<tbody>
<tr>
<td>1. diabetes education - check BS BID either QAM and QHS or QAM and 2 p.m. meal</td>
<td></td>
<td>PHQ-9 score</td>
</tr>
<tr>
<td>2. citalopram 40mg (ask Dr about 30mg for 1 month then 40mg)</td>
<td></td>
<td>EPIC, Access</td>
</tr>
<tr>
<td>Next contact:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient ID: 817</th>
<th>Case Manager:</th>
<th>Strategies for hard-to-reach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. make a plan in the next week to do 1 thing to get her active</td>
<td></td>
<td>Contact PCP</td>
</tr>
<tr>
<td>2. how much metformin is she taking?? (1500 or 750??)</td>
<td></td>
<td>Voicemail</td>
</tr>
<tr>
<td>Next contact:</td>
<td></td>
<td>Letter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Educational materials</th>
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</thead>
<tbody>
<tr>
<td>DVD, Depression book</td>
</tr>
<tr>
<td>Patient booklet</td>
</tr>
<tr>
<td>My Healthcare</td>
</tr>
<tr>
<td>AHA/ADA materials</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase of intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Move to maintenance</td>
</tr>
</tbody>
</table>
Core Components

- Identify Goals
- Support Self-Care
- Monitor Progress
- Treat-to-Target
- Systematic Case Review

Care Coordination
Case Management Workload

- 96 patients in steady state for full FTE nurse case manager
- 2.5 hours weekly of internist and psychiatrist case review supervision per 96 patients
- Psychiatrist 10 hours per month, internist 10 hours per month per 96 patients
Does it really work?
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.


BACKGROUND

Patients with depression and poorly controlled diabetes, coronary heart disease, or both have an increased risk of adverse outcomes ...
A1c
Blood pressure
Cholesterol (LDL)
Depression
## Comparison with Other Studies

<table>
<thead>
<tr>
<th>Domain</th>
<th>I vs. C TEAMcare study</th>
<th>I vs. C other studies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>SCL: 0.4</td>
<td>ES: 0.25</td>
<td>37 Collaborative Care Trials</td>
</tr>
<tr>
<td>HbA$_{1c}$</td>
<td>0.58%</td>
<td>0.42%</td>
<td>66 Diabetes Care Trials</td>
</tr>
<tr>
<td>Systolic Blood Pressure</td>
<td>5.1 mmHg</td>
<td>4.5 mmHg</td>
<td>44 Trials</td>
</tr>
<tr>
<td>LDL Cholesterol</td>
<td>6.9 mg/dL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Any Medication Adjustment**

![Bar chart showing percent of any medication adjustment.](chart)

- **OH**: 30% (UC: 25%)
- **IH**: 50% (UC: 40%)
- **AH**: 70% (UC: 60%)
- **LL**: 60% (UC: 50%)
- **AD**: 90% (UC: 80%)

* p-value <0.05 ; ** p-value < 0.01 ; *** p-value < 0.001
Satisfaction with Care of Depression

- Baseline: Intervention 51%, Control 47%
- 6 months: Intervention 87%, Control 62%, $p < .001$
- 12 months: Intervention 90%, Control 55%, $p < .001$
Satisfaction with Diabetes/CHD Care

<table>
<thead>
<tr>
<th>Time</th>
<th>Intervention</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>70%</td>
<td>68%</td>
</tr>
<tr>
<td>6 months</td>
<td>90%</td>
<td>68%</td>
</tr>
<tr>
<td>12 months</td>
<td>86%</td>
<td>70%</td>
</tr>
</tbody>
</table>
Adjusted 24-Month Intervention vs. Usual Care Outpatient Costs

$594 Cost Savings

Usual Care: $21,513
Intervention: $20,918
24-Month Intervention vs. Usual Care
Adjusted Outpatient Costs
($54/visit for 10 visits)

$1116 Cost Savings

Usual Care
Intervention

$21,474
$20,358
Achieving Level 2 or Level 3 PCMH NCQA Accreditation Depends on Compliance with 10 *Must-Pass* Components

| Written standards for patient access and patient communication | □ |
| Use of data to show standards for patient access and communication are met | □ |
| Use of paper or electronic charting tools to organize clinical information | ✗ |
| Use of data to identify important diagnoses and conditions in practice | ✗ |
| Adoption and implementation of evidence-based guidelines for two chronic medical conditions and one behavioral condition | ✗ |
Achieving Level 2 or Level 3 PCMH NCQA Accreditation Depends on Compliance with 10 *Must-Pass* Components

<table>
<thead>
<tr>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active support of patient self-management</td>
</tr>
<tr>
<td>Systematic tracking of tests and follow-up on test results</td>
</tr>
<tr>
<td>Systematic tracking of critical referrals</td>
</tr>
<tr>
<td>Measurement of clinical and/or service performance</td>
</tr>
<tr>
<td>Performance reporting by physician or across the practice</td>
</tr>
</tbody>
</table>
Multi-Condition Collaborative Care

An evidence-based strategy for addressing patients with multiple conditions using a team-based approach

Associated with:

• better outcomes
• better quality of care
• lower cost
TEAMcare Collaborative Care at The Polyclinic: Program Description

Elise Ernst, MEd, MSW, MBA
Vice President of Practice Management
The Polyclinic
Seattle, WA
The Polyclinic Profile

- Independent, physician-owned, multi-specialty clinic since 1917
- Over 200 providers in 30 specialties, 66 are PCPs
- 192,000 patients
- 13 locations
- Primary Care is on the top floor!
When and how did TEAMcare start at The Polyclinic?

- Part of Primary Care Transformation
- Attendance at TEAMcare training led to conversations with Drs. Katon and Ciechanowski.
- Over many months, UW and The Polyclinic designed the initial program.
- RN FTE was “borrowed” as there were no RNs in Primary Care at that time.
• Contract was negotiated/signed (No cost to patients).
• 2-day RN training was completed.
• Materials were created for patients, PCPs, and clinic staff, including FAQs.
• Presented at IM and FM section meetings to gain physician and administrative approval.
• First case staffing was September 2012.
• To date over 100 patients have been enrolled, utilizing 6 RNs who are parttime to this program (maximum 25% of their time).
Who is the TEAM?

- 6 RN Case Managers
- 1 Pharmacist
- 1 RN Supervisor
- 1 Certified Diabetic Educator
- 1 Internal Medicine Physician
- 1 Psychiatrist

Additional:
- 2 Masters’ level Psychology Interns from Seattle Pacific University
- VP of Primary Care
How TEAMcare works at the Polyclinic

Patients are referred in one of two ways:

1. PCPs refer patients to RNs directly, or
2. Diabetes Registry is sorted for all PHQ-9s with score of ≥ 10, along with at least one other clinical value out of control; A1c ≥ 8, or LDL ≥ 100, or BP ≥ 140 (systolic).
3. Majority of patients are initially found by data sort.
4. As PCPs become more aware of program, they refer additional patients.
What are some of the Tools?

- PHQ-9 (Patient Health Questionnaire)
- FAQs (customized for your organization)
- Patient handout introducing TEAMcare
- Decision Balance Worksheet (grid)
- Problem Solving Treatment Worksheet
- Motivational Interviewing Techniques
- Goal Setting—How to choose a problem to address
- Shared Decision-Making
- Self-Harm Risk Assessment Policy
- Notes and MyChart in EPIC
Case Staffing

- Weekly 2-hour meetings
- Each patient’s EPIC record is brought up on screen
- RN presents patient
- Drs. Townsend and Ciechanowski share management of the staffing
- Team has staffed 45-55 patients in one setting.
- RN supervisor uses a timer to keep us moving along!
Case Staffing, continued

• If a patient is not new, presentation starts with previous week’s recommendations.
• Recommendations are made for managing depression, including possible suicide risk, and diabetes, focusing on non-controlled measures.
• Medication lists are reviewed and updated.
• Health maintenance issues are also addressed.
• Team strives to move each patient to target on all 4 parameters.
• Humor is helpful!
TEAMcare in action
Communication with Referring PCP?

• A note taker records all recommendations.
• Immediately following the meeting, RNs enter lab orders into EPIC, send notes to clinic staff, and send notes to PCPs with team recommendations.
• PCP can either:
  1) choose to follow recommendations, or
  2) consult with RNs for further clarity, or
  3) ignore them.
RN contacts with patients are approximately 50/50:

- 50% face-to-face, including “stalking” patients at scheduled clinic visits.
- 50% phone and email contact, including MyChart messaging.
TEAMcare Collaborative Care at The Polyclinic: Clinical Data and Outcomes

Oren Townsend, MD
Medical Director of the Physicians’ Care Network
The Polyclinic
Seattle, WA
Patients Enrolled
N = 90

Active
N = 37
No depression
N = 7

Graduated
N = 32
No depression
N = 6

Discharged
N = 21
No depression
N = 1
Patients Enrolled
N = 90

Active
N = 37
No depression
N = 7

Graduated
N = 32
No depression
N = 6

Discharged
N = 21
No depression
N = 1

Program Enrollment Criteria

• Automated data (ICD-9) of having:
  – diabetes +/- coronary artery disease

• Poor disease control:
  – $\text{HbA}_{1c} \geq 8.0\%$
  – Blood pressure $\geq 140/90$ mmHg
  – LDL $\geq 100$ mg/dl

• PHQ-9 $\geq 10 = \text{Major Depression}$
Patients Enrolled
N = 90

Active
N = 37
No depression
N = 7

Graduated
N = 32
No depression
N = 6

Discharged
N = 21
No depression
N = 1

Participating Care Managers

Angie  3
Irene  28
Kariena  6
Kelly  29
Nicoleta  15
Sara  4
Shu Lin  5
### Patients Enrolled
N = 90

#### Active
N = 37
No depression
N = 7

#### Graduated
N = 32
No depression
N = 6

#### Discharged
N = 21
No depression
N = 1

### Participating Providers

<table>
<thead>
<tr>
<th>Provider</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baumgaertel</td>
<td>2</td>
</tr>
<tr>
<td>Bautista</td>
<td>1</td>
</tr>
<tr>
<td>Brown</td>
<td>2</td>
</tr>
<tr>
<td>Brunsvold</td>
<td>1</td>
</tr>
<tr>
<td>Cabodi</td>
<td>1</td>
</tr>
<tr>
<td>Clark</td>
<td>2</td>
</tr>
<tr>
<td>Cordova</td>
<td>11</td>
</tr>
<tr>
<td>Farooqi</td>
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</tr>
<tr>
<td>Friedmann</td>
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</tr>
<tr>
<td>Frownfelter</td>
<td>4</td>
</tr>
<tr>
<td>Gonchar</td>
<td>1</td>
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<tr>
<td>Goode</td>
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<td>Townsend</td>
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Patients Enrolled
N = 90

Percent Patients Enrolled from Each Participating Provider’s Panel of Patients with Diabetes

- <3.0
- Active N = 37
  No depression N = 7
- Graduated N = 32
  No depression N = 6
- Discharged N = 21
  No depression N = 1
Patients Enrolled
N = 90

Active
N = 37
No depression
N = 7

Graduated
N = 32
No depression
N = 6

Discharged
N = 21
No depression
N = 1

Number of Patients per Provider

N = 23
1-3

N = 6
3-7

N = 3
8+
Patients Enrolled
N = 90

<table>
<thead>
<tr>
<th>State</th>
<th>N</th>
<th>No depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>37</td>
<td>N = 7</td>
</tr>
<tr>
<td>Graduated</td>
<td>32</td>
<td>N = 6</td>
</tr>
<tr>
<td>Discharged</td>
<td>21</td>
<td>N = 1</td>
</tr>
</tbody>
</table>

**Patient Demographics**

- Mean Age +/- SD (yrs): 60.5 +/- 11.5
- Age Range (yrs): 27 to 88
- Female Gender (%): 62 (68.9%)
- Male Gender (%): 28 (31.1%)
Patients Enrolled
N = 90

Baseline Patient Clinical Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean HbA1c (%)</td>
<td>8.5 +/- 2.1</td>
</tr>
<tr>
<td>Mean Systolic BP (mmHg)</td>
<td>130.3 +/- 15.7</td>
</tr>
<tr>
<td>Mean Diastolic BP (mmHg)</td>
<td>77.2 +/- 10.0</td>
</tr>
<tr>
<td>Mean LDL (mg/dL)</td>
<td>110.2 +/- 42.3</td>
</tr>
<tr>
<td>Mean PHQ-9</td>
<td>13.7 +/- 5.2</td>
</tr>
</tbody>
</table>

Active
N = 37
No depression
N = 7

Graduated
N = 32
No depression
N = 6

Discharged
N = 21
No depression
N = 1
Patients Enrolled
N = 90

Mean Length of Enrollment (weeks)

<table>
<thead>
<tr>
<th>Group</th>
<th>Range (weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Patients</td>
<td>21.6 +/- 14.0 (1 to 46)</td>
</tr>
<tr>
<td>Graduated Patients</td>
<td>15.8 +/- 9.3 (1 to 39)</td>
</tr>
<tr>
<td>Discharged Patients</td>
<td>17.3 +/- 10.2 (4 to 38)</td>
</tr>
<tr>
<td>All Patients</td>
<td>18.5 +/- 11.8 (1 to 48)</td>
</tr>
</tbody>
</table>

Active Patients (N = 37)
No depression (N = 7)

Graduated Patients (N = 32)
No depression (N = 6)

Discharged Patients (N = 21)
No depression (N = 1)
Q1 2013 : Q2 2013 Bundle Data Comparison

A1C < 8 * LDL < 100 * BP < 140/90

Over 300 patients added to registry in Q2 by including diabetes with complexities codes 250.4-250.7
Patients Enrolled
N = 90

Active
N = 37
No depression
N = 7

Graduated
N = 32
No depression
N = 6

Discharged
N = 21
No depression
N = 1

Baseline Patient Clinical Characteristics

Proportion in Target

- HbA1c < 8%
  - 41%
- BP < 140/90 mmHg
  - 73%
- LDL < 100 mg/dL
  - 45%
- PHQ-9 < 10
  - 16%
Patients Enrolled
N = 90

Active
N = 37
No depression
N = 7

Graduated
N = 32
No depression
N = 6

Discharged
N = 21
No depression
N = 1

Graduated Patient Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1c &lt; 8%</td>
<td>69%</td>
<td>97%</td>
</tr>
<tr>
<td>BP &lt; 140/90 mmHg</td>
<td>69%</td>
<td>81%</td>
</tr>
<tr>
<td>LDL &lt; 100 mg/dL</td>
<td>47%</td>
<td>87%</td>
</tr>
<tr>
<td>PHQ-9 &lt; 10</td>
<td>19%</td>
<td>84%</td>
</tr>
</tbody>
</table>

P-values:
- HbA1c: P < .01
- BP: P < NS
- LDL: P < .01
- PHQ-9: P < .001
Patients Enrolled
N = 90

Active
N = 37
No depression
N = 7

Graduated
N = 32
No depression
N = 6

Discharged
N = 21
No depression
N = 1

Graduated and Discharged Patient Outcomes

Proportion in Target

- HbA1c < 8%
  - Pre: 59%
  - Post: 79%
  - P < .001

- BP < 140/90 mmHg
  - Pre: 70%
  - Post: 76%
  - P < NS

- LDL < 100 mg/dL
  - Pre: 45%
  - Post: 77%
  - P < .001

- PHQ-9 < 10
  - Pre: 13%
  - Post: 70%
  - P < .001

Comparison:
- HbA1c: Pre vs. Post, P < .001
- BP: Pre vs. Post, P < NS
- LDL: Pre vs. Post, P < .001
- PHQ-9: Pre vs. Post, P < .001
Patients Enrolled  
N = 90

Active  
N = 37  
No depression  
N = 7

Graduated  
N = 32  
No depression  
N = 6

Discharged  
N = 21  
No depression  
N = 1

Full Sample Outcomes

Proportion in Target

- HbA1c < 8%
  - Pre: 41%
  - Post: 52%
  - P < .05

- BP < 140/90 mmHg
  - Pre: 73%
  - Post: 74%
  - P < .001

- LDL < 100 mg/dL
  - Pre: 45%
  - Post: 67%
  - P < NS

- PHQ-9 < 10
  - Pre: 16%
  - Post: 69%
  - P < .001

Pre  
Post  


P < .05  
P < NS  
P < .001  
P < .001
Patients Enrolled
N = 90

Active
N = 37
No depression
N = 7

Graduated
N = 32
No depression
N = 6

Discharged
N = 21
No depression
N = 1

Proportion with SBP, HbA1c and LDL in Target

P < .001

Proportion in Target

P < NS
TEAMcare Collaborative Care at The Polyclinic: Lessons Learned

Oren Townsend, MD and Elise Ernst, MEd, MSW, MBA
What are the challenges the RNs face?

TEAMcare:

• “Challenges the traditional paradigm of patient-doctor relationship which involves a doctor visit, diagnosis and prescription of a treatment the patient has to follow at home.”

• “Requires following patients in their day-to-day routines and extending our support to them in areas they identify as needing help.”
“It is a different RN role to work one-on-one with patients, with weekly follow through. It can be professionally empowering to partner with a patient to formulate and reach goals.”
“It is definitely a different way to care for patients than what you learned in school, quite the opposite. It is not predictable, and there will be times when you have no control over a situation, but the satisfaction is much greater when the most resistant patient will call out of the blue to talk about their diabetes management.”
Role of TEAM MDs—Why does it work?

“It takes a special physician or psychiatrist to be able to step back from the traditional role and be willing to step into a role where everyone on the team is viewed equally.”
What has been the response of patients?

- “The patient response varies. Some patients enjoy the routine and structure while others view it as an intrusion on their lives. Finding a balance with each patient is essential if the goal is for the patient to receive the most benefit from the program.”
- “This outcome-focused program has partnered with patients in a new way to self monitor their diabetes.”
Comments from Patients
Comments from PCPs
What defines Organizational Readiness?

- Initial support & ongoing commitment of Leadership
- EMR
- Reliable report generation from registry data
- Psychiatrist (or access to psychiatric consultation)
- PCP (Internal Medicine/Family Medicine)
- RNs who have care management experience and are trained in TEAMcare model
- Administrative support
Organizational Readiness, continued

- RN supervisor/manager
- Organizational willingness to administer PHQ-9 to patients with one or more chronic conditions
- Approved Self-Harm Risk Policy to support PCPs/Staff with suicidal patients
- Co-location of RNs in Primary Care & Endocrinology
- Buy-in and education throughout all of Primary Care, including PCPs
Organizational Readiness, continued

- Policies and Procedures in place to address other behavioral health needs, including social work (The Poly clinic has just approved a small Behavioral Health program for 2014).
- Operations manager to solve day-to-day program issues as they arise.
- Ongoing support of administration as challenges arise.
- An attitude of perseverance and patience--embrace change!
One year later, what have we learned?

• Write a Self-Harm Risk Policy prior to program inception and train to it.
• Train the team more broadly at beginning of program.
• Schedule regular training updates as team members change.
One year later, what have we learned?

• Use RN care managers to train other clinical staff.
• Create methodology for gathering data that is well defined and agreed to by team, and keep it simple.
• Communicate with larger organization on a regular basis.
Questions?