

# Prime Care: Improving patient outcomes using an integrated model of delivery

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# Objective

- The learner will understand the use of an integrated model of delivery provided in a nurse practitioner led center that improves health outcomes with underserved individuals.

# Background

- Healthcare access challenges
  - Vulnerable populations
    - low-income individuals
    - Minorities
    - homeless individuals
    - migrant families
  - Challenges
    - lack of funds
    - health literacy
    - transportation barriers
    - language/cultural differences
  - Unmanaged chronic disease and poor health
    - (CDC, 2011), (Härter, M. C.; Conway, K. P.; Merikangas, K. R., 2003)

# Methods

- PrimeCare
  - Provides healthcare for the un/underinsured individual in western NY
  - Partner with local center providing healthcare for uninsured
  - Faculty practice site
  - Student precepting
    - FNP
    - Nursing
    - Licensed Mental Health Counseling
  - NP managed, providing an Integrated Model of Delivery (IMD)
    - FNP
    - LMHC
  - Individuals screened for mental health issues
    - DSM-V Self-Rated Level 1 Cross-Cutting Symptom Measure
    - PHQ-9
    - Possible links identified between physical illness/chronic conditions and psycho-social stressors
    - Pts referred for counseling
    - Bi-weekly meetings between the FNP and LMHC focus on optimizing patient outcomes, facilitating collaboration between the disciplines

# DSM-5 Level 1 Cross-Cutting Symptom Measure

- Initiated May 2015
- Available in English and Spanish
- 13 domains
  - Depression
  - Anger
  - Mania
  - Anxiety
  - Somatic symptoms
  - Suicidal ideation
  - Psychosis
  - Sleep problems
  - Memory
  - Repetitive thoughts and behaviors
  - Dissociation
  - Personality function
  - Substance use

## DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure—Adult

Name: \_\_\_\_\_ Age: \_\_\_\_ Sex:  Male  Female Date: \_\_\_\_\_

If this questionnaire is completed by an informant, what is your relationship with the individual? \_\_\_\_\_  
 In a typical week, approximately how much time do you spend with the individual? \_\_\_\_\_ hours/week

Instructions: The questions below ask about things that might have bothered you. For each question, circle the number that best describes how much (or how often) you have been bothered by each problem during the past TWO (2) WEEKS.

|   | None<br>Not at<br>all | Slight<br>Rare, less<br>than a day<br>or two | Mild<br>Several<br>days | Moderate<br>More than<br>half the<br>days | Severe<br>Nearly<br>every<br>day | Highest<br>Domain<br>Score<br>(circle) |
|---|-----------------------|--|-------------------------|---|----------------------------------|--|
| I. 1. Little interest or pleasure in doing things?  | 0                     | 1  | 2                       | 3   | 4                                |  |
| 2. Feeling down, depressed, or hopeless?  | 0                     | 1  | 2                       | 3   | 4                                |  |
| II. 3. Feeling more irritated, grouchy, or angry than usual?  | 0                     | 1  | 2                       | 3   | 4                                |  |
| III. 4. Sleeping less than usual, but still have a lot of energy?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| 5. Starting lots more projects than usual or doing more risky things than usual?  | 0                     | 1  | 2                       | 3   | 4                                |  |
| IV. 6. Feeling nervous, anxious, frightened, worried, or on edge?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| 7. Feeling panic or being frightened?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| 8. Avoiding situations that make you anxious?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| V. 9. Unexplained aches and pains (e.g., head, back, joints, abdomen, legs)?  | 0                     | 1  | 2                       | 3   | 4                                |  |
| 10. Feeling that your illnesses are not being taken seriously enough?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| VI. 11. Thoughts of actually hurting yourself?  | 0                     | 1  | 2                       | 3   | 4                                |  |
| VII. 12. Hearing things other people couldn't hear, such as voices even when no one was around?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| 13. Feeling that someone could hear your thoughts, or that you could hear what another person was thinking?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| VIII. 14. Problems with sleep that affected your sleep quality over all?  | 0                     | 1  | 2                       | 3   | 4                                |  |
| IX. 15. Problems with memory (e.g., learning new information) or with location (e.g., finding your way home)?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| X. 16. Unpleasant thoughts, urges, or images that repeatedly enter your mind?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| 17. Feeling driven to perform certain behaviors or mental acts over and over again?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| XI. 18. Feeling detached or distant from yourself, your body, your physical surroundings, or your memories?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| XII. 19. Not knowing who you really are or what you want out of life?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| 20. Not feeling close to other people or enjoying your relationships with them?   | 0                     | 1  | 2                       | 3   | 4                                |  |
| XIII. 21. Drinking at least 4 drinks of any kind of alcohol in a single day?  | 0                     | 1  | 2                       | 3   | 4                                |  |
| 22. Smoking any cigarettes, a cigar, or pipe, or using snuff or chewing tobacco?  | 0                     | 1  | 2                       | 3   | 4                                |  |
| 23. Using any of the following medicines ON YOUR OWN, that is, without a doctor's prescription, in greater amounts or longer than prescribed [e.g., painkillers (like Vicodin), stimulants (like Ritalin or Adderall), sedatives or tranquilizers (like sleeping pills or Valium), or drugs like marijuana, cocaine or crack, club drugs (like ecstasy), hallucinogens (like LSD), heroin, inhalants or solvents (like glue), or methamphetamine (like speed)]? | 0                     | 1  | 2                       | 3   | 4                                |  |

# Staff

- Nurse Practitioner
  - 2 PT FNP
    - 50 hrs/mo
    - 16 hrs/mo
  - 1 PT WHNP
    - 12 hours/mo
- License Mental Health Counselor
  - 2 PT
    - 40 hrs/mo
    - 20 hrs/mo
- Consultants
  - Statistician
  - Technology Consultant

# Access to care

- Improved hours of availability
  - Monday-Thursday
  - Half days
  - Varying daytime/evening hours
  - Friday coverage by facility staff for urgent needs only

# Health Care Services Overview

- Primary Care
- Women's Health Care
- Immunizations screening
- Cancer screening with Pap smears, FIT screening, referral for mammograms and colonoscopy with funding from Cancer Services Program
- Dental and Eye care
- Affordable laboratory testing and free or affordable imaging tests
- Coordination of care with specialists and programs (cardiology, podiatry, neurology, urology, nephrology, pulmonology, dermatology, chiropractic, psychiatry, counseling, endocrinology, orthopedics, rheumatology, dietician, diabetes educator, prescription assistance, health empowerment, smoking cessation)
- Coordination of care with local health organizations through 'charity care' applications as well as outreach to private practitioners as needed to secure patient services that are affordable.



# Counseling services provided

- Individual counseling=34 pts
- Couples counseling=2 pts
- Referred
  - Psychiatry=7 pts for psychopharmacotherapy
    - 10 pts prescribed medication by FNP
      - Depression
      - Anxiety
  - Substance abuse treatment services=4 pts
  - Outside agency for housing assistance=1 pt
  - Mental health crisis services/hosp admission=1 pt
  - Vocational services=1 pt

# Patient Profile

- 1/1/13-5/31/15
  - 414 Medical pts
    - 1423 completed appointments
      - 425 cancellations (21%)
      - 160 no-shows (8%)
    - 154 active pts as of 5/31/15
    - 30 pts in counseling
    - Most reside in Rochester NY; some in southern tier, Buffalo, Finger Lakes region
    - Average age 47 yrs old

# Mental Health Counseling

- Initiated 10/1/13
- Began with 36 hrs/month
- Increased to 40 hrs/month 2/15
- 45 Prime Care pts
- 14 pts with 8 different interns
- 481 appointments
  - 88 Cancellations
  - 45 No-shows

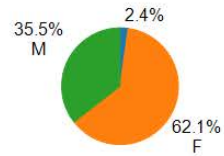
## Prime Care: Demographics

**Date of Most Recent Visit**  
All values

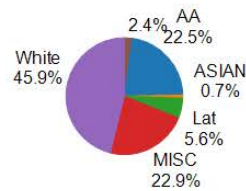
**# Distinct Patients**

414

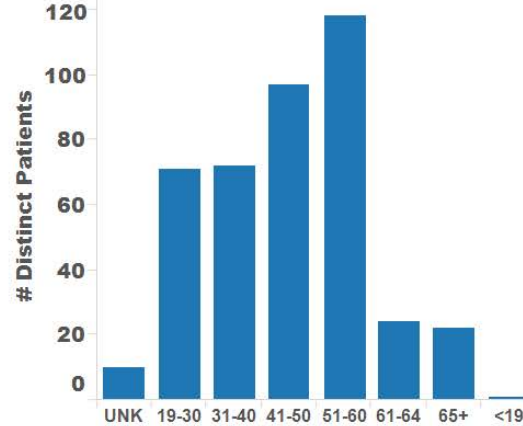
**Gender**



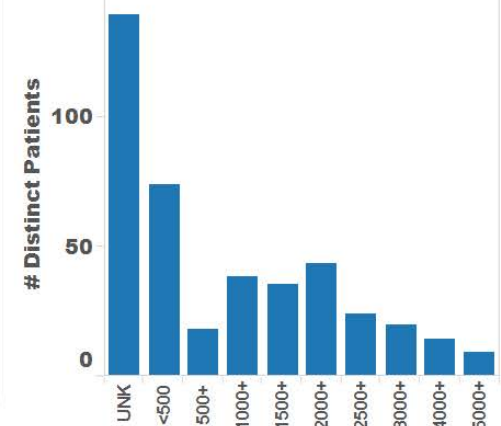
**Ethnicity**



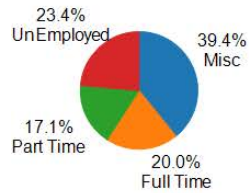
**Age Groups**



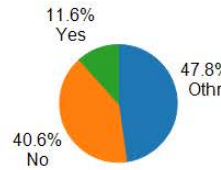
**Monthly Income**



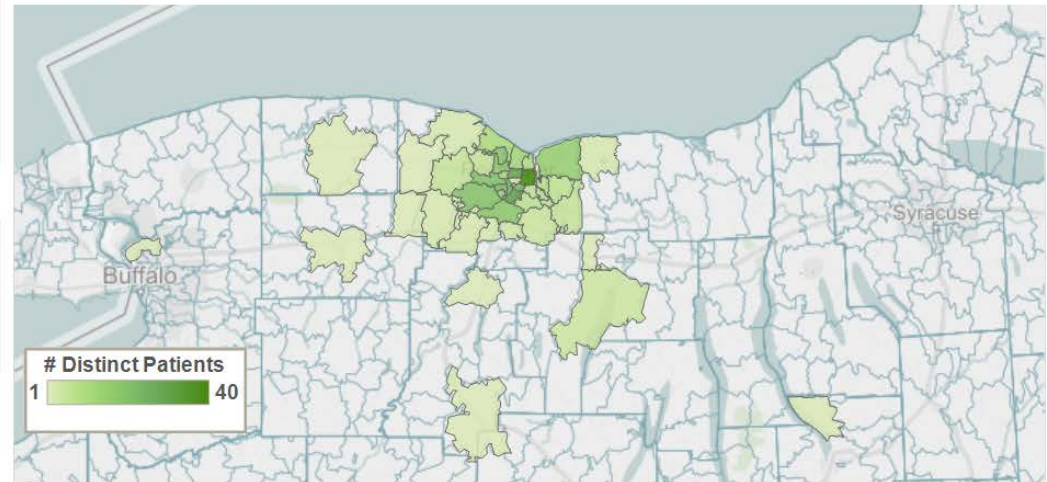
**Employment Status**



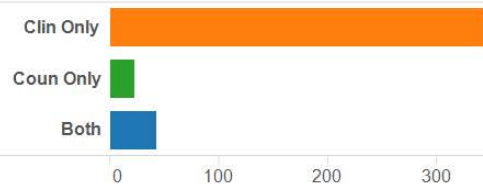
**Employer Insurance**



**Location by Zip Code**



**Patient Category**



Click on any demographic chart to filter entire report.

# Demographics--Medical

| Age        | Gender | Race        |            |           |            | Totals      |
|------------|--------|-------------|------------|-----------|------------|-------------|
| Group      |        | White       | Black      | Hispanic  | Other      |             |
| 19-30 (0%) | Male   | 18 (62.1%)  | 5 (17.2%)  | 2 (6.9%)  | 4 (13.8%)  | 29 (48%)    |
|            | Female | 26 (61.9%)  | 7 (16.7%)  | 2 (4.8%)  | 7 (16.6%)  | 42 (59.2%)  |
|            | Total  | 44 (62%)    | 12 (16.9%) | 4 (5.6%)  | 11 (15.5%) | 71 (100%)   |
| 31-40 (0%) | Male   | 18 (54.5%)  | 5 (15.2%)  | 3 (9.1%)  | 7 (21.2%)  | 33 (45.8%)  |
|            | Female | 20 (51.3%)  | 11 (28.3%) | 5 (12.8%) | 3 (7.7%)   | 39 (54.2%)  |
|            | Total  | 38 (52.8%)  | 16 (22.2%) | 8 (11.1%) | 10 (13.9%) | 72 (100 %)  |
| 41-50 (0%) | Male   | 14 (42.1%)  | 10 (29.4%) | 4 (11.8%) | 6 (17.6%)  | 34 (35.1%)  |
|            | Female | 25 (39.7%)  | 19 (30.2%) | 4 (6.3%)  | 15 (23.8%) | 63 (64.9%)  |
|            | Total  | 39 (40.2%)  | 29 (29.9%) | 8 (8.2%)  | 21 (21.6%) | 97 (100%)   |
| 50 (0%)-59 | Male   | 17 (38.6%)  | 13 (29.5%) | 2 (4.5%)  | 12 (27.3%) | 44 (37.3%)  |
|            | Female | 33 (44.6%)  | 13 (17.6%) | 0 (0%)    | 28 (37.8%) | 74 (62.7%)  |
|            | Total  | 50 (42.4%)  | 26 (22%)   | 2 (1.7%)  | 40 (33.9%) | 118 (100%)  |
| 60 (0%)-64 | Male   | 1 (25%)     | 0 (0%)     | 1 (25%)   | 2 (50 %)   | 4 (16.7%)   |
|            | Female | 7 (35%)     | 6 (30 %)   | 0 (0%)    | 7 (35%)    | 20 (83.3%)  |
|            | Total  | 8 (33.3%)   | 6 (25%)    | 1 (4.2%)  | 9 (37.5%)  | 24 (100%)   |
| 65+        | Male   | 2 (66.7%)   | 1 (33.3%)  | 0 (0%)    | 0 (0%)     | 3 (13.6%)   |
|            | Female | 10 (52.6%)  | 3 (15.8%)  | 0 (0%)    | 6 (31.6%)  | 19 (86.4%)  |
|            | Total  | 12 (54.5%)  | 4 (18.2%)  | 0 (0%)    | 6 (27.3%)  | 22 (100%)   |
| Under 19   | Male   | 0 (0%)      | 0 (0%)     | 0 (0%)    | 1 (10%)    | 1 (100%)    |
| Totals     | Male   | 69 (46.9%)  | 34 (23.1%) | 12 (8.2%) | 32 (21.8%) | 147 (35.5%) |
|            | Female | 121 (47.1%) | 59 (23%)   | 11 (4.3%) | 66 (25.6%) | 257 (62.1%) |
|            | Total  | 190 (45.9%) | 93 (22.5%) | 23 (5.6%) | 108 (26%)  | 414 (100%)  |

# Demographics Counseling pts

| <u>Age</u>           | <u>Gender</u> | <u>Race</u> |          |         |        | <u>Totals</u> |
|----------------------|---------------|-------------|----------|---------|--------|---------------|
| <u>Group</u>         |               | Wh          | Bl       | Hisp    | Oth    |               |
| <b>20 (0%)-29</b>    | Male          | 6 (55%)     | 0 (0%)   | 0 (0%)  | 0 (0%) | 6 (55%)       |
|                      | Female        | 2 (18%)     | 2 (18%)  | 1 (9%)  | 0 (0%) | 5 (45%)       |
|                      | Total         | 8 (73%)     | 2 (18%)  | 1 (9%)  | 0 (0%) | 11 (100%)     |
| <b>30 (0%)-39</b>    | Male          | 4 (44%)     | 0 (0%)   | 1 (11%) | 0 (0%) | 5 (67%)       |
|                      | Female        | 3 (33%)     | 1 (11%)  | 0 (0%)  | 0 (0%) | 4 (44%)       |
|                      | Total         | 7 (78%)     | 1 (11%)  | 1 (11%) | 0 (0%) | 9 (100%)      |
| <b>40 (0%)-49</b>    | Male          | 2 (22%)     | 0 (0%)   | 1 (11%) | 0 (0%) | 3 (33%)       |
|                      | Female        | 3 (33%)     | 2 (22%)  | 1 (11%) | 0 (0%) | 6 (67%)       |
|                      | Total         | 5 (56%)     | 2 (22%)  | 1 (11%) | 0 (0%) | 9 (100%)      |
| <b>50 (0%)-59</b>    | Male          | 2 (15%)     | 0 (0%)   | 1 (8%)  | 1 (8%) | 4 (31%)       |
|                      | Female        | 5 (38%)     | 4 (31%)  | 0 (0%)  | 0 (0%) | 9 (69%)       |
|                      | Total         | 7 (54%)     | 4 (30%)  | 1 (8%)  | 1 (8%) | 13 (100%)     |
| <b>60 (0%) +</b>     | Male          | 1 (33%)     | 0 (0%)   | 1 (33%) | 0 (0%) | 2 (67%)       |
|                      | Female        | 0 (0%)      | 1 (33%)  | 0 (0%)  | 0 (0%) | 1 (33%)       |
|                      | Total         | 1 (33%)     | 1 (33%)  | 1 (33%) | 0 (0%) | 3 (100%)      |
| <b><u>Totals</u></b> | Male          | 15 (33%)    | 0 (0%)   | 4 (9%)  | 1 (2%) | 20 (44%)      |
|                      | Female        | 13 (29%)    | 10 (22%) | 2 (4%)  | 0 (0%) | 25 (56%)      |
|                      | Total         | 28 (62%)    | 10 (22%) | 6 (13%) | 1 (2%) | 45 (100%)     |

# Description and Frequency of Presenting Clinical Issues

| Label | Description   | Frequency |
|-------|---|-----------|
| DEP   | Depressed/Sad/Hopeless  | 29        |
| ANX   | Anxious/Frightened Angry/Panic  | 21        |
| PER   | Personality functioning/Not feeling close to others or enjoying relationships/Not knowing what you want out of life | 7         |
| SUB   | Substance Use problems  | 5         |
| ANG   | Anger /Irritability   | 3         |
| MAN   | Manic/Euphoric  | 3         |
| SUI   | Suicidal thinking/plan/feeling unsafe   | 2         |
| SOM   | Excessive focus/preoccupation on medical problems   | 2         |
| OCD   | Obsessive-compulsive symptoms   | 1         |
| PSY   | Psychotic thinking  | 1         |
| Other | Severe sleep problem  | 1         |

# Description and Frequency of Contextual Factors

| <u>Label</u> | <u>Description</u>  | <u>Frequency</u> |
|--------------|---|------------------|
| FAM          | Family/Couple Discord   | 29               |
| EMP          | Unemployment/Job-Related Stress   | 24               |
| FIN          | Poverty/Low Income to meet needs  | 10               |
| MED          | Serious Medical Health Problems<br>(as specified) *                             | 10               |
| LOS          | Loss of loved one   | 8                |
| HSG          | Homelessness/Inadequate Housing   | 8                |
| POL          | Phase of life problem (leaving home, getting married, having child, empty nest) | 5                |
| ABU          | Victim of Abuse/Violence as Child or Adult                                      | 3                |
| LEG          | Legal Difficulties  | 3                |
| OTH          | Other (as specified)**  | 3                |
| ACC          | Acculturation Difficulties  | 2                |

\*Hypertension (2), Diabetes, COPD, Seizures, Chronic Pain (2), Obesity, Multiple Physical Problems (2)

\*\*Abortion, Drug Withdrawal, Unspecified Social Situations



# Patient engagement following evaluation

| Category Label | Description  | Number | %    |
|----------------|--|--------|------|
| NSR            | No services recommended after evaluation                                     | 2      | 4.4  |
| REF            | Referred out- needed higher level of care                                    | 1      | 2.2  |
| NEV            | Services recommended but never started                                       | 6      | 13.3 |
| OUT            | Services started/dropped out or stopped coming/failed to respond to outreach | 9      | 20.0 |
| ACT            | Receiving services/Currently active  | 18     | 40.0 |
| COM            | Completed Services   | 9      | 20.0 |

# Demographic and other characteristics among patients with different levels of engagement

|                                       | PROCESS CATEGORIES                     |  |                               |
|---------------------------------------|--|--|-------------------------------|
|                                       | Recommended/<br>Never Started<br>N=6   | Dropped Out<br>N=9                     | Completed<br>N=9              |
| Gender                                | Predominately Males<br>(83%)           | Male=44%<br>Female=56%                 | Male=44%<br>Female=56%        |
| Age                                   | <40=80%                                | 40+=67%                                | 40+=67%                       |
| Race                                  | White=50%<br>Hispanic=33%<br>Black=17% | White=56%<br>Black=44%<br>Hispanics=0% | White=67%                     |
| Employed                              | 33%                                    | 44%                                    | 44%                           |
| Primary + Secondary<br>Clinical Focus | DEP=50%<br>ANX= 30%                    | DEP=78%<br>ANX=44%                     | DEP=78%<br>ANX=67%            |
| Most Frequent<br>Contextual Issues    | FAM=67%<br>EMP=50%<br>MED=33%          | FAM=78%<br>EMP=44%<br>MED=22%          | EMP=67%<br>HSG=44%<br>MED=33% |
| 3+ Contextual Issue                   | 0%                                     | 56%                                    | 56%                           |

# Global Treatment Outcomes for Patients

| <u>Treatment Outcomes</u> | <u>Process Outcomes</u> |               |                    |
|---------------------------|-------------------------|---------------|--------------------|
|                           | <u>Completed</u>        | <u>Active</u> | <u>Dropped Out</u> |
| <b>SIGN</b>               | 4                       | 2             | NA                 |
| <b>SOME</b>               | 5                       | 14            | NA                 |
| <b>NONE</b>               | 0                       | 0             | NA                 |
| <b>UNKN</b>               | 0                       | 2             | 9                  |
| <b>Total</b>              | 9                       | 18            | 9                  |

# PHQ-9

## PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

Over the last 2 weeks, how often have you been bothered by any of the following problems?  
(use "✓" to indicate your answer)

|   | Not at all | Several days | More than half the days | Nearly every day |
|---|------------|--------------|-------------------------|------------------|
| 1. Little interest or pleasure in doing things  | 0          | 1            | 2                       | 3                |
| 2. Feeling down, depressed, or hopeless   | 0          | 1            | 2                       | 3                |
| 3. Trouble falling or staying asleep, or sleeping too much  | 0          | 1            | 2                       | 3                |
| 4. Feeling tired or having little energy  | 0          | 1            | 2                       | 3                |
| 5. Poor appetite or overeating  | 0          | 1            | 2                       | 3                |
| 6. Feeling bad about yourself...or that you are a failure or have let yourself or your family down  | 0          | 1            | 2                       | 3                |
| 7. Trouble concentrating on things, such as reading the newspaper or watching television  | 0          | 1            | 2                       | 3                |
| 8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual | 0          | 1            | 2                       | 3                |
| 9. Thoughts that you would be better off dead, or of hurting yourself   | 0          | 1            | 2                       | 3                |

add columns  +  +

(Health care professional: For interpretation of TOTAL, TOTAL:   
please refer to accompanying scoring card).

|  |                      |       |
|--|----------------------|-------|
| 10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people? | Not difficult at all | _____ |
|  | Somewhat difficult   | _____ |
|  | Very difficult       | _____ |
|  | Extremely difficult  | _____ |

- Screening tool for depression

# Changes in Severity of Depression for Patients with Depression as Primary or Secondary Concern

|        | PHQ-9 Scores         |                       |
|--------|----------------------|-----------------------|
|        | First Administration | Second Administration |
| Mean   | 12.06                | 8.33                  |
| Median | 11.00                | 5.50*                 |
| Mode   | 11.27                | 7                     |
| SD     | 8.39                 | 7.07                  |

# Outcomes--Medical

| Metric       | Goal                          | Results   | Notes   |
|--------------|-------------------------------|---|---|
| Referrals    | Dental referrals=277 patients | Eye referrals=162 pts   | All diabetic pts referred or up to date on eye exams  |
| Diabetes     | HgBA1C<9                      | <ul style="list-style-type: none"> <li>• &lt;5.6=13 pts (15.5%)</li> <li>• 5.7-6.4=29 pts (34.5%)</li> <li>• 6.5-7=9 pts (10.7%)</li> <li>• &gt;7=33 pts (39.3%)</li> </ul>   | Average HgBA1C=7.46   |
| Microalbumin | All DM patients yearly        | <ul style="list-style-type: none"> <li>• &lt;30=22 pts (81.48%)</li> <li>• 30-300=4 pts (14.81%)</li> <li>• &gt;300=1 pt (3.7%)</li> </ul>  | All DM pts with microalbumin>30 were referred to nephrology   |
| Hypertension | BP < 140/90                   | <ul style="list-style-type: none"> <li>• 142 pts (39.8%) normal blood pressure (&lt;120/80)</li> <li>• 156 pts (39.8%) borderline high blood pressure (&lt; 140/90)</li> <li>• 44 pts (11.2%) high blood pressure (&gt;140/90)</li> <li>• 9 pts (2.3%) low blood pressure (&lt; 90/60)</li> </ul> | Blood pressure medication and/or lifestyle modification was recommended in all cases of hypertension. Causes of persistent elevation in blood pressure included lack of medication and refusal to take medication |

|                     |   |  |   |
|---------------------|---|--|---|
| <b>Dyslipidemia</b> | <b>Chol &lt;200</b><br><b>HDL&gt;45</b><br><b>TRI&lt;150</b><br><b>LDL&lt;100</b>                         | <b>Total Cholesterol</b> <ul style="list-style-type: none"> <li>• &lt;200=154 pts (60.63%)</li> <li>• 200-239=73 pts (28.74%)</li> <li>• &gt;239=27 pts (10.63%)</li> </ul> <b>HDL</b> <ul style="list-style-type: none"> <li>• &gt;50=138 pts (53.91%)</li> <li>• 40-49=72 pts (28.13%)</li> <li>• &lt;40=46 pts (17.97%)</li> </ul> <b>LDL</b> <ul style="list-style-type: none"> <li>• &lt;130=176 pts (69.57%)</li> <li>• 130-159=54 pts (21.34%)</li> <li>• &gt;159=23 pts (9.09%)</li> </ul> <b>Triglycerides</b> <ul style="list-style-type: none"> <li>• &lt;200=220 pts (85.94%)</li> <li>• 200-399=33 pts (12.89%)</li> <li>• &gt;399=3 pts (1.17%)</li> </ul> | <b>Number of times tested</b> <ul style="list-style-type: none"> <li>• Once=223 pts (56.9%)</li> <li>• Twice=26 pts (6.6%)</li> <li>• &gt; 2=8 pts (2%)</li> <li>• Never tested (including pt refusal)=135 pts (34.4%)</li> </ul> |
| <b>Obesity</b>      | <b>BMI&lt;19 underweight</b><br><b>20-24.9 Normal</b><br><b>25-29.9 Overweight</b><br><b>&gt;30 Obese</b> | <ul style="list-style-type: none"> <li>• BMI &lt;19=3 pts (0 .77%)</li> <li>• BMI 20-24.9=90 pts (22.96%)</li> <li>• BMI 25-29.9=93 pts (23.72%)</li> <li>• BMI &gt;30=20 6 pts (52.55%)</li> </ul>  | <ul style="list-style-type: none"> <li>• Average BMI=31.14</li> </ul>   |

|                        |   |   |  |
|------------------------|---|---|--|
| <b>Immunizations</b>   | <b>Tdap every 10 yrs<br/>Influenza yearly</b>                           | <ul style="list-style-type: none"> <li>• Administered=223 pts (54%)</li> <li>• Up to date=59 pts (14%)</li> <li>• Declined=25 pts (6%)</li> <li>• Unknown=107 pts (26%)</li> </ul>  | <b>Influenza administered yearly but data difficult to interpret due to seasonal vaccine</b> |
| <b>FIT/Colonoscopy</b> | <b>Age<math>\geq</math>50</b>   | <ul style="list-style-type: none"> <li>• Completed testing=105 pts (64%)</li> <li>• Declined testing=59 pts (36.2%)</li> </ul>  |  |
| <b>Women's Health</b>  | <b>Pap smear every 3 years<br/>Mammogram yearly <math>\geq</math>40</b> | <b>Pap smear</b> <ul style="list-style-type: none"> <li>• Completed=134 pts (78%)</li> <li>• Recommended=15 pts (9%)</li> <li>• Referred to other provider=22 pts (13%)</li> </ul> <b>Mammogram</b> <ul style="list-style-type: none"> <li>• Completed=108 pts (61%)</li> <li>• Referred, not completed=39 pts (22%)</li> <li>• Refused=29 pts (17%)</li> </ul> | <b>CSP allows for Pap smear every 3 years, mammogram yearly</b>                              |



# Four main areas of focus

- Diabetes
  - 94 patients
- Hyperlipidemia
  - 31 patients
- Obesity
  - 40 patients
- Hypertension
  - 93 patients

# Outcomes compared with counseling

- Initial data comparing patients receiving counseling vs those not receiving counseling
- outcomes from at least 2 appointments
- most of these appointments are a month apart, but a few were longer.
- The table definitely show improvement on all outcomes

| BP systolic  |             |        |
|--------------|-------------|--------|
|              | appointment |        |
| counseling?  | 1st         | latest |
| no           | 130.75      | 125.75 |
| yes          | 132.40      | 125.30 |
| N=18         |             |        |
|              |             |        |
| BP diastolic |             |        |
|              | appointment |        |
| counseling?  | 1st         | latest |
| no           | 81.00       | 73.88  |
| yes          | 78.70       | 75.80  |
| N=18         |             |        |
|              |             |        |
| BMI          |             |        |
|              | appointment |        |
| counseling?  | 1st         | latest |
| no           | 31.29       | 31.93  |
| yes          | 34.38       | 32.92  |
| N=18         |             |        |
|              |             |        |
| PHQ9 scores  |             |        |
|              | appointment |        |
| counseling?  | 1st         | latest |
| no           | 7.29        | 4.14   |
| yes          | 11.50       | 8.40   |
| N=17         |             |        |

# Conclusion

- An IMD utilizing both the nursing and mental health counseling aspects improves the health outcomes of patients with chronic illness. It addresses the medical aspect of healthcare as well as the psycho-social needs of the patient, and thus enabling the patient to achieve optimal health.

# Limitations and Recommendations

- Data collection
  - Update excel spreadsheet to include tracking metrics
    - Include patient compliance
  - Coordinate with statistician for next report with 3 different data collection tools
    - 2015 spreadsheet
    - 2016 spreadsheet
    - EMR (pending)
  - Limiting work physicals and known short term physicals
    - Little to no follow up appointments
    - Difficult to interpret data if only one or two appointments, short time frame

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