



# An Outcome Evaluation of the IMPACT Program: Summary of Key Findings

JANUARY 2009 – DECEMBER 2013

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## Executive Summary: An Evaluation of IMPACT Program Outcomes from January 2009 through December 2013

**Overview:** This summary presents key findings from an outcome evaluation of the Improving Mood-Promoting Access to Collaborative Treatment (IMPACT) program implemented by Health Quality Partners (HQP), a subsidiary of Health Center Partners (HCP), as part of its Behavioral Health and Primary Care Integration Project. The Behavioral Health and Primary Care Integration Project is funded by the County of San Diego Health and Human Services Agency, Behavioral Health Services through the Mental Health Services Act. HQP has managed the IMPACT program since implemented in 2006 and, to date, the following Community Health Centers (CHCs)have treated more than 3,000 patients: Family Health Centers of San Diego; Imperial Beach Health Center; La Maestra Community Health Centers; Mountain Health and Community Services; Neighborhood Healthcare; and North County Health Services. The IMPACT program is ongoing.

This evaluation was undertaken to better understand program efficacy at multiple levels and explore if patient outcomes correlate with or vary by key clinical and/or demographic markers, including severity of depression, gender, and ethnicity. Findings are intended to highlight the program's successes and value for CHC patients, as well as identify any patient populations who may benefit from more targeted support or outreach strategies.

**Background:** A large body of literature indicates that the IMPACT model is much more effective than usual care for treating depression among adults.<sup>1</sup> IMPACT is a team-based and stepped-care approach to treating depression among adults in primary care. The IMPACT model emphasizes pro-active behaviors such as education, problem-solving, scheduling pleasant activities, and exercise. Pfizer Patient Health Questionnaire (PHQ-9) scores are collected from patients at the beginning of every IMPACT visit to assess progress and identify patients who may need their treatment plans adjusted if expected progress is not being made. Treatment goals are to reduce depressive symptoms by 50% among 50% of patients within 12 program visits.<sup>ii</sup> PHQ-9 scores are the primary metric for measuring patient progress.

**Methods:** HCP has developed and maintains a database for tracking IMPACT program participation and patient outcomes. A de-identified version of this database was utilized to conduct a retrospective cohort analysis for 1,522 patients who participated in the program between January 2009 and December 2013.<sup>1</sup> Only patients with initial PHQ-9 scores of 10 or above were included to ensure fidelity with the IMPACT model's threshold criteria for program participation (i.e., moderate to severe depression), and patients who dropped out after their first visit were excluded from the analysis. PHQ-9 scores corresponding with patients' depression levels when starting the program were sorted into one of four cohorts: moderate (n=472); moderate-severe (n=505); severe (n=441); and most severe (n=104). Data were analyzed per each cohort to identify variance and account for any population differences that could potentially skew program outcomes. A secondary crosstabs analysis was also conducted to: (a) determine demographic comparability between cohorts, and (b) identify if outcomes varied by gender or ethnicity within and

<sup>&</sup>lt;sup>1</sup> This timeframe was selected for analysis due to differences in data collection methods prior to 2009 and to programmatic changes implemented in 2014.



across cohorts. **Figure** 1 displays aggregated outcomes for all IMPACT participants included in this evaluation. Outcomes per each cohort are provided in the full Summary Report.





**Overall Findings:** Overall, 74% of IMPACT participants were female (n=1,132). The majority of patients identified as either Mexican-American (50%) or Caucasian (37%); 4% identified as African-American, and 9% as "other" or unspecified. Participants ranged in age from 18 to 84; 89% of patients were between ages 26 and 65.

Among females, Mexican-American women had the highest participation rates (53%), followed by Caucasian women (34%). Among males, Caucasian men had higher participation rates (47%) than Mexican-American males (40%).

Females also tended to have more visits than males, regardless of how depressed they were when they started the program. For males, however, a higher number of visits was associated with the initial severity of their depression.

As a whole (n=1,522), data show that patients experienced the most pronounced improvement after their first visit. By the 2<sup>nd</sup> visit, averaged PHQ-9 scores show patients were categorically less depressed, progressing from moderately severe to moderate levels of depression, with progress continuing across most visits. The highest attrition or "drop out" rates were also evidenced following the 2<sup>nd</sup> visit when 21% of patients (n=314) did not return for a 3<sup>rd</sup> visit. PHQ-9 scores collected at the 2<sup>nd</sup> visit, however, indicate that 63% of those non-returning patients were categorically less depressed than when they started.



**Key Evaluation Questions:** The collectively high attrition rate evidenced at the 3<sup>rd</sup> visit and the continued rates of improvement across visits initially raised the following evaluative questions: (1) did patients "drop out" after only two visits because they felt better? Or, (2) are the positive outcomes artificially inflated by disproportionate "drop out" rates of more severely depressed patients? The cohort analysis undertaken specifically addresses these questions.

**Cohort Analysis:** When analyzed separately, findings per each cohort show similar trends of improvement as when analyzed collectively, regardless of how depressed patients were when they started the program. At the 2<sup>nd</sup> visit, where averaged PHQ-9 scores indicate marked improvement overall, cohort analysis shows PHQ-9 scores dropped most precipitously among patients with moderately-severe (23%) to severe (24%) depression, followed by the most severely depressed (20%) and moderately depressed (15%) patient cohorts.

Cohort analysis of patients who did not return for a 3<sup>rd</sup> visit (n=314), shows that 70% of patients who started the program with the highest levels of depression (i.e., had PHQ-9 scores between 20 and 27) were categorically less depressed than when they started IMPACT. Additionally, 64% of patients who started the program with moderately-severe depression and 55% who started with moderate depression also evidenced categorical improvement.

**Summary of Key Findings:** Although patients are authorized to receive up to 12 IMPACT visits, many experience a decrease in depressive symptoms after only two visits – regardless of gender or ethnicity – and do not return for a third session. Findings from the cohort analyses demonstrated proportional attrition rates across cohorts and program visits and support the conclusion that program outcomes *are not* skewed by greater attrition/persistence rates among any single cohort. Program efficacy is further supported by PHQ-9 scores collected at the 2<sup>nd</sup> visit, which indicate that 63% of patients, overall, who did not come back for a 3<sup>rd</sup> visit had categorically lower levels of depression than when they started. Moreover, outcomes *per each cohort* show improvement rates ranging from 55% to 72% among patients who did not come back for a 3<sup>rd</sup> IMPACT visit. Overall, findings from this evaluation support the value and efficacy of the IMPACT program for CHC patients experiencing moderate to severe depression, regardless of gender or ethnicity.



## Full Summary of Findings: An Evaluation of IMPACT Program Outcomes from January 2009 – December 2013

#### Introduction

This summary presents key findings from an outcome evaluation of the Improving Mood-Promoting Access to Collaborative Treatment (IMPACT) program implemented through Health Quality Partners (HQP), a subsidiary of Health Center Partners (HCP), as part of its Behavioral Health and Primary Care Integration Project. The Behavioral Health and Primary Care Integration Project is funded by the County of San Diego Health and Human Services Agency, Behavioral Health Services through the Mental Health Services Act. HCP has managed the IMPACT program since implemented in 2006 and, to date, the following Community Health Centers (CHCs) have treated more than 3,000 patients: Family Health Centers; Mountain Health and Community Services; Neighborhood Healthcare; and North County Health Services. The IMPACT program is ongoing.

This evaluation was undertaken to better understand program efficacy at multiple levels and explore if patient outcomes correlate with or vary by key clinical and/or demographic markers, including severity of depression, gender, and ethnicity. Findings are intended to highlight the program's successes and value for patients receiving treatment from HCP member CHCs in San Diego, Riverside, and Imperial Counties, as well as identify patient populations who may benefit from more targeted support or outreach strategies.

#### **IMPACT** Program

IMPACT is a team-based and stepped-care approach to treating depression among adults in primary care that is more effective than usual care.<sup>iii, iv</sup> The IMPACT model emphasizes pro-active behaviors such as education, problem-solving, scheduling pleasant activities, and exercise. A "depression care manager" leads the program and works closely with the referring patient's primary care physician (PCP) and a psychiatrist to develop and manage a coordinated care treatment plan. One of the IMPACT model's key components is the collection of Pfizer Patient Health Questionnaire (PHQ-9) scores at the beginning of every session. The PHQ-9 is a brief, self-report assessment tool that is clinically useful for diagnosing, monitoring, and measuring depression. It can be quickly completed by patients and scored by clinicians. Scores range from 0-27 (i.e., "not at all depressed" to "most severely depressed"). Patients referred to IMPACT typically have an initial PHQ-9 score of 10 or higher (i.e., moderate to severe depression).

The PHQ-9 scores are used to assess progress and identify patients who may need their treatment plans adjusted if expected progress is not being made. Treatment goals are to reduce depressive symptoms by 50% among individual patients within 12 program visits.<sup>v</sup> Among participating CHCs, program efficacy is measured collectively as a 50% reduction in PHQ-9 scores among 50% of IMPACT patients. Ideally, patient PHQ-9 scores would fall below "10," indicating they are experiencing low to no depression.



## Methods

HCP has developed and maintains a database for tracking IMPACT program participation and patient outcomes. A de-identified version of this database was utilized to conduct a retrospective cohort analysis for 1,522 patients who participated in the program between January 2009 and December 2013.<sup>2</sup> Only patients with initial PHQ-9 scores of 10 or higher were included to ensure fidelity with the IMPACT model's threshold criteria for program participation, and patients who dropped out after their first visit were excluded from the analysis. PHQ-9 scores corresponding with patients' depression levels when starting the program were sorted into one of four cohorts: moderate (n=472); moderate-severe (n=505); severe (n=441); and most severe (n=104). Data were analyzed per each cohort to identify variance and account for any population differences that could potentially skew program outcomes. A secondary crosstab analysis was also conducted to: (a) determine demographic comparability between cohorts, and (b) identify if outcomes varied by gender or ethnicity within and across cohorts.

## **Report Organization**

**Section I** displays outcomes and highlights key findings for: (a) all 1,522 patients in aggregate; and (b) per each of the four designated cohorts. **Section II** provides more detail regarding cohort size and other measures of comparability (i.e., attrition and persistence rates). **Section III** considers how outcomes vary by gender and ethnicity among each cohort. **Section IV** briefly summarizes and discusses key findings.

<sup>&</sup>lt;sup>2</sup> This timeframe was selected for analysis due to differences in data collection methods prior to 2009 and to programmatic changes implemented in 2014.



#### SECTION I. IMPACT PROGRAM OUTCOMES

#### **Participant Demographics**

Of the 1,522 participants included in this analysis, 74% were women; 26% were men. Patients identifying as Mexican-American/Chicano accounted for the largest population of IMPACT participants (50%), followed by White/Caucasian (37%), Black/African-American (4%), and 9% did not indicate their ethnic affiliation or identified as "other." Overall, PHQ-9 scores for participants trend downward across visits, indicating a successive decline in depressive symptoms over time (Figure 1).



Figure 1. Average PHQ-9 Scores for IMPACT Program Participants, January 2009 – December 2013

Key findings for these data include:

- Averaged PHQ-9 scores declined 49% (8.47 points) between the 1<sup>st</sup> and 12<sup>th</sup> visit.
- PHQ-9 scores and depression levels progressively trended downward across most visits.
- Patient improvement is most pronounced at the 2<sup>nd</sup> visit, where averaged PHQ-9 scores dropped 21% (3.73 points).
- On average, patients were experiencing only mild depression by their 8<sup>th</sup> visit.



## **Outcomes Per Each Depression Cohort**

One objective of this evaluation was to determine if the improved patient outcomes depicted above in **Figure 1** resulted from disproportional attrition/persistence rates among any of the four patient cohorts. In other words, did the successive decline in averaged PHQ-9 scores reflect: (a) attrition among patients who had improved; or, (b) attrition among the most depressed patients? To make this determination, patient data were disaggregated into cohorts that matched their level of depression when they first started IMPACT (i.e., moderate, moderate-severe, severe, and most severe) and analyzed separately. **Figure 2** comparatively displays averaged PHQ-9 scores (outcomes) across cohorts and visits (V-1 through V-12). **Figures 3-6** display outcomes per each cohort in greater detail.



Figure 2. Averaged PHQ-9 Scores Across Cohorts

Key findings for **Figure 2** are as follows:

- When disaggregated, PHQ-9 scores for each cohort also trend downward, as they do in aggregate.
- Patient improvement was most pronounced at V-2 among each of the four cohorts. The severe (24%) and moderately-severe (23%) cohorts evidenced the most improvement, followed by the most severe (20%) and moderate (15%) cohorts.
- Notably, the level of depression initially defining each cohort at V-1 is categorically less severe at V-2 *and* cohort improvement persists through V-12.





Figure 3. Outcomes for Patients who began IMPACT with Moderate Depression

**Moderate Depression.** As shown in **Figure 3** (above), averaged PHQ-9 scores for this cohort decreased 15% (1.84 points) from V-1 to V-2. Correspondingly, PHQ-9 scores indicate that patients' affect improved at V-2, moving from "moderate" to "mild" depression, and continued to improve across all remaining visits. Overall, from V-1 to V-12, averaged PHQ-9 scores declined 46%.



Figure 4. Outcomes for Patients who began IMPACT with Moderately-Severe Depression



**Moderately-Severe Depression.** As displayed in **Figure 4** (above), averaged PHQ-9 scores for this cohort decreased 23% (3.88 points) from V-1 to V-2, indicating overall cohort improvement from "moderate-severe" to "moderate" depression. Marked improvement for this cohort was also evidenced at V-6 when averaged PHQ-9 scores dropped to 9.77, which is a score indicative of "mild" depression. This categorical shift persisted across all remaining visits. Overall, from V-1 to V-12, averaged PHQ-9 scores declined 57%.



Figure 5. Outcomes for Patients who began IMPACT with Severe Depression

**Severe Depression**. Among this cohort, averaged PHQ-9 scores declined 24% (5.25 points) by V-2, indicative of a lower level of depression (i.e., from "severe" to "moderately-severe"). Marked improvement was further evidenced at V-4 when averaged scores dropped to 14.38, a score categorically indicative of "moderate" depression. This shift persisted through V-12. Overall, from V-1 to V-12, averaged PHQ-9 scores declined 49% (Figure 5).





Figure 6. Outcomes for Patients who started IMPACT with the Most Severe Depression

**Most Severe Depression.** As depicted in **Figure 6**, averaged PHQ-9 scores among this cohort fell 20% (5.21 points) by V-2, indicative of a lower level of depression (i.e., "most severe" to "severe"). At V-3, averaged scores dropped to 17.76, shifting the cohort into the "moderately severe" category. This shift persisted through V-8 when averaged scores fell to 14.97 (indicative of "moderate" depression) but then fluctuated between "moderately severe" and "moderate" depression across remaining visits. Overall, averaged PHQ-9 scores among this cohort declined 40%. **Table 1** below compares outcomes for each cohort presented in the figures above.

Table 1. Changes in Averaged ( $\bar{x}$ ) PHQ-9 Scores by Depression Cohort									
Cohort	x PHQ-9 Scores at V1	Change in x̄ PHQ-9 Scores (V1-V2)	Percent Change (V1-V2)	x̄ PHQ-9 Scores at V12	Overall Change in x̄ PHQ-9 Scores (V1 - V12)	Overall Percent Change (V1 – V12)			
Moderate	11.74	-1.84	-15%	6.36	-5.38	-46%			
Mod-Severe	16.97	-3.88	-23%	7.36	-9.61	-57%			
Severe	21.94	-5.25	-24%	11.18	-10.76	-49%			
Most Severe	26.05	-5.21	-20%	15.75	-10.30	-40%			
Overall	17.40	-3.73	-21%	8.93	-8.47	-49%			



#### SECTION II. COHORT COMPARABILITY

#### **Cohort Characteristics**

Cohort participation rates (at V-1) and attrition rates (by V-12) are generally quite comparable (Figure 7). And, although the most severely depressed patient cohort starts out with about 75% fewer patients than the others, the cohort's attrition rate *is* nearly comparable with the others and patients in this cohort are demographically similar to patients in the other three cohorts (see Section III). Overall, high levels of comparability within and across cohorts supports and strengthens conclusions about IMPACT program outcomes for CHC patients.



Figure 7. Cohort Sample Size at V-1 and Attrition Rate (AR) by V-12

Trendlines depicted in **Figure 8** (below) show that attrition rates are very uniformly distributed across cohorts. These findings are important because they validate overall program efficacy; in other words, program outcomes indicative of patient improvement *are not* skewed by greater rates of attrition/persistence among any particular cohort. Further, benefit greatly from their participation in the IMPACT program, regardless of depression levels.



Figure 8. Attrition Rates among Cohorts



## Outcomes for Patients who did not Return for a 3rd IMPACT session

As evidenced in **Figure 8** above, attrition rates are similar per each cohort across most visits. This finding supports the validity of collective program efficacy. To further bolster the validity of this finding, however, we wanted to understand the high rate of patient attrition that occurs both collectively and per each cohort at the 3<sup>rd</sup> visit (21% overall) and why 314 patients stopped participating after only two IMPACT sessions. In other words, did patients stop participating because they felt better or because they did not benefit from the program?

To make this determination, PHQ-9 scores collected at the 2<sup>nd</sup> visit for the 314 patients who *did not* return for a 3<sup>rd</sup> visit were analyzed. Overall, 63% of patients who did not come back for a 3<sup>rd</sup> visit had PHQ-9 scores that were categorically lower than when they started the program; 30% had scores indicating no change in their depression levels from when they started; and, 7% were more depressed than when they started (**Figure 9**).



Figure 9. Changes in Depression Levels for Patients Who Stopped Treatment after only Two Visits (N=314)

The cohort analysis also supports the contention that many patients did not return for a 3<sup>rd</sup> visit felt better. Nearly 70% of patients who started the program with the highest levels of depression (i.e., had PHQ-9 scores between 20 and 27) were categorically less depressed than when they started IMPACT. Additionally, 64% of patients who started the program with moderately-severe depression and 55% who started with moderate depression also evidenced categorical improvement.



#### SECTION III. PARTICIPATION AND PERSISTENCE RATES AMONG KEY DEMOGRAPHICS

#### **Participation and Persistence Rates**

Participation rates reflect the number of patients in each cohort *when they started* the IMPACT program. Persistence rates reflect the percentage of patients who *continued* to participate in the IMPACT program across the 12 authorized visits. Although many patients experienced improved affect after only a few visits, multiple visits may be an important component in meeting treatment goals among certain patient populations or cohorts.

#### Gender

Overall, females accounted for 74% of patients starting the IMPACT program. Females also had higher participation rates than males, at a ratio of 3:1 across visits. Within each cohort, however, participation rates among males and females were mostly similar.

Persistence rates among females were consistent across cohorts, meaning that the percentage of females who had at least one visit was comparable to the percentage of females who completed 12 visits (Figure 10). Among males, persistence rates vary by depression levels, with higher persistence rates for those experiencing severe depression (Figure 11).



Figure 10. Participation and Persistence Rates among Females





Figure 11. Participation and Persistence Rates among Males

## Ethnicity

Overall, patients identifying as Mexican-American/Chicano accounted for the largest population of IMPACT participants (50%), followed by White/Caucasian (37%), and Black/African-American (4%). Nine percent (9%) did not indicate their ethnic affiliation or identified as "other." Ethnic identities are representatively distributed within each cohort, **(Figure 12)**, with a few exceptions:

- Participation rates for Mexican-Americans decrease across depression levels.
- Participation rates for Whites increase across depression levels.
- Participation rates for Blacks are highest among the "most severely" depressed cohort, although the actual number of participants is low (n=24).



Figure 12. Participation Rate by Ethnicity



## **Ethnicity and Gender**

**Figure 13** (below) displays participation and persistence rates among male and female patients who identified as Mexican-American/Chicano, White/Caucasian, and Black/African-American.

Overall, participation and persistence rates increase or remain static across genders and ethnicities. Among Mexican-American males, however, persistence rates (33%) fall well below their participation rates (40%). More analysis is required to interpret this difference.



Figure 13. Participation and Persistence Rates by Ethnicity and Gender (V-1 to V-12)

## SECTION IV. SUMMARY OF KEY FINDINGS

#### **Overall Findings**

Overall, 74% of IMPACT participants were female (n=1,132). The majority of patients identified as either Mexican-American (50%) or Caucasian (37%); 4% identified as African-American, and 9% as "other" or unspecified. Participants ranged in age from 18 to 84; 89% of patients were between ages 26 and 65.

Among females, Mexican-American women had the highest participation rates (53%), followed by Caucasian women (34%). Among males, Caucasian men had higher participation rates (47%) than Mexican-American males (40%).

Females also tended to have more visits than males, regardless of how depressed they were when they started the program. For males, however, a higher number of visits was associated with the initial severity of their depression.

As a whole (n=1,522), data show that patients experienced the most pronounced improvement after their first visit. By the  $2^{nd}$  visit, averaged PHQ-9 scores show patients were categorically less depressed, progressing from moderately severe to moderate levels of depression, with progress continuing across most visits. The highest attrition or "drop out" rates were also evidenced following the  $2^{nd}$  visit when 21% of patients (n=314) did not return for a  $3^{rd}$  visit. PHQ-9 scores collected at the  $2^{nd}$  visit, however,



indicate that 63% of those non-returning patients were categorically less depressed than when they started.

#### **Key Evaluation Questions**

The collectively high attrition rate evidenced at the 3<sup>rd</sup> visit and the continued rates of improvement across visits initially raised the following evaluative questions: (1) did patients "drop out" after only two visits because they felt better? Or, (2) are the positive outcomes artificially inflated by disproportionate "drop out" rates of more severely depressed patients? The cohort analysis undertaken specifically addresses these questions.

## **Cohort Analysis**

When analyzed separately, findings per each cohort show similar trends of improvement as when analyzed collectively, regardless of how depressed patients were when they started the program. At the 2<sup>nd</sup> visit, where averaged PHQ-9 scores indicate marked improvement overall, cohort analysis shows PHQ-9 scores dropped most precipitously among patients with moderately-severe (23%) to severe (24%) depression, followed by the most severely depressed (20%) and moderately depressed (15%) patient cohorts.

Cohort analysis of patients who did not return for a 3<sup>rd</sup> visit (n=314), shows that 70% of patients who started the program with the highest levels of depression (i.e., PHQ-9 scores between 20 and 27) were categorically less depressed than when they started IMPACT. Additionally, 64% of patients who started the program with moderately-severe depression and 55% who started with moderate depression also evidenced categorical improvement.

#### **Summary of Key Findings**

Although patients are authorized to receive up to 12 IMPACT visits, many experience a decrease in depressive symptoms after only two visits – regardless of gender or ethnicity – and do not return for a third session. Findings from the cohort analyses demonstrated proportional attrition rates across cohorts and program visits and support the conclusion that program outcomes *are not* skewed by greater attrition/persistence rates among any single cohort. Program efficacy is further supported by PHQ-9 scores collected at the 2<sup>nd</sup> visit, which indicate that 63% of patients, overall, who did not come back for a 3<sup>rd</sup> visit had categorically lower levels of depression than when they started. Moreover, outcomes *per each cohort* show improvement rates ranging from 55% to 72% among patients who did not come back for a 3<sup>rd</sup> IMPACT visit. Overall, findings from this evaluation support the value and efficacy of the IMPACT program for CHC patients experiencing moderate to severe depression, regardless of gender or ethnicity.



<sup>i</sup> More than 80 randomized clinical trials have shown IMPACT's collaborative care model to be more effective than usual care. See, for example:

Archer, J. et al., (2012). Collaborative care for depression and anxiety problems. *Cochrane Database of Systematic Reviews 2012*, Issue 10 Available at <u>http://www.cochrane.org/CD006525/DEPRESSN\_collaborative-care-for-people-with-depression-and-anxiety</u>

Grypma, L., Haverkamp, R., Little, S., &Unützer, J. (2006). Taking an evidence-based model of depression care from research to practice: Making lemonade out of depression. *General Hospital Psychiatry*, 28(2), 101–107. PubMed abstract available at <a href="http://www.ncbi.nlm.nih.gov/pubmed/16516059">http://www.ncbi.nlm.nih.gov/pubmed/16516059</a>

<sup>ii</sup> Unützer, J. et al., (2002). Collaborative care management of late-life depression in the primary care setting: A randomized controlled trial. *JAMA*, 228(22): 2836-2845. Available at <u>https://jamanetwork.com/journals/jama/fullarticle/195599</u> End Notes

<sup>iii</sup> IMPACT was developed by a team of researchers led by Jurgen Unützer at the University of Washington in the late 1990s. The model was tested over a two-year period in a randomized clinical trial among 1,801 depressed adults at 18 health clinics across the U.S.

<sup>iv</sup> More than 80 randomized clinical trials have shown IMPACT's collaborative care model to be more effective than usual care. See, for example:

Archer, J. et al., (2012). Collaborative care for depression and anxiety problems. *Cochrane Database of Systematic Reviews 2012*, Issue 10 Available at <u>http://www.cochrane.org/CD006525/DEPRESSN\_collaborative-care-for-people-with-depression-and-anxiety</u>

Grypma, L., Haverkamp, R., Little, S., &Unützer, J. (2006). Taking an evidence-based model of depression care from research to practice: Making lemonade out of depression. *General Hospital Psychiatry*, 28(2), 101–107. PubMed abstract available at <a href="http://www.ncbi.nlm.nih.gov/pubmed/16516059">http://www.ncbi.nlm.nih.gov/pubmed/16516059</a>

<sup>V</sup> Unützer, J. et al., (2002). Collaborative care management of late-life depression in the primary care setting: A randomized controlled trial. *JAMA*, 228(22): 2836-2845. Available at <a href="https://jamanetwork.com/journals/jama/fullarticle/195599">https://jamanetwork.com/journals/jama/fullarticle/195599</a>