DIAMOND Bibliography

Care Delivery

1. Barry, Colleen L., et al., Commentary: An economic perspective on implementing evidence-based depression care. 2005 Springer Science + Business Media, Inc. Short commentary by author from Yale, commenting on the experience with the RWJF projects under the Depression in Primary Care project. She discusses several elements necessary to support realignment of the system incentives—use of IT, need to imbed changes into constraints of present system—more of an opinion of the efforts seen thus far.

2. Craven, MA, Bland R. What is Collaborative Care? Can J. Psychiatry, 2006 May;51(6 Suppl 1),7S-72S. Brief overview describing work done in model of collaborative care being developed in Canada. Provides list of ten learnings from extensive evaluation of literature by Canadian experts. Provides executive summary for entire supplement, which we will try to provide at later date if interested.

3. Dietrich, Allen, MD, et al; Going to scale: Re-engineering systems for primary care treatment of depression (RESPECT-Depression Project). Annals of Family Medicine, vol. 2, No. 4 July/August 2004. Randomized controlled trial of 5 medical groups and health plans following the Three Component Model: (1- care management, 2- collaboration between mental health and primary care, 3- preparation of primary care clinicians and practices to provide systematic depression management). One of the first studies to link an RCT to subsequent dissemination. All assigned groups were able to implement the model, 5 were willing to maintain supports using their own resources once the study was over.

4. Frank, Richard G. Ph.D., et al. Aligning incentives in the treatment of depression in primary care with evidence-based practice. Psychiatric Services, Vol. 54 no. 5 –2003. Discussion of need for changes in contractual relationships, payment methods for primary care physicians, and measurement which could be made in existing institutional arrangements to align with emerging clinical technologies and evidence based practices. Overview of challenges and opportunities which exist.

5. Gallo, Joseph J. MD, MPH, et al The effect of a primary care practice-based depression intervention on mortality in older adults. Ann Int Med 2007;146:689-698. Randomized controlled trial in which care management programs at 20 primary care practices tested effects of depression intervention on risk of death associated with depression. Reduction in death

seemed attributable to reduction in death due to cancer in older patients with major depression.

6. Gilbody, S., Bower, P., Fletcher, J., Richards, D., Sutton, A. Collaborative care for depression. Arch Intern Med. Vol 166, Nov 27, 2006. 2314-2321. Meta-analysis of 37 randomized studies on collaborative care for depression. Short-term (6 months) and longer-term (up to 5 years) effectiveness was found based on factors of medication compliance and the professional background and method of supervision of care managers.

7. Grypma, L., et al. Taking an evidence-based model of depression care from research to practice: making lemonade out of depression. General Hospital Psychiatry 28 (2006) 101-107. Applied the IMPACT model to a quality improvement program at Kaiser Permanente San Diego. Outcome goals included adaptation for all adults not just age 60 and older and whether model would work under "real world" conditions. Results showed similar clinical improvements to those in the research trial.

8. Haworth, Heather, MSW, et al. Collaboration between community mental health workers or counsellors and psychiatrists in a shared care setting. CPA Bulletin de L'APC. April 2004. Description of a shared care model in Ottowa between social workers, psychiatric nurses, psychologists, primary care physicians and psychiatrists.

9. Kates, Nick, MB, BS, FRCPC; Mach, Michelle, BA (H)BSW, MSW, RSW. Chronic disease management for depression in primary care: A summary of the current literature and implications for practice. The Canadian Journal of Psychiatry, Vol 52, No 2, Feb 2007. Review of randomized controlled trials evaluating models for depression in primary care using chronic disease management. Emphasizes importance of monitoring and follow-up, role of psychiatrists, and funding for care managers.

10. Kilbourne, Amy M. et al. Translating evidence-based depression management services to community-based primary care practices. The Milbank Quarterly, Vol. 82, No. 4, 2004 (631-659) Detailed and extensive review of the different methods which have been used to move evidence based depression care to the community, using the chronic care model elements as a framework. Addresses in detail how different projects and concepts have attempted to fulfill the different elements of Wagner's model. Useful for those seeking general overview, background of application of chronic care model to depression.

11. Kroenke, K. MD, et al. The PHQ-9: Validity of a brief depression severity measure. J Gen Intern Med 2001;16:606-613. Case-control study validating the PHQ-9 for assessing depression severity. The sensitivity of detecting a PHQ-9 of greater or equal to 10 was 88% and sensitivity was also 88%. Other PHQ-9 language versions can be found at: http://www.phqscreeners.com/overview.aspx.

12. Liu, C., et al. Time Allocation and Caseload Capacity in Telephone Depression Care Management. Am J Manag Care. 2007;13:652-660. Cross-sectional analysis of care manager activities and workload for depression collaborative care. Time allocations for an average care manager patient load (143-165 patients) were determined for initial assessment including ancillary activities: 75-95 minutes, and follow-up contact including ancillary activities: 51-60 minutes. Provides more detailed breakdowns of time per activity including unsuccessful call attempts. No other study to date has looked at CM time allocation, and they used a large number of patients across several clinics. Limitations included relying on CM self-report of time spent and the short (4 week) data collection period but the authors mitigated for these issues as much as possible and explain how. *(Class D)*

13. Löwe B., Unutzer, J., Callahan, C., et al Monitoring Depression Treatment Outcomes with the Patient Health Questionnaire-9. Medical Care. Volume 42, Number 12, December 2004. A subset of elderly patients from the IMPACT study were able to reliably fill out the PHQ-9 if they had mild cognitive impairment. Patients with moderate impairment were able to answer the questions on the PHQ-9 when asked by a clinician.

14. Meredith, Lisa, S. PhD., et al Implementation and maintenance of quality improvement for treating depression in primary care. Psychiatric Services 57:48-55, 2006. QI teams that participated in IHI breakthrough series on depression were evaluated through progress reports and interviews. Changes most viewed as major successes included delivery system and information system changes. Broad success at implementation and maintenance of quality improvement for depression treatment in primary care.

15. Mulsant, Benoit H., et al. Pharmacological treatment of depression in older primary care patients: the PROSPECT algorithm. International Journal of Geriatric Psychiatry Int J. Geriatr Psychiatry 2001; 16:585-592. Tests whether trained clinician ("health specialist") can work with PCP in implementing a comprehensive depression management program. Specifically was dealing with elderly population. Specifically addressed aspects of medication tolerance in elderly population.

16. Olick, Robert S., JD, PhD; Bergus, George R., MD, MAEd. Malpractice Liability for Informal Consultations. Fam Med 2003; 35(7):476-81. Review of reported judicial opinions in nearly 20 states involving informal physician consultations. Rulings were consistant that a consultant and patient are not in a physician-patient relationship when the patient is the focus of an informal consultation. In the absence of this relationship, the courts have found no grounds for a claim of malpractice.

17. Pincus, Harold, et al. Depression in primary care: Bringing behavioral health care into the mainstream. Health Affairs 2005 Volume 24, Number 1. Description of RWJF program on depression in primary care. Progress to date

included acknowledgement of depression and key barriers, efforts to inform purchasers about indirect costs of depression, and policy implications such as the importance of behavioral health care to penetrate more deeply into the mainstream of general health care with room for adaptation because of the historical and structural separation.

18. Pincus, Harold, et al. Depression in primary care: Learning lessons in a national quality improvement program. Administration and Policy in Mental Health and Mental Health Services Research. 2005. Description of overall context for the Depression in Primary Care program at RWJ. Includes a table outlining the sites doing demonstration projects and a table with their clinical framework for depression in primary care (Leadership, Decision Support through evidence-based treatment guidelines and core protocols and access to mental health specialists for consult and referral, Delivery System Design through access to guidelines, patient registry, care manager, access to mental health specialists, Clinical Information System through tools to facilitate roles of primary care provider and care manager for tracking, measuring and managing patients, Self-Management Support, Community Resources).

19. Price, David, MD. Translating effective depression care into practice: making an impact with IMPACT. General Hospital Psychiatry 28 (2006) 92-93. Kaiser Permanente adapted the IMPACT model. Primary care clinicians advocated for continuing the model after the study ended and strong sponsorship and advocacy was obtained from leaders with influence over resources and commitment to the change.

20. Rollman, Bruce, et. al. Implementation of guideline- based care for depression in primary care. Administration and Policy in Mental Health and Mental Health Services Research, 2005. Experience of the Maine Health System and Massachusetts Consortium on Depression in Primary Care (MCDPC) who have implemented the RWJF initiative. Learnings included engaging leaders at all levels, flexibility needed for implementation at individual sites and role of the care manager (procedures need to be developed for communication when located outside the clinic, how to incorporate him/her as a team member, care mgr should be trained in cultural issues that affect management of depression).

21. Rush, A. John, MD., et al. Acute and longer term outcomes in depressed outpatients requiring one or several treatment steps: A STAR*D report. Am J. Psychiatry 2006; 163:1905-1917. Later phase analysis of the STAR*D clinical study reporting patients who require several medication changes to achieve remission of an acute major depressive episode have a higher rate of relapse and shorter period of time until relapse compared to patients who require fewer medication changes to achieve remission.

22. Trivedi, M.H., MD, et al. Evaluation of outcomes with citalopram for depression using measurement-based care in STAR*D: Implications for

clinical practice Am J Psychiatry, January 2006 163:1, 28-40. Early phase STAR*D clinical study dealing with use of citalopram addressing the timeframe for improvement in patients undergoing treatment, reflecting possible need for longer timeframes for treatment.

23. Trivedi, MH., MD, et al. Medication augmentation after the failure of SSRI's for depression. New Engl J Med March 2006;354:1243-52. Middle phase analysis of the STAR*D clinical study indicating primary care can be just as successful as specialty care in getting depressed patients to remission. Remission can take up to three months, but can be achieved if primary care provider sees some improvement and continues to work with patient to augment or increase medication dosages.

24. Unutzer, J. et. al Collaborative care management of late-life depression in the primary care setting: a randomized controlled trial. JAMA 2002, 288:2836-2845. Original article describing the IMPACT trial which used as collaborative approach in 8 different organizations, in evaluating the treatment of depression in the elderly population.

25. Unutzer, J. MD., M.P.H., Transforming mental health care at the interface with general medicine: Report for the president's commission. Psychiatric Services Jan 2006 Vol. 57 No. 1. Report commissioned by Subcommittee on Mental Health Interface with General Medicine authored by Jurgen Unutzer. Recommendations are presented for achieving high-quality care for common mental disorders at interface of general medicine and mental health, and for overcoming barriers, also how to facilitate quality improvement models.

26. Wells, K., et al. Impact of Disseminating Quality Improvement Programs for Depression in Managed Primary Care. JAMA, 2000. Vol 283, No 2. 212-220. Randomized controlled trial evaluating whether implementation of QI depression programs improve quality of care, employment and health outcomes in managed care practices. Depression outcomes and quality of care improved over one year as did retention of employment, without increases in medical visits.

27. Wulsin, L., Somoza, E., Heck, J. The Feasibility of Using the Spanish PHQ-9 to Screen for Depression in Primary Care in Honduras. Primary Care Companion J Clin Psychiatry 2002;4(5). Compared to another screening tool, the PHQ-9 spanish version had a sensitivity of 77% and specificity of 100%. Other PHQ-9 language versions can be found at: http://www.phqscreeners.com/overview.aspx.

28. Yeung, A., Fung, F., Yu, S., et al. Validation of the Patient Health Questionnaire-9 for depression screening among Chinese Americans. Comprehensive Psychiatry 49 (2008) 211-217. Case-control study validating the Chinese Bilingual version of the PHQ-9 (CB-PHQ-9) for assessing depression severity. Sensitivity for recognizing major depressive disorder

was 81% and specificity was 98%. *(Class C)* Other PHQ-9 language versions can be found at: http://www.phqscreeners.com/overview.aspx.

Cost Effectiveness

29. Bachman, John, Ph.D. a, et al. Funding mechanisms for depression care management: opportunities and challenges, General Hospital Psychiatry 28 (2006) 278-288. Description of the models for funding depression care management services as used by the RWJF demonstration sites. Care manager role is more explicitly described, and is defined as: a collaborative process of assessment, planning, facilitation and advocacy for options and services to meet an individual's health needs through communication and available resources to promote quality cost-effective outcomes (Wagner, 1996). Funding mechanisms include: practice-based care management on a fee-for-service basis, practice-based care management under contract to health plans, global capitation, flexible infrastructure support for chronic care management, health-plan-based care management, third-party-based care management under contract to health plans, and hybrid models. Strategies for fee-for-service billing, challenges in funding depression care management, and future directions are also outlined.

30. Barry, Colleen Ph.D., Improving the quality of depression care in medicaid. Psychiatric Services- Oct. 2005 Vol. 56 No. 10. Brief discussion of challenges in public sector (Medicaid population) and discussion of Colorado Access project which is effort to improve depression care in this population using collaborative model.

31. Katon, Wayne, MD et al Cost-effectiveness and net benefit of enhanced treatment of depression for older adults with diabetes and depression. Diabetes Care 29:265-270, 2006**.** Evaluates the effect of the IMPACT model in patients with both diabetes and depression. Patients treated had more depression free days over 24 months, with outpatient costs being $25 higher over the same period as opposed to usual diabetic care costs. IMPACT was a high value investment for older adults with diabetes and depression with high clinical benefits at no greater cost than traditional care.

32. Katon WJ, Schoenbaum M, Fan MY, et al. Cost-effectiveness of improving primary care treatment of late-life depression. Arch Gen Psychiatry. Dec 2005;62(12):1313-1320. Study of the incremental cost-effectiveness of the IMPACT RCT for 1801 patients age 60+ with major depression (17%), dysthymia (30%), or both (53%). Relative to usual care, intervention pts. had 107 more depression-free days (.06-.12 QALYs) over 24 months at an outpt cost of $295 more and inpt cost of $77 more than usual care pts. On the outpt side, mental health costs were higher and other medical costs lower, while on the inp side, mental health costs were lower while other medical costs were higher. Depression free days were 20-32 days greater over each of the 4 6-month periods, while total outpt costs were higher in the first 2 6-month periods, but lower in the second 2 periods. Conclusion:

this is a high value investment with high benefits at a low increment in health care costs.

33. Pirraglia PA, Rosen AB, Hermann RC, Olchanski NV, Neumann P. Cost-utility analysis studies of depression management: a systematic review. Am J Psychiatry. Dec 2004;161(12):2155-2162. Found 9 good studies and concluded that pharmacologic interventions had lower costs per QALY than nonpharmacologic interventions, but that psychotherapy alone, care management alone, and psychotherapy plus care management all had lower costs than usual care. However, cost-utility studies combine quality of life and mortality benefits in a common metric (QALY) that differs from the cost-effectiveness studies noted above.

34. Pyne JM, Rost KM, Zhang M, Williams DK, Smith J, Fortney J. Cost-effectiveness of a primary care depression intervention. *J Gen Intern Med.* Jun 2003;18(6):432-441. A twelve month cost analysis of the study reported by Rost, 2005 for 24 months. Depression intervention was cost-effective relative to usual care using cost-effective ratios and quality adjusted life years.

35. Revicki DA, Simon GE, Chan K, Katon W, Heiligenstein J. Depression, health-related quality of life, and medical cost outcomes of receiving recommended levels of antidepressant treatment. J Fam Pract. Dec 1998;47(6):446-452. Out of 358 patients starting antidepressant treatment for major depression, compared the 54% who received recommended doses for 90+ days to those who didn't (not an RCT). Found no sig. differences in health-related quality of life over 6 months, but mean total medical costs were $1872 compared to $2622 or $740 less (P=.032). The difference was entirely due to lower non-mental health-related inpatient costs.

36. Rost K, Pyne JM, Dickinson LM, LoSasso AT. Cost-effectiveness of enhancing primary care depression management on an ongoing basis. Ann Fam Med. Jan-Feb 2005;3(1):7-14. Analysis of cost effectiveness for enhanced primary care depression for 211 adults starting new major depression treatment. Over 24 months, intervention pts had 60 more depression impairment-free days (more in year 2 than year 1). The incremental cost-effectiveness ratio for enhanced care ranged from $9,595 to $14,306 per quality-adjusted life-year. The number of incremental days free of depression impairment increased between the first year and the second year (23.0 vs 36.4, respectively, P< .01). Health plan costs (program + outpt costs) were $568 more than for usual care, but in the second year, these costs were $12 less.

37. Schoenbaum M, Unutzer J, Sherbourne C, et al. Cost-effectiveness of practice-initiated quality improvement for depression: results of a randomized controlled trial. JAMA. Sep 19 2001;286(11):1325-1330. Using the Partners in Care RCT, compared 443 usual care patients screened positive for depression to 424 in the medication arm and 489 in the psychotherapy arm over 24 months. Average total health care costs

increased by $419 in meds arm and $485 in therapy arm. Patients had 25 and 47 fewer days with depression burden and were employed 18 and 21 more days.

38. Simon GE, Katon WJ, VonKorff M, et al. Cost-effectiveness of a collaborative care program for primary care patients with persistent depression. Am J Psychiatry. Oct 2001;158(10):1638-1644. Out of 228 patients in an RCT, those receiving collaborative care had 16.7 more depression-free days over 6 months than usual care at an incremental cost of depression treatment of $357. "No offsetting decrease in use of other health services was observed," including other outpt or inpt services or costs.

39. Simon GE, Manning WG, Katzelnick DJ, Perarson SD, Henk HJ, Helstad CS: Cost-effectiveness of systematic depression treatment for high utilizers of general medical care. Arch Gen Psychiatry 2001;58:181-187. Organized depression management program led to an increase of 47.7 depression-free days over 12 months. Estimated outpatient costs were $675 with $412 of that total for antidepressant prescriptions.

40. Simon G, Ormel J, Von Korff M, Barlow W. Health care costs associated with depressive and anxiety disorders in primary care. Am J Psychiatry. 1995 1995;152:352-357. Analysis of data on 206 patients of Group Health Puget Sound with data at baseline and 12 months later showed those with anxiety or depressive disorders at baseline had markedly higher baseline costs ($2390 vs. $1397). There differences persisted after adjustment for medical morbidity, but they reflected higher utilization of general medical services rather than mental health treatment costs.

41. Simon GE, Von Korff M, Ludman EJ, et al. Cost-effectiveness of a program to prevent depression relapse in primary care. Med Care. Oct 2002;40(10):941-950. Relapse prevention program for depression resulted in 13.9 additional depression free-days and $160 total outpatient costs.

42. Sturm R, Wells KB. How can care for depression become more cost-effective? JAMA. Jan 4 1995;273(1):51-58. Modeling based on data from the Medical Outcomes Study of depressed patients identified in 1986 and followed for 2 years. Concluded that more appropriate care (per guidelines) improves functioning outcomes, so increased costs increase value. However, shifting care to the primary setting lowers cost while worsening outcomes. Best would be to focus on substantially improved care in primary care settings.

43. Unutzer, Jurgen, Katon, Wayne, Ming-Yu, Fan, Schoebaum, Michael, Lin, Elizabeth, Penna, Richard, Powers, Diane; Long-Term Cost Effects of Collaborative Care, American Journal of Managed Care, Vol 14, No. 2 Randomized controlled trial comparing collaborative care with usual care at two IMPACT sites in which four-year cost data were available. Results showed a slight increase in costs to put the new care in place but then over time, in

2-4 years post implementation, there is an overall health care cost savings of $3,300 per patient compared to patients receiving usual care.

Workplace Effects

44. Dickinson L, Rost K, Nutting P, Elliott C, Keeley R, Pincus H; RCT of a Care Manager Intervention for Major Depression in Primary Care: 2-Year Costs for Patients with Physical vs Psychological Complaints. Annals of Family Medicine, Vol. 3, No. 1, January/February 2005. Randomized controlled trial comparing care management intervention with usual care in 12 primary care practices for 24 months. Results found decreased outpatient costs for depressed patients who complain of psychological symptoms although increased costs for depressed patients who complain exclusively of physical symptoms.

45. Lo Sasso AT, Rost K, Beck A. Modeling the impact of enhanced depression treatment on workplace functioning and costs: a cost-benefit approach. Med Care. Apr 2006;44(4):352-358. Data from the Rost RCT of enhanced care in 12 practices in a model showed an average net benefit of enhanced care to the employer of $30 per worker in Year 1 and $257 in Year 2 for an overall ROI of 302%. This ROI was greater in firms using team production, hiring more costly substitute labor, or having penalties for output shortfalls, but lower in those with a large fraction of employees with dependent coverage or high turnover rates.

46. Pincus HA, Pettit AR. The societal costs of chronic major depression. J Clin Psychiatry. 2001;62 Suppl 6:5-9. Literature review showed functional impairment with depression is equal or greater than that for any other chronic disease, while worsening the care or outcomes of those other chronic conditions. While direct medical costs are $12 billion/year, workplace costs due to absenteeism and reduced productivity are $24 billion. 80% of employers say it is a problem in their work settings, and 40% say it is a moderate or large problem.

47. Rost K, Smith JL, Dickinson M. The effect of improving primary care depression management on employee absenteeism and productivity. A randomized trial. Med Care. Dec 2004;42(12):1202-1210. Using data from the Rost RCT showed employed pts in enhanced care had 6% greater productivity and 23% less absenteeism over 2 years. In consistently employed subjects, the increase in productivity was 8% ($1982) and reduction in absenteeism was 28% ($619).

48. Stewart WF, Ricci JA, Chee E, Hahn SR, Morganstein D. Cost of lost productive work time among US workers with depression. JAMA 2003;289:3135-44. Study of all employees in the American Productivity Audit who responded + to the 2-question depression screen (n=692) compared to those who didn't (n=435). Workers with depression had sig. more total health-related LPT (lost productive time) than those without (5.6 hours/week vs. 1.5 hours). 81% of this is due to reduced performance while

at work. Extrapolation to the whole US workforce shows workers with depression cost employers $44 billion per year. Moreover, <30% of depressed workers reported use of antidepressants in the prior year. Conclusion: A majority of the LPT is invisible and explained by reduced performance while at work.

49. Wang PS, Beck AL, Berglund P, McKenas DK, Pronk NP, Simon GE, Kessler RC. Effects of major depression on moment-in-time work performance. Am J Psychiatry 2004;161:1885-91. Study of randomly sampled work performance data from 105 airline reservation agents and 181 telephone customer service reps with depressed workers oversampled. Major depression was the only one of 7 chronic conditions with decreased task focus and productivity (= to2.3 days of absence per depressed worker per month). Conclusion: Previous studies sig. underestimate the adverse economic effects associated with depression.

50. Wang P, Simon G, Avorn, J., et al. Telephone Screening, Outreach and Care Management for Depressed Workers and Impact on Clinical and Work Productivity Outcomes. JAMA Sept 2007, Vol 298, No 12. 1401-1411. Randomized controlled trial of exclusively employed people receiving either usual care or intervention of care manager telephone outreach services. Results from the intervention group included a 50% improvement in depression scores at 12 month assessment and a 2.6 hour improvement per week in overall work function due to increased hours worked and increased job retention.

51. Whooley MA, Kiefe CI, Chesney MA, Markovitz JH, Matthews K, Hulley SB. Depressive symptoms, unemployment, and loss of income. Arch Intern Med 2002;162:2614-20. Prospective cohort study of 2334 employed young adults with an annual family income of $25,000+. 33% of depressed subjects and 21% of undepressed subjects reported new unemployment during the next 5 years, even after adjusting for confounding variables. 17% of depressed and 7% of undepressed reported their income had fallen below $25,000 over the next 5 years.