Effectiveness and Costs of Clinical Psychology Services:
A Business Plan

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Preamble

The purpose of this report and business plan is to make a pitch, solidly grounded in data, for the wider inclusion of Clinical Psychologists in third-party-payer health plans. At this time, I unabashedly make the pitch for Clinical Psychologists because I believe they are uniquely (albeit not exclusively) prepared to deliver high quality, reasonable cost, psychological services to clients. Psychologists are recognized as health service providers in that they do not need to charge GST on their services, yet, unlike physicians, chiropractics, massage therapists, or homeopathic practitioners they can not bill any government-based, or other universal payer plan. The Seaton Commission Report on Health Care in BC has explicitly identified psychologists as an underutilized resource in BC. This recommendation has been totally ignored by the New Directions initiative despite the fact that New Directions in its spirit and detail grows directly out of the Seaton Commission Report and its recommendations.

The tradition of not providing third party paid, universal access to psychologists has forced professional psychology into the role of being a business that needs to market itself. Although initially uncomfortable in this role, professional clinical psychologists have now carved out some niches. Many employers including the R.C.M.P. and some local B.C. police forces have already recognized the value and cost-efficiency of offering psychological services to their employees/members and some of the research backing these decisions is cited below. Employee assistance programs (EAP), however, are offered only by select few large employers (most frequently public service agencies) with generally rich benefit plans; they leave out most employees of small and private companies, they do not cover those unfortunate enough to be unemployed or on welfare. A two-tiered health care system has de facto been created as far as psychological services are concerned. Note that such two-tiered service provision is clearly contradictory to the spirit of the Canada Health Act.

The provision of free psychological services via hospitals and community out-patient clinics is woefully inadequate as excessively long waiting-list demonstrate. Even worse, despite massive population growth in BC, such positions have been cut back; Shaughnessy Hospital, for example, had a large, thriving Psychology Department that has been eliminated in its entirety. As Director of our in-house Psychology Clinic at UBC (during 1994-1995), I personally witnessed the effect of this closure for our already embarassingly long waiting-list.

There is strong evidence that easy-access psychological services are an efficient means of supporting the population; this is particularly easy to demonstrate when considering selected, yet diverse, areas of application and when considering hard endpoints like reduced hospitalizations, drug use, absenteeism etc. Such a case will be made below by drawing on, and condensing information from [a] original research and reviews of research conducted over the past few decades and compiled by professional psychology organizations, [b] a symposium presented at the annual convention of the Canadian Psychological Association in June 1994 in Penticton, B.C., [c] reviews of cost

and utilization patterns of already existing third-payer programs for Clinical Psychology Services.

How is this report organized?

This report consists of summaries of relevant controlled research and includes sections on the following questions:
[1] What is the cost of mental health problems to society, to health care plans, to employers?
[2] For which particular disorders has psychological treatment been shown effective?
[3] Is psychological treatment cost-effective, i.e., which areas of health service and national economy show reduced costs that offset the investment?
[4] If psychological services are universal and easy to access, does that not lead to a cost explosion?

At the outset, I want to alert the reader to the current prevailing opinion in the profession that Clinical Psychology is not just a mental health profession but also a physical health profession; or, even simpler, a health profession. Cited below will be evidence that distinguishing mental health and physical health and assigning separate budgets is counterproductive. In fact, it makes most sense to study the effect of mental health treatment on all forms of health care costs including utilization of mental health services, hospitalizations, physician visits, drug use (prescription and over-the-counter), rehabilitation, return to work etc. .

Why present a business plan *now*? A personal view

The timing of this presentation is everything but an accident because I believe that health care, and the role of psychology in it, is currently undergoing dramatic changes that will also leave our profession (Clinical Psychology) changed for many decades to come. These changes are happening **now** and there is so much momentum that psychologists simply cannot afford a wait-and-see attitude. In fact, one can very well describe the current status quo as one of crisis, and as the definition of the word crisis implies, it allows for change for the worse and for change for the better. Which of the two outcomes is the more likely will depend largely on us, that is, psychologists, or clinical psychologists in particular. The overall purpose of this business plan is therefore to illustrate how clinical psychology can play a pivotal role in health care and define its place in a changing, cost-conscious market place.

The good news is that there have been positive changes on many fronts and exciting discoveries in Clinical psychology. We have argued elsewhere (Linden & Wen, Prof Psychol: Res & Pract, 1990, 21,482-488) that the types of measures clinicians and researchers are using can be coarsely broken down into what we call "soft" and "hard" measures. While this is a somewhat arbitrary, dichotomous breakdown, the labels refer to the degree of trustworthiness or objectivity inherent in these measures. Soft measures, like self-report and clinician ratings, tend to be highly reactive measures and often involve psychological constructs that do not have much inherent meaning to non-psychologists. On the other hand, hard measures include physiological indices (like blood pressure or cholesterol), reduced hospitalization rates, reduced medication intake, and are at least to some degree easier to understand for non-psychologists. Hence, the

inclusion of hard measures makes it easier to market psychological treatment. We have noted that a relatively large number of studies do include hard measures and that over time the inclusion rate has actually risen from about 60 to 75% of all published studies.

What is the cost of mental health problems to society, to health care plans, and to employers?

- A business plan submitted to CU&C by the Alexander Consulting group (January 1995) shows the enormous cost of many diseases for insurance carriers, employers, and society as a whole.
- Approximately 10% of North-Americans have a serious mental disorder other than substance abuse. In the U.S., the associated costs to society were estimated at U$129 billion about half of which is attributable to lost productivity in the workplace (Rice et al, 1990).
- Mental illness, including depression, can be as functionally disabling as a serious heart condition, and more disabling than other chronic disease conditions like hypertension, angina, lung and gastrointestinal problems (Wells et al., 1989).
- Patients with diagnosable mental disorders average twice as many visits to their primary care physicians as those without a mental disorder (Borus & Olendzky, Arch Gen Psychiatry,1985, 42, 573-580).
- Smoking, a treatable behavioral problem, is estimated to burden the U.S. economy with $500 billion in long-term costs (Hodgson, J Amer Med Soc, March 1993).
- A 3-yr observation of employees in a large corporation revealed that 60% of absenteeism was due to psychological problems.
- Workers testing positive for drugs, were two and a half times more likely to take disability days than those not testing positive.
- In 1989, the U.S. spent $380 million on stress-related disability.

It is reasonable to argue that Canada is burdened with a proportionally similar expenditure reflecting about 10% of the observed costs in the U.S.

Evidence for effectiveness of psychological interventions

The leading journal of the American Psychological Association published a massive review of the effectiveness of psychological interventions by accumulating the results from 302 published meta-analyses (Lipsey & Wilson, Amer Psychol, 1993, 48,1181-1209). This report concluded that psychological treatment is consistently effective even when highly different disorders are targeted; patients improve relative to their own pre-test levels and also improve more than untreated controls. The size of the observed treatment effects can in some cases exceed the effect sizes of drug treatments. Relevant raw data from table 1 of this paper are enclosed in the Appendix. Among the myriad of supportive findings, a number of psychological interventions stick out as particularly powerful: cognitive therapy for depression, biofeedback for Raynaud's disease, psychotherapy for bulimia, cognitive behavioral marital therapy, psychological of chronic pain, and stress management for high blood pressure. In addition to evaluations being conducted by academic researchers, there is now evidence for the perceived benefit of psychological interventions from a massive consumer survey whose results were published in the Consumer Report magazine (1995, November). This

Consumer Report survey concluded that mental health services provided by professionals without specific, broad-based mental health training (i.e., family physicians and marriage counselors) were also less effective than those provided by psychologists or psychiatrists. Almost 90% of recipients of psychotherapy services reported notable improvements that they then attributed to their therapy.

There have been many reviews that show the benefits achieved with more narrowly defined psychological treatments using hard measures (e.g., Lorig et al., Arthritis & Rheumatism, 1993, 36,439-446; Sobel; of full copy of the Mental Medicine Update, Special Report 1993 is enclosed as Appendix 1, Linden, Stossel, & Maurice, 1995, in press, Arch Int Med; Linden & Chambers, Ann Behav Med, 1994, 16, 35-45). The findings reported in these publications (as enclosed in Appendix format) are by no means complete summaries of published research but they can serve as persuasive exemplars of how one can demonstrate psychological benefits even to non-experts. Especially the Sobel Special Report speaks for itself and does so with a clear and parsimonious voice. Study results are summarized from research on stress-related disorders, chronic pain, asthma, diabetes, arthritis, surgery, and childbirth.

Also enclosed are abstracts from our own work showing benefits of psychological interventions for high blood pressure and rehabilitation from heart attacks and other forms of cardiac disease.

- An example not discussed by the Sobel report is a recent study by our own group (Linden, Stossel, & Maurice, 1996). We conducted a meta-analysis of psychological treatments for patients with coronary artery disease. The primary study question was whether or not the addition of psychosocial treatment to a standard treatment package consisting typically of medication and exercise would also lead to increased benefits for patients. Benefit was defined as the likelihood of dying from coronary heart disease or having a coronary event. Follow-up data were broken down into short and long-term follow-up periods reflecting an average of one year follow-up and an average of 4-year follow-up respectively. This comparison revealed that psychosocial treatment which was often quite brief (10 sessions or less) accounted for a 41% reduction in mortality in the short follow-up and a similar, slightly less powerful reduction in mortality in the long follow-up. The recurrence of costly coronary events was similarly reduced.
- Smoking cessation techniques developed by psychologists can have initial success rates of up to 70%, and 40% are likely to be abstinent for at least 6 months (Yates, Psychother, 1984, 21, 439-451).
- In a study of 742 substance abuse patients undergoing a variety of treatments, a 67% decrease in number of days intoxicated was observed as well as 150% increase in income. The substance abuser reduced opiate use by 67%, stimulant use by 50%, and increased earned income by 390% overall (cited in APA Info sheet, Dec 1994).

Although the interventions described above generally reflect results from randomized clinical trials, there is evidence that these findings likely underestimate the benefit of psychological interventions because researchers often fall into the trap of defining psychological interventions only in terms of techniques. Persons (Amer Psychol, 1991, 46, 99-106), Roberts and his collaborators (Clin Psychol Rev, 1993, 13,375-391) and Linden and Chambers (1994) have argued that standardized clinical trials do not test

what clinicians are trained to do best and what they actually practice. Because standardization of treatment and random assignment to treatment conditions essentially wipes out differential expectancy effects, differences in therapist skill, and the individual tailoring of treatment goals to individual patient needs, these researchers have argued convincingly that randomized clinical trials give unnecessarily conservative estimates of what happens in clinical practice. Roberts et al. (1993) for example, showed that the nonspecific effects associated with psychotherapy are far more powerful than commonly reported in the therapy outcome literature. While non-specific effects are difficult to explain from a "pure-science" perspective they are nevertheless real effects in terms of measurable benefits to patients. Total randomization and standardization removes the nonspecific effects from analysis and discussion and thereby reduces the chance of finding clinically important changes that indeed are likely to happen in clinical practice. Along these lines, our own research in psychological treatment of hypertension revealed that individualized psychological treatment could produce substantially greater treatment benefits than standardized psychological treatments. Another elegant demonstration of this point has been provided by Frasure-Smith (Amer J Card, 1991, 67, 121-127) who showed that patients receiving a stress reduction intervention showed dramatic reduction in mortality if indeed they were highly stressed during the first month after their heart attack, whereas patients not under psychological stress showed no benefit from receiving psychological treatment. Cost-efficient delivery of services obviously requires screening and tailoring of treatments. I posit that these skills are particularly well taught in Clinical Psychology training programs.

Evidence for Cost-Effectiveness of Psychological Interventions

There is now an extensive body of studies demonstrating the cost-benefit ratios of psychological interventions.

- Oldridge et al., (Amer J Card, 1993, 72, 154-161) presents a thorough cost-benefit analysis that clearly supports the use of a multi-component cardiac rehabilitation program.
- Jack Wiggins, in his 1993 Presidential address to the American Psychological Association showed that for every dollar spent on vocational rehabilitation $7 are gained in saved rehabilitation costs (see also Wiggins, 1989 in the appendix).
- Nick Cummings concluded that employee assistance programs providing psychological services saved $2 for every dollar invested (in Sweet J et al. (Eds): Handbook of Clinical Psychology in Medical Settings, NY: Plenum Press).
- Similarly, there have been demonstrations that a chronic pain treatment program with a psychological component (that was admittedly costly to implement at roughly $10,000 per patient), saved more than twice the amount invested via the reduced follow-up medical care costs (reviewed in Sobel, see Appendix).
- Pallak et al. (Mind/Body Med, 1995, 1, 7-12) published the results from a randomized controlled trial where Medicaid enrollees either received standard care only (controls) or received an additional component of mental health care. The addition of mental health care translated into medical cost savings of 9.5% to 21% and were stable over 6, 12, and 18 months follow-up. Interestingly, those not receiving mental health care had associated cost increases of 15%. Depending on the

subgroup studied, the cost of additonal mental health treatment was recovered in 6 to 22 months in terms of reduced medical care costs.

- Medicaid patients in the U.S. hospitalized for physical ailments and then provided additional mental health interventions realized cumulative savings of $1,500 per patient over a 2.5 yr period. The cost for psychological treatment was entirely offset by these savings (Fiedler & Wight, The medical offset effect and public health policy: mental health industry in transition, 1989, NY: Praeger).
- A 3-yr study of over 10,000 Aetna beneficiaries showed that after initiation of mental health treatment, the client overall medical costs dropped coninuously over 36 months. The costs of mental health treatment group fell from $242 the year prio to treatment to $162 two years post treatment (Holder & Blose, Hosp Comm Psychiatry, 1987, 38, 1070-1075).
- Research on 20,000 enrollees at the Columbia Medical Plan, Maryland, showed that untreated mentally ill patients increased their overall medical utilization by 61% during a 1-yr period. In contrast, those who received psychological interventions increased their medical expenditures by only 11%. A mental health comparison group averaged a 9% increase (Hankin et al, Med Care, 1983, 21, 1099-1110).
- Three hundred veterans who received abbreviated mental health treatment following a history of excessive medical service utilization were able to reduce outpatient medical visits by 36%. Controls not receiving psychological therapy actually increased medical visits and associated costs (Massad et al., 1990).
- Even brief psychological interventions for mixed samples including many elderly patients reduced hospital stays by 1.5 days below the control average of 8.7 days (Mumford et al., Amer J Psychiat, 1984, 141, 1145-1158,).
- 8,100 enrollees at a medical clinic in Boston could be subdivided into groups of patients who did or did not receive psychotherapy for a non-chronic medical condition. Those receiving psychological therapy reduced service utilization by 7.2% whereas untreated ones increased utilization to the point of a 16.7% difference in service utilization between the two groups; the difference was maintained over a 24-month observation period. (cited in APA Info sheet, Dec 1994).
- Diagnosing and treating patients with multiple personality disorders resulted in net savings of $84,900 per patient in direct medical costs alone during the first ten years of treatment (Dua & Ross, Amer J Psychother, 1993, 47, 103-112).
- Patients diagnosed with mental illness but left untreated, increase their medical utilization and "become voracious users" of limited medical resources (Borus & Olendzki, 1985).
- Mental health costs at a community hospital had been found to have risen dramatically. Once the scope of outpatient treatment offerings was increased, in-patient care was needed less often and savings of $1.7 million were noted (Armstrong & Took, Military Med, 1993, 11, 717-721).
- Data from the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) suggested that an increase in out-patient psychiatric expenditures from $81 million to $103 million resulted in net savings of $200 million (Psychiatric Times, 1993).
- The Group Health Association found that patients receiving mental health counseling trimmed their non-psychiatric, overall medical usage by 30.7% and their use of

laboratory and x-ray services by 29.8% (Kansas City Health Care Consumer, Feb 1993).

- When a branch plant of the Kennecott Copper Corp. provided mental health counseling to its employees, hospital medical and surgical costs decreased by 48.9%. The company's weekly claims dropped nearly 64.2%. Overall, for every dollar invested a savings of $5.78 accrued (EAP Digest, 1993, 22, 23).
- Similarly, within the Kaiser Permanente system the addition of psychotherapy resulted in a 77.9% decrease in the average length of hospital stay, a 48.6% decrease in the number of prescriptions written, a 48.6% decrease in physician office visits, a 45.3% decrease in emergency room visits, and a 31.2% decrease in telephone contacts (Lechnyr, EAP Digest, 1993, 22,23).
- Medicaid patients with drug and alcohol problems who received targeted psychological services reduced their subsequent medical costs by 15% whereas the untreated controls increased their utilization cost by 90% (!!) (Lechnyr, J Oregon Psychol Assoc, 1992, 38, 8-12).
- A University of California study found that every $1 invested on drug and alcohol treatment saved society $11.54 in health care and criminal justice costs and lost productivity for business (Coalition, 1991).

In sum, these findings overwhelmingly suggest that psychological interventions are worth their cost and more. Given this mass of supportive findings it is fair to conclude that the profession already has the information needed for more effective marketing of clinical psychology to the public, and this position paper is a reflection of confidence in our product.

If psychological services are easily available, does that not lead to a cost explosion?

The overall answer to this question is "no" as the above examples already demonstrate. Nevertheless, given the importance of this question there will be more examples provided below with respect to cost developments observed locally and elsewhere.

An important first question is how psychological services fit into the overall delivery care, and this may be best understood by highlighting what happens to patients' mental health complaints in the current system where psychologists are not a point of first contact, and more often than not, are not accessible at all for reasons of individual affordability. Here are some relevant facts:

- Only 5% of those suffering from a mental disorder see a mental health professional; the other 95% receive help from a family physician (Lechnyr, 1993).
- Between 11-36% of all G.P. visits involved patients with diagnosable psychiatric disorders (Eisenberg, N Engl J Med, 1992, 326, 1080-1083).
- Many patients with mental health problems are treated at unnecessarily high cost in ordinary health care services because points of referral for mental health treatment are frequently missing (Borgquist et al., Psychol Med, 1993, 23, 763-770).
- The majority of anxiety disorder patients (65%) are seen by family physicians Altrocchi et al., Amer Fam Physician, 1994, 10, 161-166). Although 10% of adults have an anxiety disorder, only an estimated 1/4 of them gets treatment.

- An estimated 50-70% of a physician's normal caseload consists of patients whose medical ailments are significantly related to psychological factors (VandenBos & DeLeon, Psychother, 1988, 25, 335-343).

In sum, too many patients are treated only within the resources that a general practitioner can provide and this is unlikely to be a cost-efficient method of delivery.

There are many examples from Health Maintenance Organizations in the United States. Blue Cross/Blue Shield introduced a mental health component and found a slight initial increase in costs following introduction of the package; subsequent psychiatric service utilization did not vary more than .5% in over 11 years. The NIMH estimated that providing coverage for mental illness as is for acute illness would cost $6.5 billion and that spending this extra amount would save taxpayers $8.7 billion in indirect costs (Goodwin & Moskowitz, 1993, Health care reform for Americans with severe mental illness: Report of national advisory mental health council). Hence, fears voiced by politicians and administrators that easy-access psychological services will lead to uncontrollable spiralling of cost are unfounded in light of these data. The cost per month for the Psychological Services portion is small, caps are already in place, and slight variations in capping levels do not have much impact on total billings to the system.

In order to fairly judge the cost-effectiveness of psychological services the entire budget for medical care will need to be studied because mental health treatment affects mental health budgets as well as acute care and rehabilitation service budgets. The data provided here suggest that hospitalization costs and physician visits will be reduced as a consequence of better mental health services. From the above review it can be included that many of the problems arriving in the family physician's office are mental health-related and are not ideally, cost-efficiently treated in the G.P.s office. Nevertheless, there is ample documentation that this is where patients go because G.P.s are the gatekeepers to BC's health care system and the service provided are universal and free. As a consequence, I posit that the current MSP-funding model, if continuing unchanged, will also continue to make it very difficult to provide universal-access, psychological services. The fact that psychiatrists can also bill MSP for their services does not resolve this access problem for a number of reasons listed in the BC Auditor General's Report on the Cost-Effectiveness of Psychiatrist Services, 1993/94 :

- Except for the Vancouver and Victoria area there is a longstanding shortage of psychiatrists in BC.
- Even where sufficient numbers of psychiatrists offer patient services in private practice they tend to serve a select clientele few of whom have chronic mental illnesses; and even for this select group of patients there are long waiting-lists.
- The strength of psychiatry training is in biological, i.e., drug interventions, and although patients have identified a desire and need for more psychological interventions (Listening: A Review of Riverview Hospital, 1994, Ombudsman Public Report No 33) there are not enough accessible psychology resources.

The above findings strongly indicate that if the BC government, their appointed Regional health Boards, or interested insurance carriers decided to provide third-party funding for psychologist services, the associated cost would likely be more than offset in savings in the acute care and rehabilitation budgets. Administratively, it will be necessary to allow the flow of budget dollars from one program (like hospitals) to

another (like psychologists providing community based services) and it may not necessarily be the same person who will provide community-based services than is now providing acute care services (Linden, N Engl J Med, 1984, 311, 59, Letter-to-the-Editor,). This "tearing down of walls" of course, is the intention of New Directions in Health Care and is reflected in the mandate and structure of the Regional Health Boards that are being set up to execute the objectives of New Directions.

Vancouver, October 1995

References

Cummings NA (1991). Arguments for the financial efficacy of psychological services in health care settings (pp135). In Sweet J et al. (Eds). Handbook of Clinical Psychology in medical settings. New York, NY: Plenum Press.

Frasure-Smith N:(1991) In-hospital symptoms of psychological stress as predictors of long-term outcome after acute myocardial infarction in men. American Journal of Cardiology, 67: 121-127.

Linden,W & Chambers, LA (1994). Clinical effectiveness of non-drug therapies for hypertension: A meta-analysis. Annals of Behavioral Medicine , 16, 35-45.

Linden W, Stossel C, Maurice J(1996). Psychosocial interventions for patients with coronary artery disease: A meta-analysis. Archives of Internal Medicine.,156, 745-752.

Linden W & Wen FK (1990). Therapy outcome research, health care policy, and the continuing lack of accumulated knowledge. Professional Psychology: Research & Practice, 21, 482-488.

Lorig K et al. (1993). Evidence suggesting that health education for self-mamangement in patients with chronic arthritis has sustained health benefits while reducing health care costs. Arthritis and Rheumatism, 36, 439-446.

Oldridge N, Furlong W, Feeny D, Torrance G, Guyatt G, Crowe J, & Jones N: (1993) Economic evaluation of cardiac rehabilitation soon after acute myocardial infarction. Am J Card ,72: 154-61.

Pallak MS, Cummings NA, Dorken H, Henke CJ (1995). Effect of mental health treatment on medical costs. Mind/Body Medicine, 1, 7-12.

Persons J (1991). Psychotherapy outcome studies do not accurately represent current models of psychotherapy: A proposed remedy. American Psychologist, 46, 99-106.

Roberts AH, Kewman DG, Mercier L, & Hovell M (1993). The power of non-specific effects in healing: Implications for psychosocial and bilogical treatments. Clinical Psychology Review, 13, 375-391.

Sobel D (1993). Mind matters, money matters: The cost-effectiveness of clinical behavioral medicine. Mental Medicine Update, Special Report.

Appendices

Appended are:
[1] The title page and relevant tables from Lipsey & Wilson, 1993 on the effectiveness of psychological therapies as demonstrated via meta-analyses, 6 pages

[2] A reprint of the Special Report of Mental Medicine Update by David S. Sobel on the cost-effectiveness of clinical behavioral medicine, 8 pages

[3] Jack Wiggins, 1989, Clinical Psychologists, on Rehabilitation , 3 pages