

# Recognizing Psychologically Masked Illnesses: The Need for Collaborative Relationships in Mental Health Care

Glenn D. Grace, Ph.D., and Richard C. Christensen, M.D., M.A.

---

**Background:** Both research and clinical experience support the view that unrecognized medical illnesses in mental health, as well as in primary care, treatment settings can directly cause or exacerbate a patient's presenting psychological symptoms. No study has compared medical and nonmedical health care professionals on their respective abilities to identify common medical illnesses that frequently masquerade as psychological disorders.

**Method:** In this study, 24 psychiatrists, 20 primary care physicians, 31 psychologists, and 17 social workers, recruited between November 2005 and April 2007, were asked to complete a questionnaire designed to measure the respondents' knowledge of masked medical illness. The questionnaire consisted of 10 different clinical vignettes in which a patient is seeking treatment for psychological problems that are due to a hidden medical illness. Statistical (analysis of covariance) comparisons of questionnaire scores were conducted between the medically trained and nonmedically trained participants.

**Results:** After adjusting for clinical experience, medical mental health care professionals demonstrated significantly greater knowledge of medical illnesses that commonly masquerade as psychological disorders ( $F = 177.02$ ,  $df = 1,82$ ,  $p = .000$ , partial  $\eta^2 = .68$ ) than did nonmedical providers. In addition, correlational results showed a strong relationship ( $r = .82$ ,  $N = 92$ ,  $p < .001$ ) between the presence of medical training and knowledge of masked medical illness in mental health care.

**Conclusions:** Study findings suggest that non-medical mental health care providers may be at increased risk of not recognizing masked medical illnesses in their patients. On the basis of these findings, proposed collaborative and educational approaches to minimize this risk and improve patient care are described.

*(Prim Care Companion J Clin Psychiatry 2007;9:433-436)*

---

*Received June 11, 2007; accepted July 31, 2007. From the North Florida/South Georgia Veterans Health System and the Department of Clinical and Health Psychology, University of Florida, Gainesville (Dr. Grace); and the Community Psychiatry Program, University of Florida College of Medicine, Jacksonville (Dr. Christensen).*

*The authors thank Lorrie K. Garces, M.D., University of Florida College of Medicine, Jacksonville, for her assistance with data collection. Dr. Garces reports no financial affiliations or other relationships relevant to the subject of this article.*

*The authors report no financial affiliations or other relationships relevant to the subject of this article.*

*Corresponding author and reprints: Glenn D. Grace, Ph.D., Psychology Service (116B), North Florida/South Georgia Veterans Health System, 1601 SW Archer Rd., Gainesville, FL 32608-1197 (e-mail: glenn.grace@med.va.gov).*

A number of studies have indicated that the practice of forging collaborative partnerships between primary care physicians and mental health care providers can significantly enhance the overall quality of patient care.<sup>1-3</sup> However, there is a dearth of information in the current literature examining how collaborations of this type might specifically improve the quality of care offered by psychologists, licensed mental health care counselors, and social workers. One advantage of these relationships might be found in situations in which patients presenting with psychological problems are actually suffering from an underlying, but unrecognized, medical illness. Unrecognized medical disorders that produce psychological symptoms are quite common and can be found in the caseloads of all primary care and mental health professionals. Several studies involving psychiatric inpatients and outpatients found high rates of unrecognized comorbid medical illness that, in many cases, either directly caused or exacerbated the psychiatric disorders.<sup>4-6</sup> Conservative estimates suggest that at least 10% of psychological symptoms are driven by medical or physical conditions.<sup>7,8</sup>

Although medical and nonmedical providers alike can miss hidden medical illnesses in both mental health and primary health care settings, some authors have suggested that nonmedically trained mental health care providers are at much greater risk due to their lack of formal medical training.<sup>9</sup> This risk may be particularly relevant for mental health care providers who work in solo practice settings or in agencies with little to no physician access. While this conclusion may seem self-evident, other authors have argued that there is no evidence to suggest that nonmedically trained therapists miss medical diagnoses more frequently than do physicians.<sup>10</sup> Surprisingly,

**Table 1. Demographic Information and Questionnaire Scores for Medical and Nonmedical Professionals**

Characteristic	Medical (N = 44)	Nonmedical (N = 48)
Sex, N		
Male	27	21
Female	17	27
Age, mean (SD), y <sup>a</sup>	52.43 (11.28)	43.42 (10.12)
Experience, mean (SD), y	17.37 (9.28)	10.26 (9.59)
Questionnaire scores		
Mean (SD)	8.80 (1.23)	4.45 (1.63)
Adjusted mean (SD) <sup>b</sup>	8.88 (1.19)	4.58 (1.59)

<sup>a</sup>Age was reported by 80 subjects; years of experience was reported by 85 subjects.  
<sup>b</sup>Analysis of covariance adjusted mean scores were available for 42 medical and 43 nonmedical subjects.

however, no studies have specifically compared medical versus nonmedical mental health providers' ability to recognize medical illnesses that produce psychological symptoms.

In this study, we attempted to evaluate the general knowledge of psychiatrists, primary care physicians, psychologists, and social workers regarding common medical disorders that often masquerade as psychiatric illness. Primary care physicians were included in this comparison of mental health care providers, since they treat the majority of individuals receiving mental health care<sup>11</sup> and comprise the largest group of prescribers of psychotropic medications.<sup>12</sup> We hypothesized that the medically trained providers would demonstrate a significantly greater ability to recognize masked medical illness than would non-medically trained providers. We believe that these findings could have practical implications regarding the need for close interprofessional collaboration as well as educational strategies to ensure patient safety and enhanced quality of care.

## METHOD

For this investigation, we requested the voluntary, anonymous participation of peer health care professionals who had experience treating persons presenting with mental health issues. In supervised test administration settings, participants completed a questionnaire designed to test knowledge of masked medical illness. Written informed consent was not required for this University Institutional Review Board–approved, exempt-status study. The questionnaire consisted of 10 clinical vignettes in which patients with psychological problems, caused by a hidden medical illness, are seeking help for their presenting symptoms. Study participants were asked to select the correct medical illness from 4 medical disorders on the basis of the symptoms described in each vignette. The questionnaire demonstrated good internal consistency with a Cronbach  $\alpha$  coefficient of .76. Since the

$\alpha$  value is above .70, the questionnaire can be considered reliable with our sample.

Subjects included 24 psychiatrists, 20 primary care physicians, 31 psychologists, and 17 social workers. Participants were recruited from a variety of clinical settings, including a Veterans Administration medical center, a state psychiatric hospital, a university teaching hospital, and a university student health center, between November 2005 and April 2007. Psychologists and social workers were chosen to represent the nonmedical provider group because they were the most representative of nonmedical providers involved in the clinical settings to which we had access. Each participant was asked to indicate his or her profession, sex, age, and years of clinical experience. Table 1 describes subjects' demographic information and questionnaire scores by medical training status. Statistical analyses were completed by using SPSS Statistical Package for the Social Sciences software, version 13.0 (SPSS Inc., Chicago, Ill.). Medical versus nonmedical provider comparisons were conducted using independent-samples *t* tests and 1-way between-groups analysis of covariance (ANCOVA). Relationships between variables were analyzed using Pearson product-moment correlation coefficients.

## RESULTS

Independent-samples *t* test comparisons found that medically trained providers were significantly older ( $t = 3.76$ ,  $df = 78$ ,  $p < .001$ ) and had significantly more years of experience ( $t = 3.47$ ,  $df = 83$ ,  $p < .001$ ) than their non-medically trained colleagues. Results of correlational analysis found that questionnaire scores were not related to sex ( $r = -.177$ ,  $N = 92$ ,  $p = .092$ ) but were significantly related to age ( $r = .23$ ,  $N = 80$ ,  $p = .041$ ), clinical experience ( $r = .27$ ,  $N = 85$ ,  $p = .014$ ), and medical training ( $r = .82$ ,  $N = 92$ ,  $p = .000$ ). However, partial correlational analysis revealed that the strong positive relationship between the presence of medical training and greater capacity to identify masked medical illness changed only slightly after controlling for age ( $r = .81$ ,  $df = 77$ ,  $p = .000$ ) and for clinical experience ( $r = .83$ ,  $df = 82$ ,  $p = .000$ ).

An ANCOVA was conducted to compare knowledge of masked medical illness for medically trained and nonmedically trained providers while controlling for the influence of clinical experience on questionnaire scores. Clinical experience was chosen as the covariate because of the high overlap between age and experience ( $r = .84$ ,  $N = 77$ ,  $p = .000$ ) and because experience had a stronger correlation to questionnaire scores than did age. After adjusting for clinical experience, there was a significant main effect for medical training ( $F = 177.02$ ,  $df = 1,82$ ;  $p = .000$ ), with a large effect size (partial  $\eta^2 = .68$ ). The covariate, clinical experience, was not statistically significant ( $F = .72$ ,  $df = 1,82$ ;  $p = .549$ , partial  $\eta^2 = .004$ ).

## DISCUSSION

It may be entirely unreasonable to expect non-medically trained mental health professionals to diagnose masked medical illnesses. However, it can be argued that they should have sufficient knowledge of the signs and symptoms of these illnesses to screen their patients for the most common medical conditions that masquerade as psychiatric disorders. As we anticipated, psychiatrists and primary care physicians demonstrated a substantially greater capacity, compared to their nonmedical colleagues, to identify hidden medical illnesses that drive “psychological” symptoms. After subtracting the average number of correct responses expected by chance alone (25% or 2.5), medically trained providers were more than 3 (3.23) times more likely to identify masked medical illness than nonmedically trained providers. The psychologists and social workers in this study were very often unable to identify the most common medical illnesses that frequently fuel psychiatric disorders (e.g., hypothyroidism and depression). While this knowledge alone would not guarantee diagnostic competence in actual clinical settings, it would increase the probability that patients with an underlying medical illness would be identified and referred for appropriate medical treatment. Therefore, these findings suggest that nonmedically trained mental health providers, practicing without the benefit of medical collaboration, could be at increased risk of missing a medical illness that is responsible for the patient’s presenting mood, anxiety, or behavioral symptoms.

The potential for a misdiagnosis is possibly greatest in mental health treatment settings in which a nonmedical provider is responsible not only for the initial intake evaluation but also for a subsequent referral to a psychiatrist and/or primary care physician. For example, individuals without health insurance who seek mental health care often have great difficulty accessing specialty medical and psychiatric care.<sup>13–15</sup> Therefore, many uninsured persons presenting primarily with psychological symptoms will first be evaluated and triaged in settings staffed by nonmedical mental health care providers. The risk of a missed medical illness’ causing or exacerbating presenting mental health problems could, as a consequence, be disproportionately high in this particularly vulnerable population. Our study results lend support to the view that collaborative relationships between mental health care providers and primary care physicians may be especially needed in those behavioral health treatment settings in which early access to psychiatric or medical specialty care is lacking.

Failure to suspect or adequately identify a hidden medical illness can result in dire health consequences for patients. In order to minimize the probability of a hidden medical illness’ going undiagnosed, we suggest that

consideration be given to the development and promotion of professional collaboration strategies. From the perspective of improving patient care and reducing undue risk, nonmedical mental health professionals can promote best care strategies for their patients by cultivating consultative relationships with primary care physicians. For example, nonmedical psychotherapists could strongly encourage individuals who have not had a recent medical evaluation to undergo a complete physical examination with appropriately indicated lab studies before (or soon after) receiving initial mental health treatment. Moreover, since mental health care providers are often in the best position to observe changes in their patients’ overall health once treatment has commenced, interdisciplinary consultation should extend beyond the initial evaluation phase of treatment and into the phase of continuity of care. Primary care physicians can greatly facilitate such professional collaboration by being receptive and actively encouraging ongoing communication with their nonmedical colleagues.

It can be argued that mental health specialists who acquire a basic knowledge of medical and general health issues can more fully collaborate with physician colleagues when it comes to patient care issues. Hence, participation in educational initiatives that address occult medical disorders in mental health are suggested so that nonmedical providers can better screen patients for the most common conditions that masquerade as psychiatric disorders. Rather than focusing exclusively on detailed pathophysiology, this suggested training would emphasize the characteristic changes in symptoms, behavior, mental status, appearance, medical history, and critical “red flags” that strongly indicate an organic cause of psychiatric symptoms.<sup>16,17</sup> This behavioral medical screening approach is also consistent with studies that found that information gathered from a mental status examination<sup>17</sup> or a brief medical history<sup>18</sup> is often critical in identifying underlying medical illness.

Several limitations of this study should be noted. The recommendations drawn from the results are based on the logical assumptions that collaboration between physicians and behavioral health providers, as well as participation in formal educational initiatives, will reduce adverse events associated with clinical misjudgment (e.g., misdiagnosis of a hidden medical illness as a psychological problem). However, additional research examining these variables is needed to confirm whether these proposed changes do, in fact, positively impact patient care. In addition, the relatively small sample sizes gathered for this study underscore the need for caution when generalizing these findings to all practicing medical and mental health professionals. Hence, follow-up studies that include larger sample sizes, and perhaps a more diverse array of practice settings, are very likely needed to confirm our preliminary findings.

Both behavioral health care providers and primary care physicians bring unique skills to patient care that, when combined, greatly improve the overall quality of both medical and mental health care. Established, close working relationships between primary care physicians and nonmedical mental health providers will ensure that patients are evaluated and appropriately treated in a timely fashion when medical illness is suspected. By working together, both the apparent and the sometimes “hidden” health care needs of their patients can be met.

## REFERENCES

1. Katon W, Unutzer J. Collaborative care models of depression: time to move from evidence to practice. *Arch Intern Med* 2006;166:2304–2306
2. Gilbody S, Bower P, Flecher J, et al. Collaborative care for depression: a cumulative meta-analysis and review of longer-term outcomes. *Arch Intern Med* 2006;166:2314–2321
3. Felker BL, Chaney E, Rubenstein LV, et al. Developing effective collaboration between primary care and mental health providers. *Prim Care Companion J Clin Psychiatry* 2006;8:12–16
4. Koran LM, Sheline Y, Imai K, et al. Medical disorders among patients admitted to a public-sector psychiatric inpatient unit. *Psychiatr Serv* 2002;53:1623–1625
5. Koran LM, Sox HC, Martin KI, et al. Medical evaluation of psychiatric patients: results in a state mental health system. *Arch Gen Psychiatry* 1989;46:733–740
6. Hall RC, Popkin MK, Devaul RA, et al. Physical illness presenting as psychiatric disease. *Arch Gen Psychiatry* 1978;1315–1320
7. Morrison J. *When Psychological Problems Mask Medical Disorders: A Guide for Psychotherapists*. New York, NY: Guilford; 1997
8. Taylor RL. *Distinguishing Psychological From Organic Disorders: Screening for Psychological Masquerade*. 2nd ed. New York, NY: Springer; 2000
9. Grace GD, Christensen, RC. Unmasking medical illness in mental health care. *Psychiatr Serv* 2006;57:1655
10. Sammons MT, Levant RF, Paige RU, eds. *Prescriptive Authority for Psychologists: A Review and Guide*. Washington, DC: American Psychological Association; 2003
11. Pincus HA, Tenielian TL, Marcus SC, et al. Prescribing trends in psychotropic medications: primary care, psychiatry, and other medical specialties. *JAMA* 1998;279:526–531
12. Schulberg HC, Burns BJ. Mental disorders in primary care: epidemiologic, diagnostic, and treatment research directions. *Gen Hosp Psychiatry* 1988; 10:79–87
13. Felland LE, Felt-Lisk S, McHugh M. Health care access for low-income people: significant safety net gaps remain. *Issue Brief Cent Stud Health Syst Change* 2004;84:1–4
14. Wells KB, Sherbourne CD, Sturm R, et al. Alcohol, drug abuse, and mental health care for uninsured and insured adults. *Health Serv Res* 2002;37: 1055–1066
15. Wilk JE, West JC, Narrow WE, et al. Economic grand rounds: access to psychiatrists in the public sector and in managed health plans. *Psychiatr Serv* 2005;56:408–410
16. Williams ER, Shepherd SM. Medical clearance of psychiatric patients. *Emerg Med Clin North Am* 2000;18:185–198
17. Reeves RR, Pendarvis EJ, Kimble R. Unrecognized medical emergencies admitted to psychiatric units. *Am J Emerg Med* 2000;18:390–393
18. Olshaker JS, Brown B, Jerrad DA, et al. Medical clearance and screening of psychiatric patients in the emergency department. *Acad Emerg Med* 1997;4:124–128