Jalie A. Tucker · Diane M. Grimley

Public Health Tools for Practicing Psychologists

Advances in Psychotherapy
Evidence-Based Practice

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Advances in Psychotherapy – Evidence-Based Practice

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The basic objective of this series is to provide therapists with practical, evidence-based treatment guidance for the most common disorders seen in clinical practice – and to do so in a "reader-friendly" manner. Each book in the series is both a compact "how-to-do" reference on a particular disorder for use by professional clinicians in their daily work, as well as an ideal educational resource for students and for practice-oriented continuing education.

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Preface

In 2009, the US National Institutes of Health (NIH) convened an institute-wide meeting on the science of behavior change (SOBC) to aid development of a roadmap for behavior change research (see http://nihroadmap.nih.gov/documents/SOBC_Meeting_Summary_2009.pdf). Attendees were a multidisciplinary group of invited experts and NIH staff from 17 institutes. Major themes included: (1) Individual- and population-level approaches should be better linked in multilevel strategies to promote healthy behaviors in order to have broader public health impact; (2) Understanding factors that shape health decision-making and the environmental contexts of choice are vital to developing effective change strategies, and span applications of ecological models, behavioral economics, and social network analysis, among others; (3) Health risk behaviors cluster in bundles that need to be targeted simultaneously; and (4) New methods and measures are needed that support assessment of multilevel, contextually framed trajectories of behavior change and that can serve as cost-effective platforms for population-scale interventions (e.g., mobile phones). The overall conclusion was that "The science of behavior change has long suffered from fragmentation along scientific and topical boundaries. . . . Because unhealthy behaviors cause so much morbidity and mortality, the status quo cannot prevail" (NIH, 2009, pp. 5–6).

The same forces operating to produce this visionary NIH roadmap for SOBC research are at play in the content of this book, which is concerned with providing psychologists with new tools from public health to motivate and maintain behavior change. The methods discussed are rooted in the same evidence base that sparked the SOBC meeting. They are meant to supplement, not replace, the longstanding emphasis of psychological practice on treating individuals for a focal disorder using the tools of psychotherapy.

The book aims to make a modest contribution to the dissemination process that brings evidence-based innovations to the attention of front-line providers, in this case from the science and practice of public health as it intersects with mental health, substance misuse, and other health behavior problems of interest to psychologists. Psychologists have been at the forefront of developing the SOBC knowledge base. We believe they likewise have much to contribute to a broadened "integrated behavioral health care" practice agenda that maintains a degree of individualization of care, in concert with dissemination strategies from public health. Such an integrated approach to care will reach more persons in need who could benefit from services for psychological and behavioral problems, ultimately enhancing the public's well-being and overall quality of life.

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Acknowledgments

We are grateful to Linda Sobell, PhD, ABPP, Series Associate Editor, for creating the opportunity for us to describe the tools of public health practice for our psychology colleagues as part of the Hogrefe/APA Division 12 series *Advances in Psychotherapy – Evidence-Based Practice*. Serendipity played a role in that the idea for the book was formulated when Linda Sobell and J.A.T. were seated together at the American Psychological Association Council of Representatives meeting in February 2007. Linda and J.A.T., along with coauthor D.M.G., share a longstanding interest in broadening the scope of psychological practice in the direction of public health that builds on the profession's clinical bedrock. Series Editor Danny Wedding, PhD, MPH, also shares a background in public health and supported the book's development and placement as part of the series, even though it deviates from the usual focus on evidence-based treatments for specific disorders. We thank Robert Dimbleby of Hogrefe Publishing for his support of the project. We also thank our colleagues at the UAB School of Public Health, Cathy A. Simpson, PhD, and Susan D. Chandler, MPH, who cheerfully provided expert content input and editing as we drafted the book. Dr. Simpson provided the case vignette for Chapter 5 that illustrates how the tools of clinical and public health practice can be assembled in an integrated system of behavioral health care, in this case for persons living with HIV/AIDS in a rural, disadvantaged region of Alabama. Finally, we are indebted to the pioneering masters in our field who touched our professional lives at a "teachable moment" and inspired us to see the possibilities of expanding our clinical world view in the direction of public health. J.A.T. thanks G. Alan Marlatt and David B. Abrams, and D.M.G. thanks James O. Prochaska.

Dedication

To my mother Helen Hutchison Tucker, who gave me the gift of curiosity.
JAT

To my loving children, James W. Grimley and Heather M. Miller.
DMG

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Introduction: The Changing Practice Environment

Psychologists and other mental health practitioners have historically focused on the individual as the primary consumer of services, typically in the form of psychological assessment and psychotherapy. Although individual clinical practice remains an important professional activity, the scope, target, and types of mental health services continue to evolve and expand as the broader health care environment in which psychological services are delivered changes. In addition to an enduring focus on mental health treatment for persons who seek clinical care, there is increasing concern with providing services to the larger population of persons with problems that do not seek care. This untreated population segment contributes the bulk of harm and cost related to mental health and substance use (MH/SU) problems, and a large gap exists between the need for and utilization of services (US Surgeon General, 1999; Wang, Lane, Olfson, Pincus, Wells, & Kessler, 2005). In addition to clinical treatment, essential services include preventive or limited therapeutic services for persons with less serious problems and programs that facilitate behavior patterns to promote health and prevent illness. This expanded *"behavioral health"* agenda encompasses physical and mental health and targets individuals, communities, and health systems, including improving access to quality, evidence-based care.

"Behavioral health" services encompass physical and mental health and target broader constituencies than individual psychotherapy.

Mental health practitioners have much to contribute to this agenda, but doing so requires adopting a broader perspective on psychological services and learning new tools for practice that come from other fields, including public health. This book provides basic knowledge about public health perspectives on mental health and introduces practitioners to public health practices and advances in communications technology that can be used to extend the reach and impact of psychological services.

Several forces have converged to promote an expansion of services. These include the rapidly changing health care environment, the associated evidence-based practice (EBP) movement, and efforts to de-stigmatize MH/SU disorders and to make treatment more accessible (Institute of Medicine [IOM], 2006; US Surgeon General, 1999). In the late 20th century, health care became an industry obsessed with containing costs, and independent fee-for-service practice involving a single provider and patient gave way to more complex service delivery arrangements epitomized by managed care organizations (MCOs) (Mechanic, 1994). Mental health services were increasingly delivered either by nonspecialist providers in primary medical care or by specialist providers in "behavioral health carve-outs" that typically required prior approval by MCO gatekeepers (Cummings, O'Donohue, & Ferguson, 2003; IOM, 2006).

Federal parity legislation in 1996 and 2008 expanded coverage of services for MH/SU disorders in ways that began to approximate coverage of comparable medical care. These changes helped expand coverage of MH/SU services and moved some services into mainstream medical practice, thereby reducing stigma (e.g., for depression and its treatment). For example, the US Medicaid

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program now offers reimbursement for alcohol and drug screening and brief interventions. However, specialty care for extended periods has been abridged, often with adverse effects on access and outcomes, particularly for the seriously mentally ill (Mechanic, 1994). Moreover, improved MH/SU benefits enacted by parity legislation are likely to be superseded in the United States by the US Patient Protection and Affordable Care Act of 2010 that reaffirms parity requirements and increases coverage of mental health care through Medicare and Medicaid (American Psychological Association, 2010). This complex legislation has a long lead-in time, however, so the future impact on behavioral health services remains ambiguous at present.

Third-party-payer coverage has expanded, but time limits are common.

Concurrent with these changes, the EBP movement developed as a means of promoting scientifically guided, patient-focused quality care in health systems that are increasingly regulated and organizationally and financially complex (IOM, 2001, 2006). These trends almost certainly will continue as US federal health care reforms are enacted over the next decade.

Collectively, these forces operating on the practice environment have led to a broadened conception of psychological services that encompasses, but is not limited to, individual-based clinical assessment and treatment. The modal client for many psychologists is no longer the self-referred, motivated outpatient psychotherapy client who can be assessed extensively and then treated for as long as the therapist and client consider necessary and desirable for continued improvement. Psychological services are increasingly limited in number and duration by MCOs and other third-party payers, and interventions that involve fewer sessions and less intensive and more focused therapeutic approaches are becoming the norm for many uncomplicated problems. Furthermore, psychologists are working more with medical patients and other persons who do not view themselves as having psychological issues, who are not aware of how their behavior may be affecting their health, and who are not particularly motivated to make changes (Cummings et al., 2003).

Behavioral health services span a broad range of needs, including prevention, early intervention, and intensive treatment of serious illness.

The conventional tools of psychotherapeutic practice are not well suited to delivering the range of services needed in this complex practice environment. Although psychotherapy will remain an essential element of psychologists' repertoire, an expanded skill set and approach to service delivery are needed to meet the demands of the contemporary health care environment. This book is about one such avenue open to psychologists to expand their skills and services: namely, how to bring the tools of public health into psychological practice in ways that complement and expand clinical approaches, thereby reaching more people in need with services that are appropriately varied in scope and intensity.

This has long been a goal of good group health plans, which offer a range of services and seek to match the type and level of care to patient needs. Our contention is that psychologists can serve a larger, more heterogeneous client base by diversifying their services through integration of basic public health and clinical strategies. This integrated approach represents an exciting advance in behavioral health practice and adds new methods to the arsenal of practicing psychologists well-versed in clinical methods.

This book describes an integrative approach to expanding clinical practice, based on a public health or population perspective.

This book is intended to offer psychologists and other mental health professionals new ways to expand their practice by introducing them to basic philosophies, concepts, and intervention approaches in public health. Public health

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principles and methods, such as market segmentation, identifying "teachable moments," and delivering motivationally congruent messages to risk groups, will be described with illustrative examples that span low- to high-technology applications. The role of screening and brief interventions (SBIs) in behavioral health care will be discussed, followed by low-technology interventions that use print materials, videos, DVDs, and other self-change materials. Then, interventions that use communications and computer technologies are described, including interactive voice response (IVR) systems that are particularly useful for monitoring and supporting behavior change over long intervals for chronic problems that remit and relapse (Abu-Hasaballah, James, & Aseltine, 2007). Other applications involve the use of cell phones and computers to facilitate automated, tailored interventions that maintain an individualized or client-centered approach to behavior change while capturing the broad reach of public health (Kreuter, Farrell, Olevitch, & Brennan, 2000).

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1

Description

1.1 Terminology

This section introduces concepts, terms, and intervention approaches from public health and contrasts them with clinical approaches. Understanding how the approaches differ and complement one another is basic to effective integration.

1.1.1 Clinical and Public Health Practice Models

Until recently, interventions for promoting psychological well-being and behavioral health tended to be either individual or small-group intensive clinical treatments delivered by mental health specialists, or large-scale public health programs delivered to at-risk populations, such as school-based programs (e.g., the President's Challenge Youth Physical Fitness Awards and Project D.A.R.E. [Drug Abuse Resistance Education]). Clinical interventions generally are client-centered, individualized, and delivered to motivated individuals who seek care. They tend to have greater benefits in reducing risk behaviors on a per-person basis than do public health interventions, which typically are generic, less intensive and costly per person, and delivered to a heterogeneous audience. However, clinical interventions reach only the small subset of persons who reactively seek services, whereas public health interventions generally have broad reach into the population in need. This reach is achieved via proactive intervention delivery to large numbers of people who are not otherwise seeking services.

Clinical interventions generally achieve greater risk reduction for individuals, but population approaches reach more people in need.

1.1.2 Population Impact of Practice Approaches

Recent work integrates public health and clinical strategies in order to target larger risk groups with interventions that are individualized, at least in part, thereby increasing the potential overall *impact* of services on population health. Advances in computer and communication technologies have helped to combine the best of clinical and public health strategies so that large segments of the population in need can be reached with individualized interventions. Concurrently, behavior change theories and techniques have broadened to support proactive recruitment and intervention delivery to less motivated persons who are not reactively seeking services.

These advances in behavior change theories and techniques, in concert with information technology, have increased the scope and potential public health

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Combining clinical and population approaches achieves the greatest impact. Impact = Reach × Efficacy.

impact of behavior change programs. Impact is defined as the product of the intervention's reach, or the percentage of individuals who receive the intervention, and its efficacy, or the percentage of individuals who show a defined benefit, that is: impact = reach × efficacy (Abrams & Emmons, 1997). Table 1 illustrates the concept of impact as it applies to clinical, public health, and integrated approaches to behavioral health care that vary in their reach and efficacy. The text box describes intervention "efficacy," an essential determinant of population impact, and its companion concept of intervention "effectiveness."

Public health interventions are typically generic, less intensive and costly than clinical treatments, and can reach more persons in need.

Although distinctions between clinical and public health approaches have blurred somewhat in recent years, clinical interventions tend to be more intensive, costly, efficacious, and "higher threshold" in that they require entry into the health care system. Public health interventions can be disseminated more widely to target audiences in the broader community. They tend to be generic and typically are less intensive, costly, and efficacious on a per-person basis. Clinical interventions require active help-seeking on the part of recipients. In contrast, public health programs actively target recipients who often are not motivated to seek services. As shown in Table 1, a more efficacious individual-level intervention may have lower overall impact than a less efficacious public health intervention that reaches many more people. For example, whereas hospital-based alcohol treatment for one alcohol-dependent patient may cost in excess of US $10,000, for about US $70,000, a health care organization could implement alcohol screening and brief intervention with about 10,000 adults (Fleming et al., 2002). Thus, well-conducted integrated behavioral health programs have potential for greater population impact compared with clinical

Table 1
Impact of Behavioral Interventions With Varying Reach and Efficacy

Intervention approach	Practice target and methods	% Population Reached	Efficacy (% improved)	Population impact
Clinical	One-on-one or small group; 6-12 visits; reactive health care	5	30	1.5
Public health	Community-population based; mass media delivery; proactive	90	2	1.6
Integrated	Community/ population; technology-assisted, individualized interventions; proactive, targeted	60	20	12.0

Note. Adapted from "Health Behavior and Health Education: The Past, Present, and Future," by D. B. Abrams, & K. M. Emmons, in Health Behavior and Health Education: Theory, Research, and Practice, K. Glanz., B. K. Rimer, & F. M. Lewis, Eds., 1997, San Francisco, CA: Jossey-Bass, pp. 453–478.

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Intervention Efficacy and Effectiveness

The terms *efficacy* and *effectiveness* both relate to the basic question in evaluation research: "Did an intervention work?" However, they address different questions along the continuum of decision-making about the strength, meaning, and generalizability of research findings. Borrowing from Flay's (1986) analysis, *efficacy trials* evaluate whether an intervention does more good than harm when delivered under optimum conditions, as in a well-resourced randomized controlled trial (RCT). In an efficacy trial, participants with pure forms of a disorder who are motivated to comply can be selected for inclusion; treatment and control conditions can be implemented with high fidelity; and outcomes are assessed on a preplanned follow-up schedule. These design features promote high internal validity, but the generalization of findings to more diverse populations in less well controlled and resourced settings may be limited.

Effectiveness trials evaluate whether an intervention does more good than harm under real-world conditions of availability, implementation, and utilization (Flay, 1986). Participants tend to be more heterogeneous along demographic and disorder-relevant dimensions, including having comorbid conditions that may adversely affect outcomes. Intervention and follow-up procedures may be implemented less consistently, and randomization to treatment or control conditions may be impractical or unethical. Effectiveness studies thus may have lower internal validity than efficacy studies, but they tend to have higher external validity. They contribute important information about the extent to which an intervention can be successfully translated into routine practice.

Ideally, an intervention established as efficacious in RCTs will be evaluated in usual practice or community settings to determine whether it provides benefits under less well controlled conditions. Effectiveness studies that do not involve random assignment allow investigation of how extratherapeutic patient and contextual variables may affect outcomes; e.g., how do the environmental circumstances that surround treatment-seeking affect treatment engagement, retention, and outcomes? Such extratherapeutic factors influence behavior change and can be studied better in effectiveness than efficacy trials.

or public health approaches alone. Integrated behavioral health care typically involves some degree of individualization that can improve efficacy on a per-person basis, coupled with dissemination concepts and strategies pioneered in public health practice to reach more persons in need.

Integrated behavioral health care combines some degree of tailoring with public health dissemination strategies to increase reach into the community.

1.1.3 Developing an Intervention Spectrum

An emerging strategy is to combine public health, integrated behavioral health, and clinical care in a coordinated service delivery system that encompasses prevention and treatment and allocates limited helping resources based on population and individual need and risk. Figure 1 shows a population-based allocation scheme adapted from an early IOM (1994) model to broaden MH/SU clinical services in the direction of prevention. As the figure shows, a far greater proportion of the population will need and benefit from preventive interventions compared with the minority in need of treatment-related services that range from initial case-finding, to acute treatment, to long-term care.

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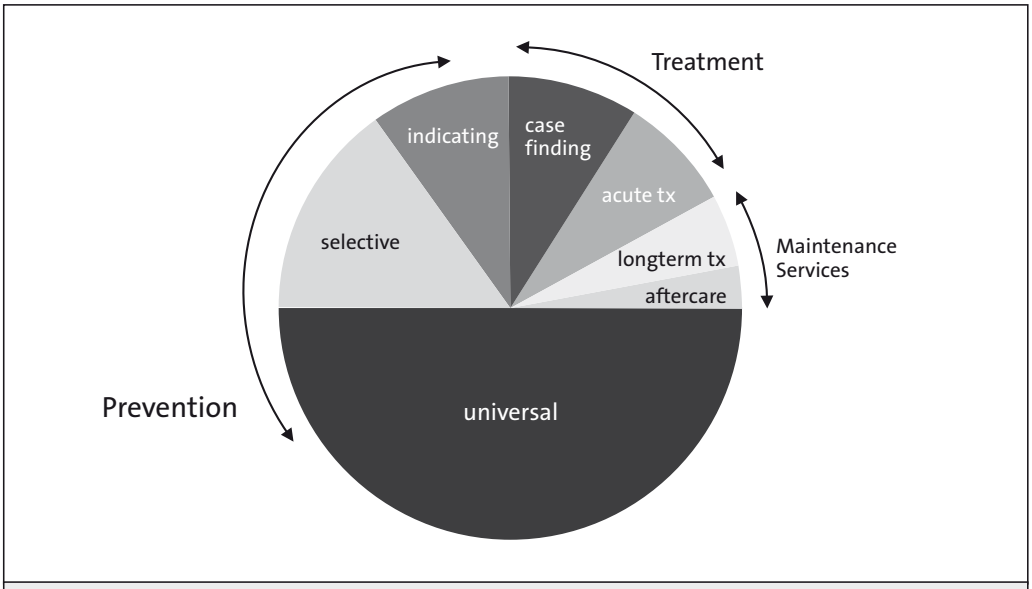

Figure 1
System of care spanning the intervention spectrum for psychological and behavioral disorders. Proportions in the pie graph reflect segments of the population that need and can benefit from different interventions ranging from universal prevention to posttreatment aftercare. Tx = treatment. Adapted from *Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research*, by the Institute of Medicine, 1994, Washington, DC: National Academies Press, p. 23.

Prevention can be universal, selective, or indicated.

Within the prevention sector, approaches can include *universal, selective,* or *indicated prevention* (IOM, 1994). This range encompasses interventions that are increasingly intensive and targeted to specific at-risk recipients. Universal prevention programs target the general public or population without regard to individual risk factors (e.g., television campaigns to "Get Five Daily" to increase general population intake of fruits and vegetables). Selective preventive interventions target population subgroups or individuals who have above-average risk factors for a preventable or treatable disorder (e.g., campaigns aimed at older women advocating bone density screenings). Indicated prevention interventions target individuals who have detectable but "subclinical" symptoms and signs for a disorder that typically fall short of clinical diagnosis (e.g., physician guidance on nutrition and weight management based on early signs of metabolic syndrome). Brief screening programs of at-risk population segments support "case-finding" of persons who meet some or all diagnostic criteria and who may benefit from preventive or clinical interventions. Ideally, case-finding will occur early in problem development before a disorder is established and serious and, therefore, more difficult to treat.

Practice can be expanded by offering low-intensity, long-term "extensive" services in addition to traditional intensive therapies.

Traditionally, most mental health practitioners have limited their services to acute or intensive treatment such as time-limited psychotherapy and the assessment procedures that support it. Although most practitioners will not participate across the full intervention spectrum outlined by the IOM (1994), there are many feasible opportunities and tools to expand their scope of practice. The first is to expand practice activities beyond the clinical treatment sector in the direction of indicated and selective preventive interventions, and case-finding in non-treatment-seeking individuals and at-risk subgroups. The second is to provide "extensive" services over long intervals that are fairly

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RE-AIM Framework for Behavioral Health Evaluations

The scope of assessment tends to be broader when behavioral health interventions are evaluated compared with the psychotherapy outcome literature familiar to mental health practitioners. The RE-AIM framework is emerging as a way to evaluate the real-world impact of behavioral health interventions (Glasgow, Klesges, Dzewaltowski, Estabrooks, & Vogt, 2006). The framework evaluates an intervention on five factors: **R**each (the proportion of the target population that receives the intervention), **E**fficacy (success rate or positive outcomes), **A**doption (the number of settings, practices, or health plans that use the intervention), **I**mplementation (the number of times the intervention is implemented as intended), and **M**aintenance (the extent or duration to which an intervention is sustained over time). These five factors in combination determine the public health impact or population-based effects of an intervention. Although not yet a publication requirement for research evaluations, the RE-AIM framework is a useful way to plan and evaluate behavioral health interventions.

minimal and supportive in scope (Humphreys & Tucker, 2002). Such services offer long-term monitoring of chronic relapsing and remitting disorders (e.g., addictive disorders) with linkages to care when problems reemerge.

The ideal continuum of care covers a spectrum of services, encourages consumer involvement, and maximizes individual and population health benefits.

This book focuses on these sectors where abundant opportunities exist to expand psychological practice. An optimal continuum of care will offer a range of services and will facilitate consumer-selected and professionally recommended choices in ways that maximize individual and aggregate benefits on behavioral health (Tucker & Simpson, in press). Evaluation of such services will similarly need to be broader than the usual focus on individual outcomes of psychotherapy. The text box describes an approach to evaluation research that is common in public health, the RE-AIM framework, and illustrates key evaluation questions for real-world interventions that seek to change individual behavior and to have an impact on population behavioral health.

1.2 Definitions

A population perspective argues for offering a range of services for different levels of need and consumer preferences.

Integrated behavioral health care depends on adopting a *population perspective*. A basic orienting assumption is that systems of care should offer a range of services of varying scope and intensity, corresponding to the range of needs and preferences in the population (Humphreys & Tucker, 2002).This means attending to and serving the needs of the larger population segment that does not seek services and tends to have less severe problems, in addition to the minority segment that presents for clinical care and tends to have more serious problems. For many disorders, the larger untreated segment with less serious problems overall contributes the bulk of harm and cost at the population level.

Reducing barriers to care and developing a continuum of appealing, accessible services are public health priorities in this endeavor (Tucker & Simpson, in press). Doing so depends on understanding the needs, preferences, and barriers to care for the underserved majority (e.g., Tucker, Foushee, & Simpson, 2009). These issues can be addressed using the tools of *social marketing*

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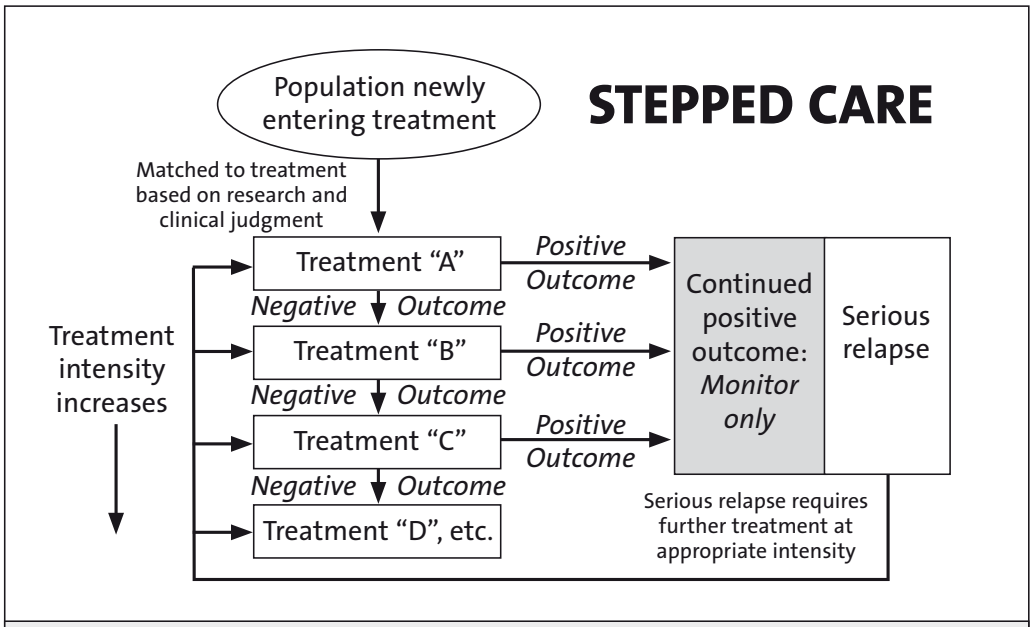

Figure 2
A stepped care approach to the delivery of health care services. Based on "Treatment for problem drinkers: A public health priority," by M. B. Sobell & L. C. Sobell, in J. S. Baer, G. A. Marlatt, & R. J. McMahon, Eds., 1993, *Addictive Behaviors Across the Lifespan: Prevention, Treatment, and Policy Issues,* Beverly Hills, CA: Sage, p. 150.

Social marketing addresses the needs, preferences, and barriers to care among potential consumers of services.

(Weinreich, 1999). High-risk groups, or "market segments," are offered interventions tailored to address their specific problems and preferences. As discussed later in Chapter 3, effective market segmentation may use consumer surveys or focus groups to assess the needs, preferences, strengths, and resources of potential target groups. Interventions then can be devised accordingly, as discussed in Chapter 4.

Stepped care begins with the least intensive service and ramps up to more intensive treatments if initial services prove inadequate.

A related strategy known as "stepped care" is shown in Figure 2. Stepped care entails using the least intensive and least costly intervention that is effective as the first line of service delivery, rather than initially offering everyone the most intensive (and often most costly) treatment (Sobell & Sobell, 2000). If a less intensive approach is not sufficient, care can be "stepped up" and intensified. Stepped care approaches are common in medicine and help spread limited health care resources to more individuals using a rational needs-based approach. For example, many individuals with uncomplicated behavior problems show significant improvements after brief motivational interventions involving one to two sessions (Miller & Rollnick, 2002). Extended psychotherapy is unnecessary and should be reserved for persons with complex, serious, and comorbid disorders.

Lower threshold services include guided self-change, screening and brief intervention, telehealth, and behavioral "prescriptions."

Collectively, this approach involves a spectrum of "low- to high-threshold" services of variable intensity and professional involvement. Examples of lower threshold services include guided self-change programs that individuals use on their own; screening and brief interventions (SBIs); *telehealth* options that use phone and computer systems to extend the reach of care; and automated expert systems that tailor individual "behavioral prescriptions" based on detailed assessment information. These services can be delivered opportunistically and

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proactively through outreach efforts to risk groups or individuals with risk factors in community or nonspecialty medical settings, instead of waiting for them to reactively seek services. If such services are readily available (e.g., outside the health care system or via "treatment on demand" arrangements), people can access them quickly when their motivation shifts in favor of behavior change. Finding such "teachable moments" when individuals are receptive to change and providing services quickly and easily are classic tactics of public health practice.

"Meeting people where they are" is a public health strategy that can be used to initiate low-threshold interventions.

1.3 Epidemiology

Development of a viable continuum of behavioral health services rests on understanding the population distribution and dynamics of behavioral health problems, patterns of care-seeking, and relationships between the two (Tucker, Phillips, Murphy, & Raczynski, 2004). The relevant behavioral epidemiology findings are summarized next.

1.3.1 Behavioral Health Problems in the General Population

Worldwide, MH/SU disorders contribute substantially to the global burden of disease and disability, and the great majority of persons with problems do not receive treatment (Wang et al., 2005; WHO World Mental Health Survey Consortium, 2004). About a third of the population experiences one or more diagnosable disorders on a lifetime basis, and many others experience subclinical signs and symptoms that may develop further or remit on their own. Mood disorders, including anxiety and depressive disorders, and alcohol and other substance use disorders are among the most prevalent disorders and contribute significantly to the global burden of disease and disability. Schizophrenia and other psychotic disorders, while much less common (< 3%), also contribute significantly (US Surgeon General, 1999; WHO World Mental Health Survey Consortium, 2004).

Mood disorders and substance use disorders are highly prevalent, and most persons with these problems do not receive treatment.

1.3.2 Behavioral Health Problems in Medical Patients

Many medical patients have behavioral health problems such as depressive or substance use disorders (SUDs), or they engage in behavior patterns that adversely affect their health status, medical treatment adherence, and outcomes (Tucker et al., 2004). People who seek help for psychological symptoms often ask their primary care providers for help first, and the main complaint of many primary care patients has a psychological or behavioral component. The "worried well" are common in medical settings. Their problems may benefit from brief interventions or resolve without treatment. Some medical patients, however, will have more serious problems and will need more intensive evaluation, referral, and treatment.

Medical patients with psychological concerns are common, and many need help with medication adherence or lifestyle changes.

Behavioral health problems can be difficult to detect because medical patients often do not self-identify as having such problems; their problems

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often are fairly mild and do not meet diagnostic criteria; and busy primary care providers may not screen for them effectively (Pini, Perkonnig, Tansella, & Wittchen, 1999). Uncomplicated depressive, anxiety, and alcohol-related problems are most common and can be treated in medical settings. Most people who receive an intervention for depression are treated by primary care physicians, who write the majority of prescriptions for antidepressant medications (Lieberman, 2003). Treating depression is important because it is comorbid with many medical disorders and often contributes to poor medical outcomes.

Uncomplicated mood and substance use disorders can be treated with brief interventions in primary medical care settings.

As another example, SBIs for alcohol problems are recommended in primary care and emergency departments because such problems are prevalent among their patients. See http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians_guide.htm for an example of an evidence-based SBI recommended by the National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2005).

1.3.3 Economic Impact

Reduced medical costs may offset costs of behavioral health treatments, but behavioral health benefits are often the first to be cut by third-party payers.

Behavioral health problems, especially when untreated, pose a substantial economic burden on the health care system and broader economy (US Surgeon General, 1999). Including behavioral health services in primary care and covering them in comprehensive health plans reduces the use and cost of medical services (Cummings, O'Donohue, & Ferguson, 2002). This *medical cost offset effect* provides an economic basis for covering behavioral health services in MCOs and other health plans and provider organizations. Despite the cost savings, however, behavioral health services are often among the first to be cut in cost-containment efforts, particularly before federal parity legislation was enacted.

1.4 Course and Prognosis

Mental health and substance use disorders often emerge during adolescence and young adulthood. Many resolve without treatment or with brief intervention only.

MH/SU disorders typically emerge in adolescence and early adulthood before age 25, and subthreshold symptoms often predate full clinical diagnosis (WHO World Mental Health Survey Consortium, 2004). Early adulthood is an important period for early case-finding and preventive interventions, in addition to treatment when indicated. Some disorders (e.g., SUDs) remit in many cases without treatment, particularly in early adulthood, whereas other disorders that occur early in life presage increased risk for future recurrences (e.g., schizophrenia, major depression).

For many MH/SU problems, partial or full improvement to premorbid levels of functioning occurs without treatment or with brief interventions. In some cases, improvements are sustained; in others, the risk of relapse remains high. The informed behavioral health practitioner will understand how population segments differ in the distribution and severity of MH/SU problems and the range of variations in the long-term course and need for continued monitoring with linkages to care.

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Depression illustrates relationships between subthreshold and clinical presentations of disorders and how this can inform screening and practice patterns (Tucker et al., 2004). In the general US adult population, 20% to 30% of individuals experience subthreshold depressive symptoms, which may remit without intervention. However, only a minority of depressed individuals seek treatment, and even fewer receive specialty mental health care (Wang et al., 2005). Major depression, the most severe form of the disorder, occurs in less than 10% of cases, but it tends to recur; 50% of persons who have had one major depressive episode will have another, and 70% who have had two episodes will have a third. Thus, long-term monitoring of individuals with a history of major depression is a high priority in behavioral health care.

20% to 30% of the general US adult population have subthreshold depressive symptoms.

Relapse of major depression is common, and long-term monitoring is a high priority.

1.5 Differential Diagnosis

As discussed in Chapter 3, formal clinical diagnosis is not highly relevant to public health or integrated behavioral health practice. Rapid, macroscopic determination of whether care is needed, and if so the appropriate level of care, is more central to practice. This is the case because the focus of public health and integrated behavioral health care often is on the large untreated population segment with risk factors or subclinical forms of disorders. This untreated segment tends to have less severe problems than clinical samples, and they often fall short of fulfilling all diagnostic criteria.

Behavioral health assessment is more concerned with rapid, macroscopic determinations about need for care than with formal clinical diagnosis.

1.6 Comorbidities

Comorbid conditions are common among persons with MH/SU disorders. For example, more than 20% of people with a mental disorder in the United States also have a substance use disorder (Wang et al., 2005). Persons with comorbidities generally need specialty clinical care that falls outside the services discussed in this book.

Comorbid MH/SU conditions are common and typically require specialty clinical care.

1.7 Diagnostic Procedures and Documentation

The psychological and behavioral problems of individuals need to be considered in an integrated behavioral health model of practice, and practitioners need to be competent with established assessment procedures and diagnostic systems. However, as discussed in Chapter 3, the scope of assessment is generally broader than the focus of traditional clinical assessment and diagnosis on individual characteristics. In an expanded population approach to practice, primary objectives of assessment are to identify opportunities for intervention delivery to persons who do not present for treatment and to characterize their motivations for change and determine where they are in the change process.

Identifying and exploiting opportunities to be of service is central to the behavioral health approach.

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Finding and exploiting these opportunities within systems and communities, as well as at the individual level, is a new domain of assessment for mental health practitioners. Consumer preferences and needs should guide the development and delivery of behavioral health programs. The scope of assessment should be multileveled and cover service features that matter to end-point consumers, such as provider characteristics, privacy, and cost, as well as features of the health care system that can promote appropriate service utilization, such as convenient parking and appointments with minimal waiting times. Another assessment objective in some applications is to screen and triage clients quickly to appropriate services that range from brief interventions to outpatient or inpatient treatment.

After describing theories that have guided public health and integrated behavioral health care in Chapter 2, these alternative assessment goals and methods are discussed in Chapter 3. Evidence-based public health and behavioral health interventions for MH/SU disorders that involve varying degrees of individualization and often make use of phone and computer technologies to extend the reach of care are then described in Chapter 4. A case vignette presented in Chapter 5 illustrates how several services along the continuum of care from low to high threshold and intensity can be applied to the medical and behavioral health care of persons living with HIV/AIDS.

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2

Theories and Models of Behavior Change in Behavioral Health Practice

Psychology's unique role in public health is to act as the steward of a correct application of behavioral knowledge and theory.
Laura C. Leviton, *American Psychologist,* 1996

Psychologists have been in the vanguard of developing theoretical approaches to understanding individual differences in health behavior, and these theories and models have been widely applied to health promotion and preventive care (Glanz, Rimer, & Viswanath, 2008). Broadly defined, theory is a systematic relationship of constructs that are devised to analyze, predict, and explain the nature of a specified set of phenomena under a relatively wide variety of circumstances. A theory must be empirically testable and generalizable across settings and populations. According to McGuire (1983), the adequacy of a theory can be assessed in terms of three criteria: (1) its logic or internal consistency, (2) the extent to which it is parsimonious and broadly relevant while using a manageable number of constructs, and (3) its plausibility (e.g., does it fit with prevailing concepts and data in the field?). At its best, a theory guides both research and application, and directs attention toward relationships that can be evaluated empirically. Findings then support refinements of concepts, hypotheses, and applications.

Theory should be internally consistent, parsimonious, and plausible and guide both research and practice.

The variable domains relevant to health behavior change and public health practice span intrapersonal, interpersonal, and broader contextual variables reflecting community, economic, organizational, and policy levels (Glanz et al., 2008; National Cancer Institute [NCI], 2003). At the intrapersonal level, theories focus on factors within an individual such as attitudes, motivation, knowledge, and skills, whereas interpersonal theories postulate that other people in one's social network influence behavior. Theories emphasizing the individual as the unit of analysis are common in psychology, and we refer to them as *psychological theories* (regardless of the disciplinary origin). In contrast, *contextual theories* are broader in scope and seek to explain individual and group behavior in context. They focus on how behavior is affected by factors such as social norms, community, and ecological characteristics; economic variables; health system characteristics; and public policy (NCI, 2003). These theories tend to be multilevel with respect to units of analysis and are more common in sociology, economics, and ecology.

Psychological theories focus on intrapersonal and interpersonal factors. Contextual theories seek to explain behavior in a broader environmental context.

Theories can vary along several additional dimensions, including: (1) the extent to which they are primarily explanatory and concerned with illuminating the nature of a given phenomenon or problem, or are useful for directing the development and implementation of behavior change interventions (Green,

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2000); (2) whether they are predominately inductive or deductive in nature, which reflects the degree to which empirical findings precede or follow theoretical development, respectively; and (3) the extent to which the dimension of time is incorporated in concepts and applications. The first two dimensions are not rigid distinctions; e.g., some theories provide both explanation and application regarding behavior change. However, whether a theory deals with time is a clear-cut distinction that is basic to understanding the temporal dynamics of behavior change and influencing its course in positive ways. Absent concern with time, a theory can inform structural or static variables that are associated with behavior patterns and outcomes at a given point in time, but will be limited with respect to predicting and controlling trajectories of behavior through time, which is the essence of behavior change. Holding time constant is sometimes necessary to conceptualize and measure complex systems (e.g., health care systems), but complexity should not be confused with explanation of behavior change. The psychological and contextual theories discussed in this chapter vary considerably in their specifics, and each has made important contributions in the health arena. However, these more basic dimensions of theoretical construction should be kept in mind because they often determine the utility of a theory for informing practice in real world settings more than the theoretical specifics. We return to these issues after presenting the different theories.

Incorporating the temporal dimension of behavior over time is critical for a theory to guide behavior change applications effectively.

2.1 Psychological Theories

Table 2 summarizes the major features of four psychological theories relevant to public health, including two intrapersonal theories (health belief model [HBM] and theory of reasoned action/theory of planned behavior [TRA/TPB]), an interpersonal theory (social cognitive theory [SCT]), and a theory that combines elements of both (transtheoretical model [TTM]). The first three are expectancy-value theories, which hold that behavior is determined by the value placed on a particular outcome and by one's estimate of the likelihood that a given behavior will result in that outcome. The TTM recognizes expectancy-value constructs, such as weighing the pros and cons of change, and incorporates constructs from a variety of theories. However, it is primarily a cross-cutting framework that describes the steps and processes of behavior change over time, not causal relationships (Glanz et al., 2008).

Expectancy is the belief that a behavior will produce a desired outcome. Value is the importance placed on the outcome.

2.1.1 Expectancy-Value Theories

The HBM is one of the oldest and most recognized interpersonal theories (e.g., Rosenstock, 1974) and was developed to help explain why few people took advantage of screening services for tuberculosis. It has since been widely applied as a model of utilization of other health screening and intervention programs (e.g., mammography, cervical cancer screening, high blood pressure, and adherence behaviors). Initially, the model had five constructs: (1) *perceived susceptibility* to a health risk; (2) *perceived severity* of a health problem; (3) *perceived benefits* (or positive consequences) of, and; (4) *perceived*

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