INTEGRATING PRIMARY CARE AND MENTAL HEALTH SERVICES IN RURAL AMERICA: A POLICY REVIEW AND CONCEPTUAL FRAMEWORK

MUSKIE SCHOOL

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Working Paper #3
May 1995

Funding for this work was provided by the Office of Rural Health Policy, Health Resources and Services Administration, DHHS, Grant #000004-02. The views expressed are those of the authors. No official endorsement by either the University of Southern Maine or the funder should be inferred. We appreciate the comments and suggestions provided by reviewers of earlier drafts of this paper.

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ABSTRACT

For decades, policymakers have promoted the integration of mental health services into primary care as a means to improve access, quality, and cost of care. Such integration may be especially desirable in rural areas, given the shortage of mental health providers and the reluctance of rural residents to seek specialty care because of stigma associated with mental illness and concerns about confidentiality. The recent growth of managed care and the accelerating development of health services networks have prompted a resurgence of interest in this and other forms of service integration.

This paper recounts the policy history of the service integration concept and discusses the relevant theoretical and empirical literature in a conceptual framework that emphasizes the structural factors shaping integration, the organizational characteristics of integrated service providers, and the effects of integration on access, quality, and cost of care. The authors characterize service integration as a "policy ideal" which enjoys widespread acceptance and face validity in the absence of consistent evidence that it can fulfill many of the expectations attributed to it. They argue that, in order to evaluate the effects of integration, concerned parties need to develop a clearer understanding of the dimensions of the concept and its relationship to specific policy and practice goals.

INTRODUCTION

For decades, policymakers have promoted the integration of mental health services[1] into primary care as a means to improve access, quality, and cost of care. These efforts have occurred in the context of a broader intellectual movement that regards service integration as a key to solving the problems of fragmentation, inaccessibility, dscontinuity, and inefficiency that seem to plague the health and human services delivery systems in many American communities (Agranoff, 1979; Aiken, et. al., 1975; Spencer, 1974). Service provider interest in integration has waxed and waned over the years, in part responding to cycles of government and foundation support for projects featuring a service integration component. Despite this history, the concept of service integration has never been well-defined. Furthermore, empirical studies examining the structural factors shaping integration, the organizational characteristics of integrated service providers, and the effects of integration on access, quality, and cost remain limited in number, scope, and generalizability. For these reasons, we regard service integration as a "policy ideal,"[2] an ill-defined concept which enjoys widespread acceptance and face validity in the absence of consistent evidence that it can fulfill many of the expectations attributed to it.

Organizational theorists have developed a considerable body of literature relevant to the concept of service integration (see, for example, Alter and Hage, 1 993; Morrissey, et. al., 1982; Rogers and Whetten, 1982; Scott, 1987). This literature regards integration as encompassing a range of inter- and intra-organizational strategies aimed at increasing functional coordination with the intent of improving performance measures such as access,

[1] In this paper, we include substance abuse treatment under the general rubric of mental health.

[2] Other examples of policy ideals are "local control" and "citizen participation."

comprehensiveness, continuity, and/or cost-effectiveness. We consider this to be a reasonable working definition, with the recognition that it provides considerable latitude regarding the actual characteristics of integration. Since integration can occur within, as well as between, organizations, the concept is applicable to a broader spectrum of arrangements than those discussed in the emerging health services networks literature (e.g., Christianson and Moscovice, 1 993; Moscovice, et. al., 1995; Rosenberg, 1993). Integration can be viewed from the consumer level, focusing on continuity of care as an individual uses multiple services, or from the organizational level, focusing on efforts to bring different agencies or programs together (Baker, 1991). In this paper, we follow the second approach.

Although the framework we describe is relevant to primary care and mental health services integration as a whole, our association with a rural health research center directs our principal interest toward the integration of mental health services with primary care in rural communities. In this context, policymakers regard integration as a solution to persistent problems of limited availability and accessibility (Beeson, 1990; Wagenfeld and Buffum, 1983). The prevalence of mental health problems in rural areas is roughly equal to that in urban and suburban communities, yet specialty mental health services are considerably more limited in rural counties, with many lacking them altogether (Blazer, et. al., 1983; Knesper, et. al., 1984; Mueller, 1981; Stuve, et. al., 1989). Physical distance, adverse weather conditions, and limited transportation options present considerable barriers to care even when resources are available (Adams and Benjamin, 1988). Some rural residents are unwilling to use available mental health services because of the stigma associated with mental illness and concerns about confidentiality (Berry and Davis, 1978; Fehr and Tyler, 1987). Rural and urban alike, a significant proportion of people with mental health problems seek and obtain care for those problems from primary care practitioners (Schurman, et. al., 1985; Regier, et.

al., 1993). The fact that these same people also experience higher rates of morbidity and tend to use health care services more intensively than the general population lends further justification to the need for integrating primary care and mental health services (Goplerud, 1981; Hankin and Oktay, 1979).

POLICY REVIEW

The concept of service integration initially appeared in the policy literature during the early 1960s, reflecting the realization that, however well-intentioned, many federal human service programs were not meeting their goals, but were instead creating a massive, costly, and often incoherent bureaucracy. As part of the War on Poverty, the Johnson administration established two major service integration initiatives, the Model Cities and Community Action Programs (U.S. General Accounting Office, 1992). Nevertheless, the June 1 967 Office of Economic Opportunity catalog of federal domestic assistance listed 459 separate programs aimed at helping individuals improve their social and economic position (Rein, 1970). The infusion of federal funds into states and localities during this period fostered rapid growth of a human services delivery system characterized by strong vertical ties *within* service categories and weak horizontal ties *between* them. With their multiple categorical funding streams, conflicting rules, and incompatible eligibility standards, state and local service structures mirrored the form of the federal bureaucracy, causing access and continuity problems, especially for clients with complex needs.

Under the early leadership of Secretary Elliot Richardson, the U.S. Department of Health, Education, and Welfare supported numerous service integration programs. Among these were the Services Integration-Targets of Opportunity (SITO) projects, initiated in 1972 as part of the Allied Services Act to help 35 rural and urban communities develop the components and techniques enabling the delivery of comprehensive and coordinated services

(Gans and Horton, 1975; John, 1977). Unfortunately, the SITO projects were funded for only three years and did not use a uniform framework for conceptualizing problems, interventions, or goals. Thus the evaluators had difficulty identifying long term effects or making comparisons across sites.

The federal government has not been alone in its efforts to encourage coordination among health and human service agencies. With leadership from local United Ways and other private sector organizations, many communities established human services planning councils during the 1 960s and 1 970s (Brilliant, 1986). These interorganizational entities continue to produce needs assessments, mediate interagency disputes, lobby on behalf of their members and clients, and incubate new services. In addition, both national and local private foundations have supported service integration efforts. For example, in 1 986 the Robert Wood Johnson Foundation initiated a five-year demonstration program calling upon grant recipients to develop integrated service delivery systems for the chronically mentally ill (Goldman, et. al., 1 994). Programs funded by the Robert Wood Johnson and Annie E. Casey foundations have sought to reduce barriers to service delivery for infants, children and youth with multiple problems by fostering service integration (Beachler, 1991, U.S. General Accounting Office, 1992).

Numerous federal initiatives have specifically sought to foster integration of mental health services with primary care. Since their inception, federally-funded migrant and community health centers and federally-qualified HMOs have been required to offer basic mental health services as a supplement to comprehensive primary health care (Geiger, 1 984; U.S. Congress, Office of Technology Assessment, 1 990). A few initiatives have encouraged the diversification of community-based primary care programs into mental health service delivery. For example, the Omnibus Budget Reconciliation Acts (OBRA) of 1987 and 1 989

broadened Medicare and Medicaid reimbursement to include clinical psychologists and masters' level social workers practicing in rural health clinics (Travers and Ellis, N/D). Provisions of OBRA 1989 and 1990 made enhanced, cost-based reimbursement available to Federally-Qualified Health Centers (FQHCs), which enabled some to hire mental health specialists directly (National Association of Community Health Centers, 1991). Other initiatives have encouraged linkage and/or referral arrangements between primary care and specialty mental health providers. The Rural Health Initiative and Health Underserved Rural Area grants, along with the later Rural Mental Health Demonstration Program, required primary care applicants to coordinate with area mental health services providers (Coulam, et. al., 1990; Ozarin, et. al., 1978). The Linkage Initiative program, co-sponsored bytwo categorical federal agencies (the Alcohol, Drug Abuse, and Mental Health Administration and the Bureau of Community Health Services), enabled community and migrant health centers to hire linkage workers[3] to assess patients and refer them to affiliated community mental health centers (ADAMHA, 1 982; Broskowski, 1980). In response to the growing AIDS crisis, the National Institute on Drug Abuse and the Bureau of Health Care Delivery and Assistance collaborated in the late 1980s in sponsoring similar demonstration projects linking primary care and substance abuse treatment programs.

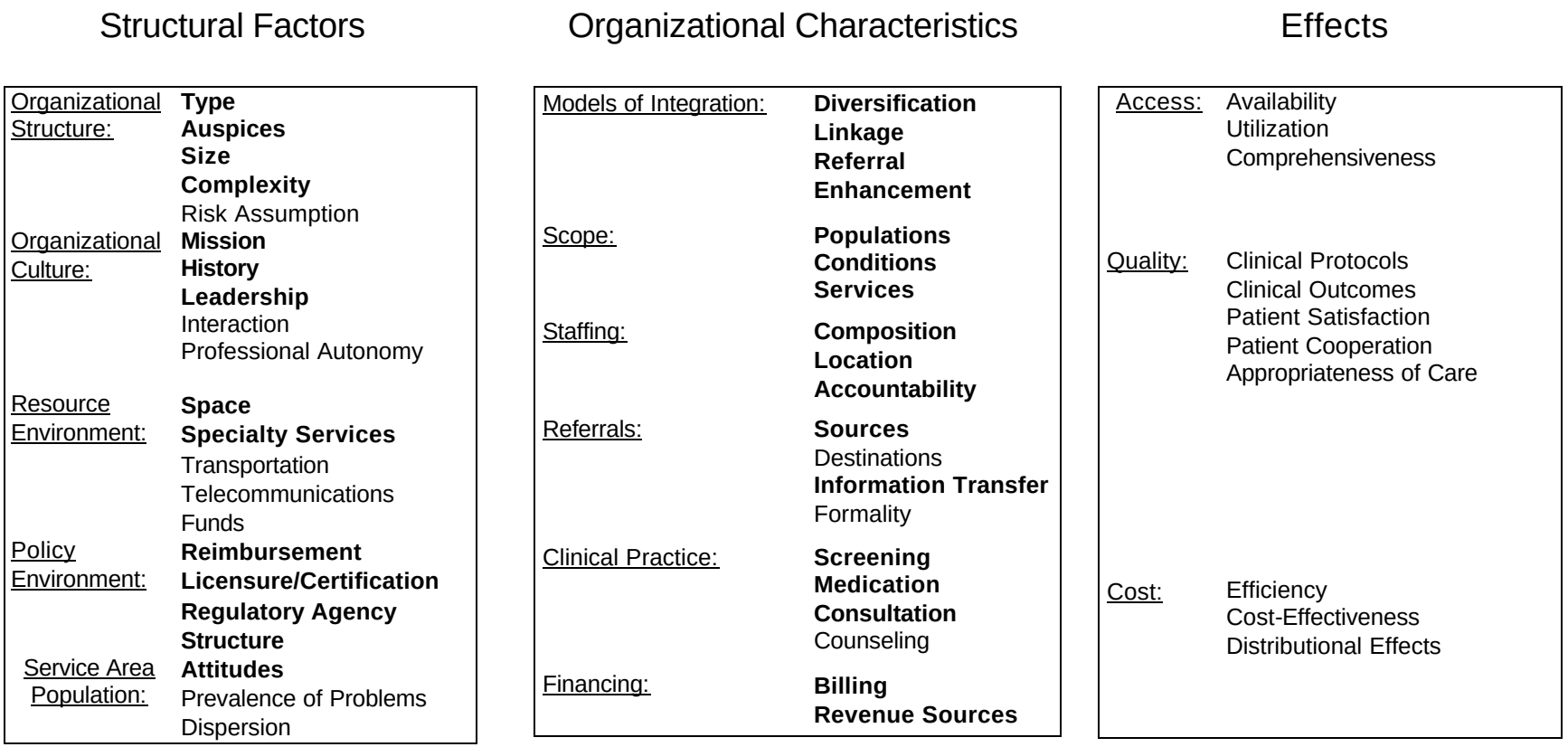
CONCEPTUAL FRAMEWORK

Overview

Our conceptual framework (Figure 1) draws on the interorganizational literature as well as on studies of primary care and mental health services integration and health services

[3] A linkage worker as defined by the Linkage Initiative was typically a masters' level mental health specialist located at a community or migrant health center. About a third of the linkage workers hired with grant funds from this project were directly employed by the community mental health center (Broskowski, 1980).

Figure 1: Conceptual Framework for Studying Integrated Primary Care and Mental Health Services



networks. It is also based on our own knowledge of integrated programs at approximately fifty rural sites around the United States[4] (Bird and Lambert, 1995). The framework is comprised of three sections encompassing the *structural factors* shaping integration, the organizational characteristics of integrated service providers, and the effects of integration. Although our diagram depicts this framework as flat and our narrative suggests that it is linear, we employ these devices for heuristic purposes only. In fact, the framework represents a highly complex and dynamic system with considerable interplay among particular components. For example, *funds* (an element of the resource environment) are in part disbursed to service providers through the mechanism of *reimbursement* (whose rules are made in the policy environment). Availability of funds through avenues including reimbursement, grants, and private donations affects the pattern of *revenue sources* experienced by the service provider at a point in time. Reimbursement rules may also influence provider decisions about *billing practices.* Our framework considers revenue sources and billing practices as elements of financing in the organizational characteristics section. All of these elements are likely to exercise an impact on the *efficiency, cost-effectiveness,* and *distributional effects* of the integrated service (elements of its cost). To bring the framework full circle using this example, findings regarding the efficiency, cost-effectiveness, and distributional effects of a particular approach to service integration might in turn affect subsequent availability of funds and rules regarding reimbursement.

Initially, we intend this framework to serve as a basis for creating systematic and comparable descriptions of integrated primary care and mental health programs. Ultimately,

[4] During 1 994, we conducted telephone interviews with administrative and clinical staff at primary care organizations which had undertaken specific program initiatives to establish linkages with mental health service providers or to integrate these services into existing primary care programs. For more information about this project and its findings, please refer to the working paper cited.

we hope to develop it as a tool for conducting analytic studies of service integration which can be used to test the existence and strength of causal relationships among elements in each of the three sections. For example, in another study currently under way, we are examining the effect of variations in availability of specialty mental health services on primary care practitioner treatment and referral of patients with symptoms of depression. In this instance, we regard availability of specialty mental health services as a structural factor, and treatment and referral practices as organizational characteristics.

Structural Factors

When we speak of **structural factors**, we refer to relevant attributes of the environment external to the integrated program or preceding it in time. They are "givens," generally not amenable to change from within the integrated program, although some can be changed by the sponsoring organization or by policymakers. We assume that under different circumstances these factors may facilitate, inhibit or exercise a neutral effect on integration. Among them, we include the structure and culture of the organization sponsoring the service integration program, its **resource** and **policy environment**, and attributes of its **service area population**.

The five elements we use to characterize **organizational structure** are *type, auspices, size, complexity* and *risk assumption.* Variations in each of these elements are likely to generate distinctive structural characteristics which may affect service integration. By *type* we mean, quite simply, whether the service provider is an acute care hospital, community health center, public health nursing service, or some other category of organization. *Auspices* refer to the sponsorship of the organization, whether non-profit, for-profit, or public. *Size* can be measured in terms of annual operating budget, total full-time equivalent staff, or patient volume. *Complexity* includes both internal and external components such as the number of

distinct functional areas maintained by the organization, the number of layers in its management hierarchy, and the number of other service providers with which it has established formal relationships through network arrangements, for example. *Risk assumption* is a measure of the extent to which the organization is at financial risk for the health and/or mental health needs of a defined population. Research to date suggests that increased assumption of financial risk may cause an organization to favor brief therapy over multidisciplinary case management, or place limits on the number of allowable mental health visits, potentially reducing access to care (Schlesinger, 1986). On the other hand, risk assumption appears to be a necessary condition of service integration in some settings (Moscovice, et. al. 1995).

Under **organizational culture** we count the elements of *mission, history, leadership, interaction* and *professional autonomy.* Although these elements are somewhat difficult to measure, we anticipate that they exercise a significant influence on the potential for service integration. *Mission* refers to the guiding philosophy of the organization and in particular to the way it defines its purpose and target population(s). *History* incorporates both duration of the organization (measured in years) and the consequences of that duration in terms of relevant achievements and defeats. The element of *leadership* focuses on the efforts of key individuals or groups to encourage or resist service integration. *Interaction* refers to the frequency, formality and intensity of relationships with other service providers. Open and ongoing exchange of information facilitated integration among mental health and primary care providers in several midwestern states (Van Hook and Ford, 1 993). *Professional autonomy* concerns the degree to which members of different medical and mental health professions function in separate spheres defined by their professional training. Lack of shared language and divergent healing paradigms may make it difficult for primary care and mental health

practitioners to work together (Barrett, 1991; Light, 1981; Strauss, et. al., 1981).

Within the category of resource environment we include availability of *space, specialty services, transportation, telecommunications,* and *funds. Space* refers to rooms suitable for the provision of mental health services, i.e. private and sound-proofed, yet conveniently located for patients and practitioners. Previous studies have found that lack of space inhibits integration (Broskowski, 1980; Bird and Lambert, 1995). *Specialty services* include both organizations and individual practitioners qualified to provide needed mental health services. Many service integration programs have foundered on difficulties recruiting and retaining qualified staff or maintaining referral relationships with specialty mental health providers (Burns, et. al., 1983). *Transportation* refers to road conditions as well as to availability of public and private vehicles. Under certain circumstances, for example when a consultation on psychotropic medications is needed, *telecommunications* may serve as a substitute for transportation (Preston, et. al., 1 992). This measure includes the availability of transmission lines for voice, images, and data along with that of equipment for sending and receiving information, such as computers, modems, fax machines, telephones, and video monitors. *Funds* are perhaps the most essential element of the resource environment and may come from a variety of public and private sources. Funds may be program-related, e.g. the categorical operating grants received by community health centers from the U.S. Department of Health and Human Services and the Alcohol, Drug Abuse and Mental Health Services block grants allocated to the states[5]. They may also relate to the provision of particular services (e.g. Medicaid and other third-party reimbursements) or to the number of individuals

[5] Some regard such categorical funding as a barrier to integration (Celenza and Fenton, 1981). Others blame block grants for the shift in focus of community mental health centers away from primary carerelated services and toward services for the chronically mentally ill (Bergland, 1 988; Hargrove and Melton, 1987; Larsen, 1987; Wagenfeld, et. al., 1994).

subscribing to a capitation-model managed care program. In most instances, policies shape the availability of funds for specific programs, services, and/or population groups.

In the context of primary care and mental health service integration, the **policy environment** includes the rules and practices of the federal and state governments, as well as of other organizations such as insurance carriers, accrediting agencies, and network administrators. These are the structural factors policy research typically aims to influence. We focus on *reimbursement, licensure and certification,* and *regulatory agency structure* as relevant characteristics of the policy environment. *Reimbursement* refers to the rules by which funds are transferred from government and other third-party payers to providers in exchange for specific services or as capitation payments. *Licensure and certification* concern the rules that qualify organizations and individual practitioners to provide specified services. These may be administered by public or private accrediting agencies. When we speak of *regulatory agency structure,* we mean the administrative relationships between those government agencies (both state and federal) charged with regulating the provision of primary care and mental health services. We suggest that integration of services at the local level is greatly facilitated if it is preceded or accompanied by integration of regulatory functions at the state and national levels[6].

The attributes of the **service area population** that are of particular interest here are *attitudes, prevalence of conditions,* and *geographic dispersion. Attitudes* of individuals and social groups influence their willingness to accept mental health diagnoses and treatments or to tolerate the presence of mental health services in their communities. The *prevalence* of

[6] However, one observer warns that, if mental health is subsumed into general health services at this level, it may acquire the flaws of the latter, emphasizing high-cost technology and treatment of disease over prevention and community-based services (Kiesler, 1 992).

various mental, emotional, and behavioral disorders among different population groups shapes the need and demand for services. The *geographic dispersion* of people within a given region, measured in terms of physical distances and relative population density, can have a profound effect on awareness of service availability and service use (Fehr and Tyler, 1987; Prue, et. al., 1979; Sommers, 1 989). Of course, availability of transportation and telecommunications may mediate geographic dispersion.

Organizational Characteristics

By **organizational characteristics** we mean administrative and clinical aspects of the integrated program, which may be embedded in a larger organization, such as a rural hospital. Within the constraints of the structural factors described in the previous section, we expect that these characteristics are amenable to change through the decisions and actions of those within the program or its parent organization, e.g. staff and board members. The organizational characteristics we include in our framework are **models of integration**, **scope**, **staffing**, **referrals, clinical practice,** and **financing**.

By **models of integration**, we refer to particular ways of organizing to provide mental health services to primary care patients. We recognize four distinct models which we call *diversification, linkage, referral,* and *enhancement* (Figure 2). These models are largely defined by the other organizational characteristics described in this section. Where the purpose of integration is improving continuity of care, it is likely to take the form of service coordination within a single organization, as, for example, when a rural health clinic hires a social worker to provide basic mental health services to its patients. We use the term *diversification* to describe such an arrangement. This is equivalent to the autonomous model described by Borus and others (1975) and the service delivery team model elaborated by Pincus (1980). When a specialty mental health provider offers these services at the primary care site through

Figure 2: Models of Integration

Model	**Practitioner** providing MH service	**Site** where MH service located	Organization **billing** for MH service
Diversification	MH	PC	PC
Linkage	MH	PC	MH
Referral	MH	MH	MH
Enhancement	PC	PC	PC

a formal, ongoing relationship, we use the term *linkage* to describe the integration approach. The federal Linkage Initiative program relied on this model of service integration. *Referral* encompasses a range of formal and informal arrangements to assure that off-site mental health services are available to primary care patients on an as-needed basis. All the organizations participating in our study used referral as one integration model. *Enhancement* involves training primary care practitioners to improve their ability to provide mental health services to their patients directly[7]. Our studies suggest that these models are more likely to occur in combinations than as pure types. Moreover, the same organization may rely on different models of integration to serve patients with different needs. For example, a social worker employed by a rural health clinic may counsel a patient with situational depression directly, but may refer one with a severe emotional disorder to a psychiatrist at a community mental health center in another town.

Scope refers to the comprehensiveness of the integrated program. We describe scope in terms of the *populations* served by the program, the *conditions* it is able to treat, and the types of *services* it provides. *Populations* are distinct social groups, such as school-aged children, pregnant women, or migrant workers. *Conditions* are families of presenting problems of varying severity, including situational anxiety, alcoholism, or schizophrenia. Among the types of *services* likely to be offered are individual, group, or family counseling, acute hospitalization, residential treatment and crisis intervention. Scope is a matter of particular importance in rural areas, where resources may be limited and demand for certain types of

[7] There is considerable controversy regarding the feasibility of this model. One perspective argues that even when primary care practitioners receive special training in the recognition, diagnosis, andtreatment of mental illness, their skills may be inadequate to meet the needs of persons with chronic or severe mental health problems (Jones, et. al., 1987; Kessler, et. al., 1985; Mechanic, 1 990). Another contends that primary care practitioners with recent specialized mental health training, usually related to a specific condition, are effective in recognizing, diagnosing, and treating those conditions (Andersen and Harthorn, 1 990; Magruder-Habib, et. al., 1 990).

services infrequent. The constraints imposed by a pattern of revenue sources that consists largely of Medicaid-SSI may restrict the program to serving primarily those with diagnosed mental illness. Likewise, categorical funding for services such as substance abuse counseling may be restricted to special populations such as pregnant women. A rural health clinic or HMO that has arranged for provision of basic mental health services by hiring a part-time counselor may still lack the capacity to provide intensive play therapy to a child with severe behavioral problems or respite services for the spouse of an older person suffering from Alzheimer's disease[8]. The scope of services available through a particular integration program may be expanded by means of referral to other providers or use of telephone or other telecommunications consultation with specialists.

Staffing refers to the administrative and clinical personnel employed by the integrated program, and is characterized in terms of *composition, location,* and *accountability. Composition* refers to numbers and types of staff, *location* to the sites at which they do their work, and *accountability* to their reporting relationships. We suggest that the types of staff employed by the program and their locations are in part functions of the resource environment. Previous studies of primary care and mental health service integration programs found that small or part-time staffs with accountability to more than one organization experienced difficulty accomplishing service integration, and that referrals were faster and easier when primary care and mental health practitioners worked at the same location (Borus, et. al., 1 975; Borus, 1 976). Under the diversification and linkage models, mental health staff are located at the primary care site. Under the diversification model, mental health staff are accountable to the primary care provider.

[8] Even when mental health services are available locally, some rural residents may prefer to travel outside their own communities for them as a way to protect their anonymity.

Referrals involve sending individuals with particular problems to off-site mental health

specialists qualified to help them. We use the term both as an integration model and as an organizational characteristic in its own right. Within the element of referrals we include *sources, destinations,* methods of *in formation transfer,* and *formality.* Often integrated programs receive referrals from *sources* in the community such as schools, law enforcement agencies, churches, or families. Even those integrated programs that rely primarily on diversification or enhancement arrangements are likely to refer patients to other *destinations,* like community mental health centers, residential treatment programs, or acute psychiatric hospitals on occasion. Each referral is likely to prompt an accompanying *information transfer,* or communication about the patient, between the referral source and the referral destination. This may involve the transfer of partial or complete patient medical records, case conferences, paper or electronic memos, or telephone or in-person conversations between practitioners. The completeness and interactivity of this process of information transfer is an important measure of integration, and appears to be related to the degree of satisfaction with the referral relationship experienced by the primary care practitioner (Rosenthal, et. al., 1991). We define *formality* in terms of the extent to which specific referral protocols have been established and are observed with each referral event.

Our element of **clinical practice** focuses on the use of *screening, medication, consultation,* and *counseling* by primary care practitioners. We expect these clinicians to engage in such activities more frequently and consistently when enhancement is part of the integration approach. Systematic *screening* of primary care patients with mental health problems is essential to the consistent recognition and diagnosis of those problems. The primary care practitioner may screen with a standard instrument, such as the General Health Questionnaire, or rely on a few key questions raised during the initial visit or when warranted

by presenting symptoms. *Medication* refers to the appropriate prescription of psychotropic drugs as part of the treatment plan for the mental health condition. Studies indicate that primary care physicians are the major prescribers of minor tranquilizers and antidepressants (Hohmann, et. al., 1991). Sometimes, the primary care practitioner consults with a psychiatrist before prescribing a particular medication. This use of *consultation* is often contingent on the availability of specialty mental health services in the area, and may also depend on the configuration of integration models used by the primary care provider. For example, a networking agreement may include formal provisions for telephone consultation between a group of primary care practitioners and a psychiatrist on an as-needed basis. The clinical practice guidelines for treatment of depression in primary care issued by the Agency for Health Care Policy and Research (AHCPR) recommend the use of *counseling* or psychotherapy by the primary care practitioner as part of the plan of treatment (Depression Guideline Panel, 1993). Counseling refers to verbal, usually face-to-face, interactions between practitioner and patient, varying in length, frequency, and purpose. One study found that rural primary care physicians lacked the time to engage in counseling with patients experiencing symptoms of depression (Rost, et. al., 1994).

Financing is the final organizational characteristic of primary care and mental health integration we include in our model. Salient features of financing are *billing* and *revenue sources.* These are related to the structural factors funds and reimbursement. With regard to billing, we are especially interested in determining who bills for mental health services provided as part of an integration arrangement. In the absence of structural factors such as a reimbursement policy that favors specialty mental health over primary care, we expect to see the primary care provider bill when the predominant integration model is enhancement or diversification. When linkage or referral is the predominant model, we expect to see the

mental health provider submit the bill. By *revenue sources* we mean the distribution of funds from different payers used to cover the cost of the mental health service. As noted previously, these revenues may be associa'ted with a program, a service, or an individual. One community health center in our study used enhanced Medicaid reimbursement resulting from its FQHC status to cover the salary of a full-time staff social worker (Bird and Lam bert, 1 995). A three-year Rural Health Outreach grant enabled another to pay for the time and travel expenses of two therapists from a community mental health center who drove 70 miles one way to spend a half day each at the clinic. A primary care provider might also obtain funds from a major local employer to provide for inservice training on treatment of mental health problems, creating an enhanced staff capacity.

Effects

Effects are the outcomes of integrating primary care and mental health services on **access, quality,** and **cost** of mental health care. As we noted earlier in this paper, policymakers have long championed integration as a means of improving these measures. Nevertheless, research and evaluation to date has not offered much in the way of supporting evidence, due at least in part to data limitations. Given current overall trends in health services research, we expect the next generation of work on integration to address this lack of knowledge. In this section, we propose several indicators of each of the desired effects that could be used in research or evaluation.

Access refers to those factors affecting the ability of a particular population to receive needed mental health services (Aday, et. al., 1 980). We hypothesize that structural factors including specialty services, transportation, reimbursement, attitudes and population dispersion all influence access. Our element of access incorporates the dimensions of *service availability, utilization,* and *comprehensiveness. Service availability* refers to supply of

specialty mental health practitioners, their geographic locations and hours of service. Under the enhancement model of integration, we might expand the definition of service availability to include the supply of primary care practitioners who have completed specified training programs, their geographic locations and hours of service, as well. We expect integration to improve service availability in rural communities by making practice more attractive to both primary care and mental health practitioners through sharing of information, skills and patient care, thus reducing professional isolation and burnout and bridging the gap between the professional cultures.

Generally one of the more straightforward measures of access, *utilization* counts the number and types of mental health services~ received by individual patients. Ideally, such a count would include patient-level information on referral sources and destinations and would attempt to define episodes of care related to particular conditions. In theory, by making needed mental health services more readily available to patients, integration should lead to reductions in use of primary care services for somatic conditions (Wertlieb and Budman, 1982). It is important to note, however, that neither increased use of mental health or decreased use of primary care services is necessarily the ultimate goal of integration. See our comments below about appropriateness of care, cost-effectiveness, and distribution of resources.

We consider *comprehensiveness* to be an extension of the organizational characteristic **scope**. Increased comprehensiveness is attained when the scope is expanded to serve more population groups or conditions, or when new services are added to the system as a result of integration. Again, it may be necessary to balance increased comprehensiveness with cost-effectiveness in an area with limited resources and a small, highly dispersed population base.

While often overlooked, the effects of integration on quality of care are likely to be of

great importance to policymakers in the future. As measures of quality, we include *clinical protocols, clinical outcomes, patient satisfaction, patient compliance,* and *appropriateness of care. Clinical protocols* refer to practices consistent with guidelines generally agreed upon within a clinical discipline. Protocols may describe preferred plans for referral as well as for treatment of given conditions. The AHCPR clinical practice guidelines for treatment of depression in primary care are a set of clinical protocols (Depression Guideline Panel, 1993). These could also be developed within a local health care network or managed care plan as part of a broader quality assurance program. By *clinical outcomes,* we mean changes in the condition or behavior of individual patients at specific time intervals during the course of treatment for a mental health problem. Desired outcomes are those which bring the patient closer to the goals enumerated in the plan of treatment. We believe it is important to elicit information on *patient satisfaction* as another measure of quality of care. This should be accomplished in a way that protects the patient's confidentiality but at the same time provides administrative and clinical staff with needed feedback from patients and family members. We expect that integration, especially if it involves co-location, will increase patient satisfaction by making services more convenient and less stigmatizing.

Another indicator of quality that might be used to determine the effects of integration is *patient compliance,* or adherence to recommendations given by the primary care or mental health practitioner. This may be measured in terms of completed referrals, counseling sessions, or drug treatment regimens. *Appropriateness of care* refers to services that are consistent in frequency, intensity and content with the needs of the patient. This presumes the availability of a generally agreed upon set of standards with regard to treating particular conditions and patients.

The final set of effects we include in our framework concern the financial cost of

providing mental health services. We characterize cost in terms of *efficiency, cost-effectiveness,* and *distributional effects.*[9] *Efficiency* can be expressed in terms of cost per unit of service under fee-for-service arrangements, or monthly per capita cost under capitation. Gains in efficiency over time may be expressed as increases in these measures relative to the consumer price index. Some models of service integration allow fixed costs to be spread over a broad scope of services, creating opportunities for economies of scope. Thus, another indicator of efficiency may be administrative costs as a percent of total costs. *Cost-effectiveness* refers to the value of care received in relation to its cost. Assigning value to measurable outcomes has proven difficult for medical services and may prove even more difficult for mental health services. While value is traditionally assigned in terms of quality-adjusted life years or well years (Kaplan, 1 988) or disability-adjusted life years (Jamison, 1 993), we suggest using the five quality indicators described above, either separately or in a composite index, in calculating cost-effectiveness.

An issue raised in the literature concerns the problem of cost-shifting between the primary care and mental health provider (Borus, et. al., 1 985; Mumford, et. al., 1 984; Richman, 1990). To address this issue, we propose two indicators of *distributional costs:* the total cost of an episode of care, including medical as well as mental health services, and the way that cost is allocated between the two types of service providers within an integration arrangement. Similarly, *distributional benefits* indicators are needed to determine whether the different parties in an integration model benefit equally from the arrangement. In addition to the relative financial performance of these parties (Moscovice, Christianson and Wellever, 1 995), there may be differential effects on provider autonomy and provider workload.

[9] For the discussion that follows, the authors are indebted to Moscovice, Christianson and Wellever (1995).

TOWARD A RESEARCH AGENDA

Our aim in this paper has been to place primary care and mental health services integration in historical perspective and to articulate a framework for comparing and analyzing different integration programs. To evaluate the effects of integration, concerned parties need to develop a clearer understanding of the dimensions of the concept and its relationship to specific policy and practice goals. While our framework suggests a detailed research agenda, the following questions strike us as among the most important and urgent. We encourage our readers to generate and explore others.

1. Effects of structural factors on integration arrangements:

- To what extent does organization size determine the model(s) of integration that are most feasible? What integration models are most amenable to adoption by very small rural primary care providers?

- How do variations in the risk assumption models adopted by the parent organization(s) affect utilization of primary care and mental health services and distributional effects between the service delivery systems?

- What characteristics of the organizational culture seem to have the most influence on the formation of primary care and mental health services integration?
- When short-term grant funds are used to start an integration program, how do the involved organizations sustain the program after the funding has ended? Does the program change when the funding source changes? If so, how?

- What effects do the elements of the policy environment (reimbursement, licensure/certification, and regulatory agency structure) have on the existence and development of local primary care and mental health services integration programs? Do these effects vary with the rurality of the program service area? To what extent are these elements amenable to policy intervention?

- Are Medicaid waivers providing incentives for integration of primary care and mental health services? If so, in which states and why?

- How are emerging rural health networks incorporating mental health services? Which integration model(s) do they seem to favor and why?

2. Effects of integration on service delivery

- In what ways do different integration models expand the scope of services for different populations and conditions? Are particular models of integration more likely to be used with particular populations and conditions?

- To what extent does integration affect utilization of primary care and mental health services? Do these effects vary across integration models? Do they vary in relation to the rurality of the service area?

- To what extent does integration affect clinical outcomes? Do these effects vary across integration models? Across populations and conditions? Across service areas of varying rurality?

- What is the role of telecommunications in assuring the availability of specialty mental health services in sparsely populated areas? Does integration of primary care and mental health services create opportunities for telecommunications applications?

Managed care, Medicaid waivers, and various market-based, state-level reforms are creating incentives for organizational and financing arrangements that place increased emphasis on interorganizational networks. Service integration is fundamental to these approaches. Given persistent and largely intractable limitations in the availability of specialty mental health services in rural areas, rural primary care providers are especially likely to play an expanded role in identifying and treating the mental health problems of their patients. Although we recognize that primary care and mental health service integration remains a largely untested policy ideal, we agree with those who argue that it is also a policy whose time has come again (Zimmerman and Wienckowski, 1991).

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