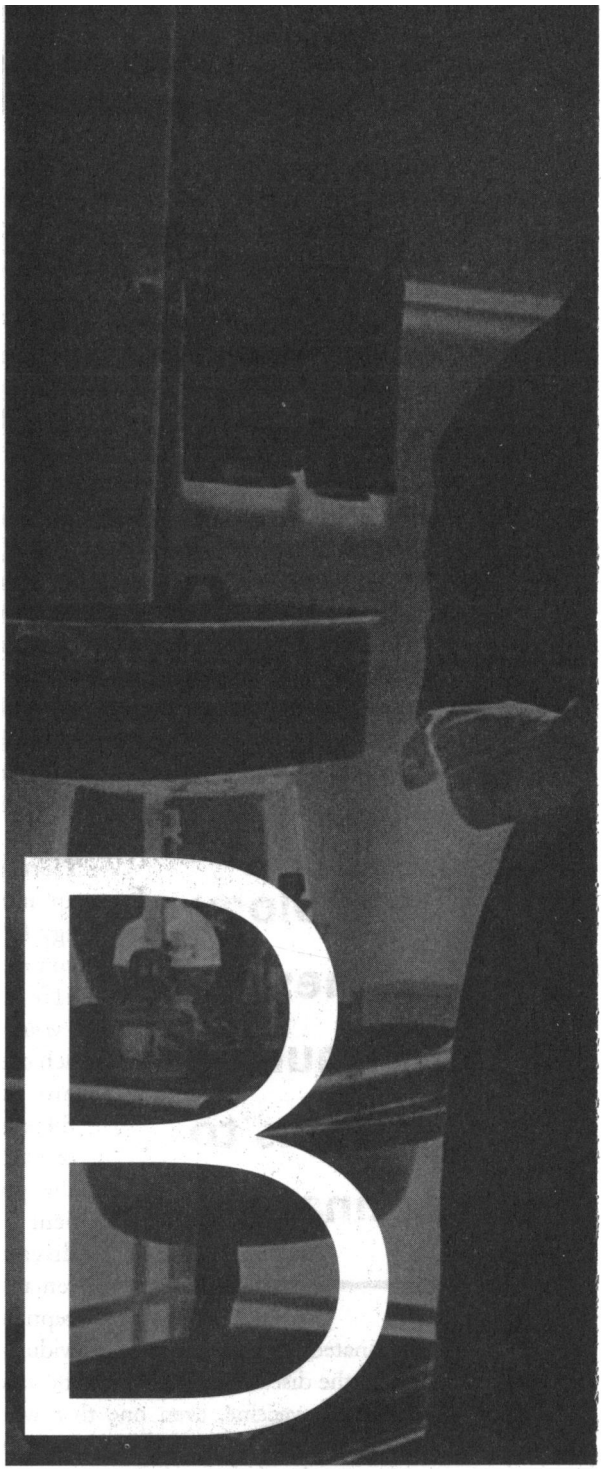
Managed Care and the Public Health Challenge of TB



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SYNOPSIS

MANAGED CARE IS FAST becoming the dominant form of medical care delivery and financing in the United States, yet its effects on public health practice remain largely unknown. Tuberculosis (TB) is a classic example of a disease with both public health and medical care implications, and as such it provides an opportunity for examining the impact on public health of the shift towards managed care in the medical marketplace.

The authors approach the role of managed care in TB control by first considering the need for interorganizational coordination at the community level. The authors identify four basic models of how managed care organizations may fit into TB control efforts in local communities, using observations from 12 local public health jurisdictions to illustrate these models. These TB control models provide insight into the general mechanisms through which managed care organizations may affect other areas of public health practice.

A shift is occurring toward managed care as a major method of medical care delivery and financing in the United States. More than 58 million people currently receive their health care from health maintenance organizations (HMOs), with an additional 91 million people served through other types of managed care such as preferred provider organizations (PPOs).[1] More than one-quarter of all Medicaid beneficiaries and 10% of all Medicare beneficiaries are now enrolled in managed care plans. (Reference 2 and Unpublished data, Health Care Financing Administration, 1996) Enrollment continues to grow steadily in most markets.

The eventual impact of this shift on public health programs and services is uncertain. Analysts note that because of capitation and the focus on care coordination, managed care has the potential to create powerful incentives and mechanisms to promote health and prevent disease.[3,4] Others note that managed care may create incentives that will *(a)* restrict delivery of needed health services and *(b)* reduce coordination among providers through the formation of competing, closed panel networks. For the purpose of this paper, the key attribute of managed care is that a single payer or provider is linked to each enrollee. This makes it possible for the payer or provider to be responsible for certain actions and outcomes for the enrollee.

Because any unidentified or untreated person constitutes a danger to the whole community, tuberculosis (TB) provides an opportunity to examine how public health agencies respond to managed care's expanding role. No single entity or organization holds sufficient authority and community coverage to combat TB effectively. State and local health officials typically retain the legal authority to isolate infected individuals and to administer appropriate treatment to noncompliant patients.[5] Clinicians working in private practices, hospitals, and ambulatory care clinics can diagnose TB and administer diagnostic tests and treatments to paying clients. Local public health agencies, public hospitals, and community and migrant health centers serve people without access to private care.

When Medicaid agencies move their vulnerable populations at high risk for TB out of public systems and into managed care programs, public health agencies will have less direct patient contact with them.[6] As a result, state and local public health agencies will be even less able to address TB control on their own.

In this paper, we consider effective TB control programs at the community level and identify ways in which managed care organizations may play a role. We draw upon observations from a study of local public health practice in 12 diverse local public health jurisdictions,[7] which show how managed care offers challenges and opportunities to public health administrators and policy makers. These experiences are not unique to TB; thus we hope to address broader concerns about the impact of managed care on public health practice.

Interorganizational Coordination and TB Control

Communities are best protected from the threat of TB by strategies based on the participation of a broad array of health care providers representing the multiple points of access to health care. Communities thus need ways to ensure coordination and continuity among the organizations providing health services critical to TB prevention and control. CDC's Advisory Council for the Elimination of Tuberculosis has identified seven essential components of tuberculosis prevention and control programs (see Table).[8] Each requires coordination and collaboration between the public health agency that is responsible for TB programs and the private health care sector.

Conducting overall planning and policy hinges upon the ability of the public health agency to communicate with and engage health care providers in planning and policy development. Failure to engage these critical players may result in a TB program lacking continuity and efficiency.

Effectively *managing TB cases and suspected cases* requires that people with TB receive appropriate and timely treatment even when diagnosed and treated in private settings. The public health agency needs the ability to monitor and support the activities of private providers who treat active or suspected cases to ensure that these activities conform with optimal methods of treatment.

Accurate identification of active and asymptomatic TB cases requires that private providers understand and use appropriate diagnostic procedures because diagnosing TB requires recognition of variable and often misleading symptoms. Currently, private providers often fail to diagnose both the active disease and latent infection.[9]

Use of *appropriate laboratory and diagnostic technologies* requires that public health agencies insure that the many providers involved in TB diagnosis and treatment have sufficient knowledge of and access to equipment and services for testing for TB, evaluating the progression of the disease, monitoring drug toxicity, and testing for co-occurring diseases such as human immunodeficiency virus (HIV) infection.

Similarly, to *collect and analyze data* on TB diagnosis and treatment a public health agency must help private providers report not only confirmed and suspected cases (as required by state laws) but also the testing status and treatment progress of cases, contacts, and high risk population groups.

Finally, *providing training and education* entails educating local health care providers about appropriate practices and available resources for diagnosing and treating TB. The provision of education and training to community providers, perhaps the most critical interorganizational task, helps ensure the success of other components that focus on identification and management of cases.

Community-level TB control efforts vary widely in the relative contributions made by local public health agencies and other health care organizations. In some jurisdictions, local health department involvement may be limited to state-mandated case reporting and tracing, leaving private health care organizations to assume most of the responsibility for diagnosis and treatment. In other jurisdictions, health departments may directly administer extensive prevention and control services, including specialty treatment clinics and routine screening programs for high risk populations and occupations. In still other jurisdictions, local health departments, physicians, hospitals, and other providers may participate in coordinated efforts to administer preventive, diagnostic, and treatment services to cover broad segments of the population. The approach in any community depends on the perceived and actual impact of TB on community health and on the resources and capacities of public and private health care providers.

The Impact of Managed Care

As managed care plans establish operations and enroll members, they create opportunities and challenges for the development of community-level TB control efforts. Success depends on the answers to three questions: *(a)* What populations are served by managed care plans? *(b)* Which providers and facilities participate in serving the enrolled populations? *(c)* What administrative and financial mechanisms are established by the managed care plans to deliver services to their enrolled populations?

Populations served by managed care. Managed care organizations have substantial incentives to collaborate with public health agencies in TB control. When managed care plans serve Medicaid beneficiaries and others at elevated risk for TB exposure, public health agencies may find them especially open to collaboration. Because appropriate diagnostic and treatment practices for TB may allow managed care plans to avoid the cost of more intensive treatment, these plans have a financial incentive to work with public health agencies. State Medicaid regulations can create additional incentives for managed care plans to collaborate with public health agencies. In California, for example, HMOs enrolling Medicaid beneficiaries are required to establish memoranda of understanding with local public health agencies that delineate roles and responsibilities regarding the provision of public health services to Medicaid beneficiaries. Similarly, Medicaid contracts in Oregon encourage HMOs to subcontract with public health agencies and community health centers for the provision of public health services such as TB diagnosis and treatment.

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Collaboration between public health agencies and managed care plans can include: jointly sponsored physician education on TB diagnostic practices; contracts to deliver TB treatment services at public health clinics to managed care enrollees; and data-sharing agreements to relay TB testing and treatment information between the health plan and the public health agency.

Opportunities for collaboration are not limited to HMOs serving high risk enrollees. Plans serving large, employed populations may also desire to establish collaborative arrangements with public health agencies. Plans facing small annual numbers of TB cases may recognize the inefficiencies of maintaining sufficient capacity and expertise internally. These plans may therefore develop arrangements with public health agencies to manage the treatment of cases and suspected cases among their enrolled members.

Unfortunately, competition between public health agencies and managed care plans serving vulnerable populations groups such as Medicaid beneficiaries may discourage some plans from participating in cooperative efforts. Or plans may not fully recognize the need for cooperation and coordination in effective TB control and so prefer to deliver all TB control services internally and retain a larger share of premium income.

Managed care plans serving commercially insured subscribers, usually at lower risk for TB infection, may completely fail to recognize the need for effective TB control programs. A low incidence of TB in the populations they serve may obscure the need for coordination and collaboration in TB prevention and control. Addressing this challenge to community-level TB control through managerial education and outreach is critical because these commercial plans can have a great deal of influence over clinical practice in the medical community.

Delivery systems under managed care. In working with a single managed care plan, public health agencies will be able to affect the plan's network of private physicians and group practice clinics practicing in their communities. Public health agencies can work with managed care plans to develop clinical guidelines for TB diagnosis and treatment, which can then be implemented across the network of physicians affiliated with the plans. Whether it works may depend on *(a)* the level of managed care penetration in the community and among its private physicians and *(b)* the degree of influence that managed care organizations maintain over the clinical and administrative practices of their affiliated clinicians. Control generally appears highest for staff and group model HMOs and lowest for network and IPA (independent practice association) model HMOs and PPOs.

Opportunities for collaboration with managed care plans may also flow from the plans' links to hospitals and nursing homes. As purchasers of institutional care services for large numbers of enrollees, managed care organizations typically enjoy substantial leverage in negotiating favorable service agreements. Through alliances with managed care plans, public health agencies may be able to secure the participation of these health care facilities in community-level TB control programs. In one Wisconsin city, for example, a consortium of HMOs working with the local health department used their leverage to persuade local hospitals and physicians to adopt a community-wide protocol for TB screening, diagnosis, and treatment.

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Managed care provider panels may impose limits on the structure and operation of community-wide TB control programs. Managed care plans typically form closed panels—separate, competing networks of affiliated physicians and health care facilities—to serve their enrolled populations. Although some may overlap in their membership (typically PPOs and IPA and network HMOs), these provider panels often restrict referral patterns and therefore may inhibit communication and coordination among providers who are members of competing panels. Providers in different HMO panels may be unable to cross-refer for specialized TB diagnostic or therapeutic services.

Administrative and financial mechanisms under managed care. Managed care plans rely heavily on administrative and financial mechanisms to control expenditures and assure quality. These mechanisms can also encourage involvement in community-level TB control. For example, health plans manage costs and quality by employing utilization review and case management; both rely heavily on the availability of data on enrollees' health status and use of services. When enrollees receive care outside the health plan, the plan may not be able to include information on these services in its medical records and treatment plans.

Health plan enrollees in some communities receive TB diagnostic and treatment services from public health agencies independent of the health plan; this may occur, for example, when *(a)* enrollees are noncompliant and require directly observed therapy, *(b)* case tracing by the public health agency identifies enrollees as exposed contacts, or *(c)* enrollees seek TB services on their own from the public health agency because of lower cost or convenience. In these cases, health plans may benefit greatly from cooperative data-sharing agreements that would allow them to integrate information on services provided by public health agencies into their databases. Likewise, data-sharing agreements may offer public health agencies enhanced information on the diagnostic and treatment services rendered by private providers. Additional information can improve the public health agency's ability to track and manage TB cases at the community level and to evaluate performance against TB control objectives for the community as a whole.

Managed care plans can use financial incentives to encourage clinicians to reduce use of costly services and increase use of preventive and primary care services that may obviate the need for expensive services in the future. These "performance-based incentive systems" often include bonus payments for reduced hospital use or increased use of preventive services. They may constitute an incentive to participate in community-level TB control efforts that offer a potential for reducing the risk of infection within specific enrolled populations, improving access and adherence to TB diagnostic and treatment services among enrolled populations, and reducing the need for more costly health services associated with the management of the disease.

Financial mechanisms under managed care may also work against the development of community-wide TB control programs. Fully or partially capitated reimbursement arrangements for primary care physicians may discourage providers from working collaboratively with public health agencies. To retain more of their capitation payment, providers may avoid collaboration that entails cost-sharing or subcontracting.

Models of Managed Care Plans' Involvement in TB Control

Public health agencies and managed care plans may respond differently to the challenges and opportunities for TB control. We propose four alternative models to summa-

rize the basic interorganizational approaches that public health agencies and managed care plans may adopt to address TB at the community level. Because what happens in any community is highly situational, these models are intended not to offer specific policy guidance but rather to illustrate possible coordinated approaches to TB control in a managed care environment.

We selected 12 communities from a larger cohort of public health jurisdictions that met an earlier study's criteria for *(a)* high overall performance of public health functions and *(b)* organizations other than the local health department making a large contribution to public health functions. The 12 jurisdictions were chosen to represent diversity in size, urbanization, geographic region, and managed care market penetration. Each jurisdiction was the service area of a local health department. The 12 communities represented 11 states and three of the four U.S. Census regions; two are cities, seven are counties, two are combined city-county areas, and one is a multi-county area.

Through interviews with health department directors, managed care plan administrators, and hospital administrators, the authors were able to characterize the TB control strategies employed in the 12 jurisdictions, which fell into four basic models.

The "default" model of interorganizational TB control (Model I) involves public health agencies and health plans managing their diagnosis and treatment processes relatively independently, with interaction and coordination occurring only for legally required case reporting and for treatment of noncompliant cases.

Under a second model, involving slightly more coordination, managed care plans may choose to contract with public health agencies to manage screening, diagnosis, and treatment services for their enrollees. Such contracting plans share data with the public health agency, allowing each to track and manage enrollees who are infected, exposed, or at risk of exposure to TB.

Under Model III, the public health agency conducts a periodic review and evaluation of the TB control programs maintained by health plans that choose not to contract with it for TB control services. In practice, this model may exist only where managed care plans serve Medicaid beneficiaries under contract with state medicaid offices. Although this approach entails more interorganizational coordination, it lacks leverage for enforcement except where the plan has a contract with the state Medicaid agency.

In the fourth model, involving the highest level of coordination, the public health agency engages health plans in ensuring the adoption and diffusion of a community-wide TB prevention and control protocol. Health plans participate in developing the protocol along with other community providers. Moreover, given their financial links to other organizations, they can play a leading role in encouraging community physicians, health centers, hospitals, and nursing homes to adopt the protocol.

These models demonstrate a wide range of opportunities to involve managed care plans in community-level TB control. A community's approach is likely to depend on the abilities of public health agencies and managed care plans to capitalize on mutual interests and to overcome conflicting objectives and competitive pressures.

Essential components of a tuberculosis prevention and control program as identified by the CDC's Advisory Council for the Elimination of Tuberculosis

1. Conduct overall planning and policy
2. Manage TB cases or suspected cases
3. Identify cases of clinically active TB
4. Identify and manage asymptomatic cases
5. Provide laboratory and diagnostic services
6. Collect and analyze data
7. Provide training and education

SOURCE: Reference 10.

Implications for Public Health

We found considerable agreement around the idea that communities are best protected from the threat of TB by strategies that include participation by a broad array of health care providers representing the multiple points of access to health care. The growing presence of managed care organizations in local health care delivery systems makes these organizations particularly attractive partners for public health agencies in their disease control efforts. Our four models illustrate a variety of roles for managed care plans within community TB control strategies: independent of the local health department, like other private providers (Model I); central to extending the disease control efforts of the local health department (Models II and III); or supportive in encouraging community-wide participation in a TB control program (Model IV). We offer these models as potential strategies for communities seeking to sustain and strengthen their efforts in combating TB.

It is worth reminding readers that in pursuing partnerships for TB control, public health agencies must attend to the organizational environment of a community, which is likely to make some arrangements possible and others impossible. Fully coordinated strategies will require the most time, effort, and expense to overcome differences between organizations in mission and culture, financial incentives, and physical location.[10,11] An interorganizational approach to TB control should be considered a work in progress, in which substantive improvements are made collectively and over time. To succeed, local public health agencies need to create and expand intercourse with all community-based service providers. Public and private health care organizations should critically assess their individual and collective abilities to

address the threat of TB in the populations they serve. Where capacity is lacking, they must expand existing interorganizational relationships to respond to disease control needs in the communities they serve.

Public health agencies should recognize the parallels that exist for other public health problems. TB control is one of many public health practices that may be affected by a growing managed care presence in a community. Increasingly, public health problems facing communities require interorganizational rather than single institution responses.[12,13] Childhood immunization, infant mortality, and cancer prevention and control cannot be effectively addressed by a single institution. Moreover, the resources available to public health organizations are increasingly uncertain in the wake of privatization initiatives, Medicaid reforms, and Federal block grant proposals.[14] As an integrating and consolidating force in health services, managed care plans may present either obstacles to coordination or opportunities for improved public health practice.

The growing presence of managed care organizations in local health care delivery systems makes these organizations particularly attractive partners for public health agencies in their disease control efforts.

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