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Preventive service delivery for children in a managed care environment: contrasts and lessons from Israel

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1. Introduction

North Carolina has begun to phase-in a managed care approach to the delivery of Medicaid-financed health care services. Because a substantial number of children enrolled in the Medicaid program are in the public health system, it is important to evaluate the future role that public health clinics should play in this managed care environment, especially in the area of preventive health care.

The Israeli health care system, for many decades, had an exemplary system for the delivery of pediatric preventive services. Recently, Israelis have begun to compare the advantages and disadvantages of several models for the delivery of preventive health care, including both a governmental delivery approach and the incorporation of preventive services delivery in managed care [1].

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The societal imperatives pushing for a change in the Israeli system are similar to the forces at work in North Carolina, namely to

- constrain the growth of public expenditures for health care by organizing the delivery system more efficiently;
- maintain the quality of services and the coverage of the health care needs of the citizens, including preventive services, and
- move the public health agencies from the direct delivery of health care services toward a monitoring and oversight role.

This report describes the Israeli models of preventive health care delivery, focusing on the incorporation of preventive health services into a regulated managed care approach. It addresses the risks and advantages of such changes and provides recommendations regarding the future direction of public health practice in the US and Israel.

2. The Israeli health care system

2.1. Overview

Historically, Israel has maintained a public-sector system of pediatric preventive care and child immunization delivery for the entire population. In Israel, children's preventive and curative care has been provided through two separate administrative, financial, and delivery systems. Preventive services (including immunizations) for children up to the age 5 years are provided by the Ministry of Health or its designees through a system of mother and infant neighborhood clinics, called *Tipat Halav* (literally 'drop of milk'). These are similar to public health clinics in the US except that they provide services to all socioeconomic strata of society. In contrast, curative services are provided by the four large non-profit health maintenance organizations (HMOs), called sick funds. Routine child preventive care and immunizations usually have not been provided by the sick funds. However, despite the success of the *Tipat Halav* system, over the years the country has been engaged in a health reform debate regarding the transfer of responsibility for the delivery of preventive care from the public sector to the HMOs [2].

The largest of the sick funds, Kupat Holim Clalit, insures approximately 65% of the population. The second largest fund, Kupat Holim Maccabi, insures approximately 25% of the population. The two smaller HMOs, Kupat Holim Meuchedet and Kupat Holim Leumit each insure approximately 5% of the population [3].

2.2. Preventive service delivery

The *Tipat Halav* clinics provide services in a population-based fashion with each clinic serving a defined catchment area (e.g. neighborhood or rural settlement). Hospitals notify the clinics of all births within their catchment area so that all children are enrolled, regardless of insurance status, sick fund membership, or even parental initiative. Each *Tipat Halav* clinic serves 5000–10 000 children.

Parents pay a nominal fee (approximately \$40) every 6 months for well-child care including immunizations; those unable to pay receive financial assistance from the National Insurance Institute. The clinics are operated by teams of specially trained public health nurses who provide the majority of well-child care, including immunizations. Physician involvement in preventive service delivery is usually limited during the first year of life to two developmental evaluations and answering questions from nurses regarding developmental milestones, or contra-indications and adverse reactions to vaccines.

Outreach is an important part of the *Tipat Halav* system. Home visits are made following the birth of a child and regular records of expected and completed visits to the clinics are maintained. If a child does not arrive for a scheduled preventive visit, the family is contacted by the clinic staff. The clinic is informed of all births in its catchment area and ensures that children are scheduled for clinic visits at the age-appropriate times. If the children are not brought to the clinics on schedule, the clinic nurses go through several different graduated steps to contact the family.

Immunization records are kept for each child in his/her own *Tipat Halav* chart and also in a master list of all children receiving services at each *Tipat Halav* clinic. Most often these records are kept by hand, but increasing numbers of clinics are using computerized databases. Clinic nurses examine the master list monthly and send written reminders to the parents of any children who are late for immunizations. If no response is received, phone calls and home visits are conducted.

Monthly, the immunization surveillance information collected in the *Tipat Halav* log book is entered onto specific forms and forwarded to a regional Ministry of Health epidemiology office. From this data, regional and nationwide immunization rates are calculated. By all accounts, the program has been very successful. Overall child immunization rates in Israel have consistently been over 90% [4], a particularly impressive figure given the country's absorption of millions of immigrants from diverse cultural backgrounds.

Although the Ministry of Health is responsible for providing the personnel, supplies, and administration associated with *Tipat Hilav* preventive care, each municipality is responsible for providing and maintaining appropriate space for the activities to be conducted. Thus, the facilities in which preventive care is delivered are the purview of the municipalities. Negotiations between Ministry of Health district health officers and municipal officials are frequent, and sometimes contentious, regarding budget allocations for facility maintenance and the construction of new venues for care to keep pace with population increase.

An important distinction between the US and Israeli health care systems is that in addition to the majority of preventive service delivery sites being separate from sites of curative care, all preventive services records, not only immunizations, are kept separately from records of curative care. Each child in the primary health care system actually has two separate charts of medical records, one for preventive care and one for curative.

The major reason perceived by almost all Israelis for the success of the *Tipat Halav* system is the fact that it is a special and distinct system with a designated mission, the delivery of preventive services to mothers and children. No distractions

from the mission take place, and personnel (primarily nurses) are specifically assigned and trained to ensure that preventive care and outreach programming are provided.

3. Changes in the Israeli health care system

Economic and governmental issues in Israel have begun to force some changes in the preventive health services system, with the potential for even greater changes in the near future.

3.1. Government-driven changes

As Israel has developed an increasingly market-driven economy, re-examination of the appropriate role of the government in society is taking place. The government-appointed Netanyahu Commission was established in 1988 to examine the role of the government in providing health care. In 1990, the commission published as one of its recommendations that the national government maintain its role in setting policy and standards, but discontinue its involvement in the direct delivery of health services, leaving direct patient care responsibilities, including preventive services, to other providers. It was argued that these changes would produce substantial government savings and improve the overall efficiency of service delivery.

One of the points of service most affected by this new direction would be the *Tipat Halav* clinics. The commission envisioned dismantling this system in favor of preventive service provision by the four HMOs. Not addressed was how to ensure the delivery of preventive services to children in general, or how to maintain or finance the epidemiologic surveillance network and reminder systems believed responsible for Israel's high immunization rates in particular.

3.2. Changes due to market forces

Even prior to the establishment of the State of Israel in 1948, one of the current four HMOs, Kupat Holim Clalit, provided curative care to the vast majority of the population [5]. Over the past decade, a climate of increased competition, coupled with a measure of public dissatisfaction with Clalit service delivery, has resulted in a decrease in enrollment from more than 80% of the population in the late 1980s to 65% in 1994 [2,3]. Further fueling the marketing war was a new 1994 National Health Insurance (NHI) law [6], under which each sick fund is financed by a capitated payment for each enrollee. Young families with children, the healthiest segment of the population, became the target of intensive marketing campaigns by the HMOs.

Some of these marketing campaigns included the opening and operating of *Tipat Halav* stations by rival HMOs in an attempt to lure members by offering enhanced services. The Ministry of Health generally opposed the establishment of these

clinics because they lacked oversight for the provision of preventive services and they wreaked havoc on the neighborhood-based epidemiologic surveillance system in place for immunizations.

It appears that one of the reasons the Israeli system worked so well through 1992 was that it entrusted immunization to a group of dedicated public health personnel, thus mandating a prioritization perhaps not possible in other settings. The *Tipat Halav* clinics functioned solely to provide preventive care. Time was allocated for tracking, outreach, and follow-up — not because these functions save money, but because they represent a priority of the society to ensure child immunization. It cannot be assumed that the HMOs, whose overriding concerns are economic rather than societal, will extend the same degree of vigilance.

The consolidation of acute and preventive services in the sick funds likely would require physicians to play a greater role in providing preventive care. However, with the exception of Ben-Gurion University in Beersheva, Israeli medical schools have not placed much emphasis on primary care, much less on prevention. Even so, Ben-Gurion University graduates still enter the hospital-based medical subspecialties at rates much higher than US medical school graduates and on a par with their counterparts at other Israeli institutions.

To this point, the effect of this deficiency in medical education has been slight because the *Tipat Halav* nurses — not physicians — were primarily responsible for preventive service. However, if a larger physician role ensues from greater HMO involvement, the lack of emphasis and training in prevention will become manifest. Israel has tried several small experiments in combining acute and preventive service delivery; almost all were abandoned as failures [7,8]. Preventive services became just one of the many tasks demanded of busy pediatricians and family physicians otherwise engaged in caring for sick children.

It is unclear whether the private sector will be able to maintain the same levels of preventive services in general, or immunization coverage in particular, under a reformed system. Since the four HMOs previously had limited involvement in preventive care, they will need to develop and implement a system for incorporating immunizations and other preventive services into their systems of care delivery, as well as find ways to encourage their physicians to accept and emphasize preventive care. They must also develop immunization tracking and reminder systems, a challenging task since under the tenets of the system individuals may change health care plans every 6 months. The Israeli Ministry of Health must develop mechanisms to disseminate new immunization recommendations and other relevant information (e.g. preventive care guidelines) to HMO physicians and clinic personnel. Medical schools and residency programs will need to incorporate preventive care training into their curricula in order to meet this new area of responsibility.

4. The 1998 Israeli budget debate regarding preventive services

As part of the national budget debate for the 1998 fiscal year, the Ministry of Finance again raised the issue of divesting the Ministry of Health from the

provision of preventive services and turning over this responsibility to the HMOs. The motivation of the Ministry of Finance was predominately financial and secondarily ideological. In looking for ways to trim the health budget, the Ministry noticed that some of the HMOs had opened *Tipat Halav* clinics (for marketing purposes) near government-sponsored *Tipat Halav* clinics. Ministry officials reasoned that the HMOs could provide preventive services in their own existing clinics or in participating physician offices rather than government clinics. Over time, the duplication of services and record keeping could be minimized and overall cost savings could be achieved. In the interim, the HMOs would receive the same budget as the Ministry of Health to operate/provide preventive services. They opined that as the system became more efficient, the budget would be reduced.

A second concern of the Ministry of Finance was the eventual implementation of the directives of the Netanyahu Commission. The Ministry of Finance embraces the ideological notion that the government, including the Ministry of Health, should remove itself from the direct provision of health services. As such, they believe Ministry of Health divestiture of the *Tipat Halav* system would put the government in more of a policy-setting and regulatory role in line with the Netanyahu Commission's recommendations.

During this budget debate, a significant coalition in opposition to the Ministry of Finance position emerged including the Ministry of Health, the Israeli Pediatrician and Family Physician Associations, and some of the HMOs themselves. The Ministry of Health was concerned regarding its ability to ensure adequate provision of children's preventive services by HMOs. District health officers of the Ministry of Health already perceive that they lack authority to ensure health supervision in the HMO-operated *Tipat Halav* clinics currently operating.

Officials in the Ministry of Health also expressed concern regarding the current tenuous financial situation of the HMOs. If current financial difficulties remain or worsen, funds may be diverted inappropriately from preventive services or outreach to the immediate needs of curative care. One district health officer believes that if the HMOs are given funds to provide preventive services, they would place these additional budgetary amounts into curative care or other aspects of care (e.g. equipment purchase) that would allow them to market themselves more effectively. Health care consumer satisfaction in Israel is tied most closely to waiting times for curative care appointments, access to laboratory and imaging tests, and entry into specialty clinics. Thus, many fear that prevention would be a very low priority for the HMOs, especially the outreach and data gathering functions.

There was also concern over the ability of the Ministry of Health to establish appropriate markers to determine adequate preventive care delivery. Immunization rates alone would not suffice although they would be the easiest measure for the HMOs to maintain. However, documentation of the many other aspects of preventive care that should be delivered also would be necessary.

Another issue of controversy was the potential that physicians would play a greater role in preventive care if the services were provided by the HMOs. Attempts at greater efficiency would likely lead to combining the preventive and curative service delivery systems within the HMOs, resulting in the same nurses and

physicians providing both curative and preventive care. Although this is the model employed in the US, many in Israel do not believe that physicians would devote appropriate time to preventive care when the demands of curative care are so great. In addition, most physicians in Israel have not been trained in prevention or health maintenance and would not have the knowledge and training needed to provide appropriate preventive counseling, screening, and services.

The HMOs themselves claimed they would lose money on the provision of *Tipat Halav* services. They stated that the clinics they operate now to provide preventive care cost more to operate than they receive in the monthly fees (set by the government) for these services. They also are hesitant to be held accountable for the actions of the contracted physicians in their network for the provision of preventive services.

An unpublished study performed by the Kupat Holim Maccabi (the second largest of the HMOs) found that the physicians in their network claimed to provide more preventive services than they actually delivered [9]. They then billed the HMO for the services they claimed to have provided.

5. Rationale for examination of the Israeli health care system

The Israeli Ministry of Health operates a system for preventive care separate from curative care. This is similar to the operation of many health department clinics which traditionally have provided preventive care in North Carolina. Many children in North Carolina are classified as ‘underinsured’ and have insurance coverage for curative services but not for preventive care [10]. As such, they utilize the public health system in a similar fashion as the Israeli public uses the *Tipat Halav* system, for preventive care only. The biggest difference is that in North Carolina, rather than the entire population using public sector services, a specific disadvantaged segment of the population, the uninsured, underinsured, and Medicaid-eligibles, account for the majority of utilization. This may differ to some degree in rural areas, but remains generally true throughout the state.

An interesting issue raised by the Israeli experience is the nature and training of those with whom the provision of preventive care is entrusted. Unlike the US, in Israel it is nurses who have primary responsibility for the practice of public health. These Israeli public health nurses undergo a special 1-year postgraduate course in public health methods and practice. Not only are nurses with this special training employed in the public sector, but also by the HMOs who operate their own *Tipat Halav* clinics. Although the presidents of both the Israeli Pediatric and Family Physician Associations state they believe it should be the responsibility of the primary care physician caring for a child to perform preventive services, they do not believe all such services would be provided if left only to physicians, including those in their own organizations.

The changes contemplated in Israel with respect to the transfer of preventive service delivery to the HMOs are highly relevant to some of the decisions currently debated in North Carolina and many other states. In North Carolina, discussion is

taking place regarding the mechanism through which health services will be addressed for children covered under the Medicaid program. Historically, the public health clinics were the primary source of preventive health care services for this population. Later, some private providers shared the responsibility through experiments with enhanced fee-for-service products. Many of the Israeli concerns regarding the accountability of the HMOs in their provision of preventive services are relevant to policymakers in North Carolina and other states as they consider various policy options.

Many in Israel agree with the President of the Israel Pediatric Association, Manuel Katz, that prevention is a national issue and priority and, as such, not one that can be trusted to the HMOs to provide. They believe that it is the role of the government to provide these services to the population.

The issues raised in Israel regarding concern for the appropriate provision of preventive services may serve as a useful guide in ensuring all such issues are raised in North Carolina and other states experimenting with methods of the provision of preventive care to disadvantaged communities. Further, examining the approach of the Israeli Ministry of Health may help to inform state-level policymakers of evaluation tools and areas of assessment that must be considered. For example, district health officers of the Ministry of Health felt strongly that using immunization rates alone as a marker for the adequate appropriate provision of pediatric preventive care would be inadequate. For all of the difficulty in the US in achieving targeted immunization rates, immunizations are likely the easiest portion of preventive care to deliver and track [11]. Preventive services for children encompass much more than immunizations and must be recognized as such in any measures of HMO accountability for their provision. Immunizations should be viewed as a starting point, not an end point, in service delivery assessment.

6. Issues to be addressed regarding managed care responsibilities for preventive health services among Medicaid-eligible children

Many issues must be addressed by states in considering whether or not the responsibility for the provision of preventive services to children receiving Medicaid benefits should be contracted to managed care providers. If the public health system is to limit its role in the delivery of clinical services and assume more of a regulatory and policy-setting role for children, assurances must be made that populations traditionally served by the public health system will still receive services in this new paradigm. Among the most important of these issues are:

- ensuring preventive service delivery;
- continuation of outreach programs to these populations;
- quality assurance assessments;
- state mandated public health reporting requirements.

Managed care organizations clearly are poised (and in many markets already contracted) to provide health care services to the beneficiaries of Medicaid programs. In North Carolina, the intent is essentially to absorb all adults and children

eligible for Medicaid under one of the several state qualified managed care plans. In this respect, for the North Carolina Medicaid population, the impact will be similar to that achieved in 1995 when virtually all residents of Israel were brought under the care of one of the four HMOs operating in that country by the National Health Insurance Law. Yet, despite the universality of the extension of managed care enrollment to the entire Israeli population, there remains an explicit division of labor between public (government) and non-profit sector health care providers, with the government retaining responsibility for the provision of mother and infant preventive care services. The four non-profit sector managed care organizations maintain responsibility for the day-to-day acute care of their respective enrolled populations.

The purpose of examining the Israeli experience with regard to preventive health care services for infants and young children relates to the question of the feasibility and utility of subdividing the responsibilities for certain preventive services (e.g. prenatal care, immunizations, and certain other pediatric screening procedures) between private sector managed care providers and existing public sector child health care providers. This division appears to be the main component of the Israeli system which has resulted in its success in preventive service delivery. If such a formal division were to be considered, many issues would require policy attention prior to such a decision being taken. The merits of such a proposal would hinge on whether significant cost savings is achieved from organizing preventive and curative services under a dual delivery system, as well as the feasibility of assuring participation of the targeted population in both components of such a segmented health care program for children. Also, the history and traditions of the health care system in the US must be considered.

7. Ensuring preventive services delivery

In the US, as opposed to the system in Israel, there is a long tradition of primary care providers who attend to the needs of children by incorporating both preventive and acute illness care into the scope of their practices [12,13]. This is especially true for the field of pediatrics, which has taken an aggressive stance in setting itself apart from most other medical specialties whereby professional involvement in the provision of preventive health services is seen as a basic component of mainstream child health care. A similar level of concern for these aspects of care has been a part of the training and practice experience of family physicians. Moreover, the provision of preventive health services has become a distinguishing characteristic of the managed care environment during its maturation in the US.

To adopt the Israeli model, a fundamental change would have to take place. To suggest that these organizations now vying for the opportunity to enroll and serve these pediatric populations (and their families) would no longer have primary responsibility for the provision of preventive services would run counter to the basic tenets of managed care in the US, as well as the basic philosophy and modes of practice taught most providers in child-care medical specialties. Unfortunately,

nationally accepted standards for the evaluation of one plan against another fall short in assessing the effectiveness with which these plans address basic preventive health services, particularly for children [14–16].

However, a substantial number of young children from families eligible for Medicaid in North Carolina and other states do not receive services either from managed care organizations or private physicians. Many of these children have their preventive service needs met by local public health agencies. For Medicaid-eligible children, a shift to managed care will in itself be disruptive to regular patterns of service use and provision concerning preventive health services. If such a shift is made, parents who are accustomed to seeking vaccines for their infants at local health departments (as in the *Tipat Halav* clinics in Israel) would be instructed that the managed care plan of their choice will now have comprehensive responsibilities for their child's health care, including immunizations and other pediatric screening procedures. Expectant mothers who have received prenatal care and monitoring from their local health departments will also find it necessary to interrupt their conventional patterns of care-seeking associated with the move to managed care.

On the other hand, many parents of Medicaid-eligible children have established relationships with private pediatric providers and have become accustomed to having these providers take responsibility for the periodic well-child and preventive services needed by their children. For these patients, institution of an 'Israeli-style' system will also be difficult. To mandate that preventive services will now have to be sought at a separate site of care, even though the child's curative pediatric care will be provided by their 'regular' pediatric provider, will appear discontinuous and disruptive of these regular primary care relationships between patient and physician.

As in Israel, there is concern in the US that managed care organizations will not establish systems of care to ensure the delivery of preventive services to children. Although there has been much publicity regarding the cost-savings of preventive care, these are not realized on the annual accounting systems utilized by managed care providers [17,18]. Additionally, many children change plans. Thus, an investment in prevention by one plan actually may be realized by another. Therefore, the economic rationale for these providers to ensure the delivery of preventive services is tenuous at best.

There also is some concern that managed care organizations, even if they are willing, may not be able to meet the need for preventive health care services associated with a sizable increase in their responsibility for the care of Medicaid-eligible populations in a given state. The delivery of services and outreach efforts to assure that the preventive services goals are achieved, would place a substantial new level of financial and administrative demand on these organizations.

Conversely, were all Medicaid-eligible children and expectant mothers in North Carolina asked to seek preventive health services from public health agencies as in Israel, there would be significant system overloads that would humble even the largest and most experienced local public health agencies.

To consider such a step as charging managed care providers with the responsibility for the delivery of preventive care to children, it would be necessary to define

precisely those basic preventive health services expected to be provided under explicit periodicity standards to children or expectant mothers for the Medicaid eligible population. The system most commonly used in the US today has been established by the National Commission on Quality Assurance, the HEDIS measures [15]. Unfortunately, at this time the measures for children's preventive services are limited to immunizations only. Although immunizations are important, they are also the easiest of the preventive services to both administer and report. Previous research has documented that US children may not receive other preventive services at the time immunizations are administered [19]. Although helpful, the suggested elements for preventive care as described in the United States Preventive Services Task Force Guide to Preventive Services [20] are too numerous to serve realistically as the basis for adequacy. As such, based on our previous experience in documenting preventive service provision, we believe the following minimum services should be included:

- age-appropriate immunization rate assessments;
- anthropomorphic (height, weight, head circumference) measurements;
- developmental assessments; including psychosocial development;
- vision/hearing screening;
- prevention counseling.

As managed care organizations assume greater responsibility for the provision of care to Medicaid populations in North Carolina, the North Carolina Department of Insurance (which has the primary responsibility for monitoring the performance of managed care organizations licensed in the state) and the North Carolina Department of Health and Human Services (which administers the state Medicaid Program) will each have separate responsibilities for monitoring the efforts of these managed care organizations to meet their client's health care needs. There is a need for coordination between these two state agencies with respect to the monitoring of health plan performance in areas of fundamental importance to preventive and curative service provision.

Regulations with regard to state licensure by the Department of Insurance should set expectations for the provision and reporting of basic preventive health services to children. Medicaid contracts should have similar expectations and reporting requirements. Standards for the advertisement of preventive services offered and provided by health plans in open enrollment documents should also specify the types of data and the reporting formats that should be included. Efforts can be made through statewide conferences and other venues to publicize the expectations of basic preventive services essential for child populations, whether cared for by private or public sector providers.

A significant caveat to the ability of the state to exercise such control is the limitation of the regulatory power of the state. The State Board of Insurance only has authority over those plans which are not self-insured and which are headquartered in North Carolina. Regulation of the remainder of plans is limited by the federal ERISA legislated exclusion [21,22]. As increasing numbers of large employers are choosing to self-insure, less than 50% of the plans in most states today are subject to state mandates or authority for enforcement of coverage. Thus, states

would maximize their ability to track and enforce provision of specific services if Medicaid contracts are left to managed care organizations licensed in each state.

A separate, yet fundamental issue with regard to ensuring delivery of preventive services in a new environment is the need for a significant educational/informational campaign for parents regarding the change. Patterns of care provision have been established over time and have become ‘routine’ for many families, even being passed down from one generation to the next. Other studies have demonstrated many parents with children insured by private carriers do not understand the extent of coverage to which they are entitled, nor do they fully understand how to access the services available within their own managed care plans [23,24].

Families from low-income and potentially less well-educated populations will face similar, if not greater, difficulty in understanding their role, and the role of their provider(s) in any new paradigm of preventive health care delivery. Simply enrolling children in even the best of managed care plans does not ensure the initiation of health care seeking behavior by parents nor their utilization of preventive services at appropriate levels. This is in contrast to the situation in Israel where there is a defined national priority and expectation on the part of the population that preventive care utilization is an essential component of the health care system.

8. Responsibility for outreach programs

Pediatric preventive service utilization is often unpredictable and less than recommended for specific populations [25,26]. For these ‘at risk’ populations, outreach and recruitment efforts are considered an integral and essential component of the health care system. When public health agencies are the providers of preventive health care services, it is often the case that these services are coupled with organized programs of outreach (e.g. consumer/patient education, community-based service access arrangements, media educational efforts). In Israel, as in the US, it is commonplace for the structures and budgets of public health prevention programs to include provision for the involvement of public health and patient educators.

Managed care organizations in the US, and increasingly in Israel as well, have underscored their commitment to preventive health care services as one of the principles of their operations and most have offered an impressive array of such services as part of their standard benefit packages. Comparisons of the content and periodicity with which these packages of services are offered have been a major dimension of the competition among managed care organizations as they have sought to capture larger market shares in defined populations. Yet, it is unclear as to what extent these organizations have supported the necessary outreach efforts that would assure that at-risk individuals and families actually take advantage of these services when offered as part of a benefit package.

In the US, managed care organizations are accustomed to being compared on the basis of only a few preventive health services (e.g. childhood immunizations) which

are actually provided to enrolled populations. There are serious questions about the accuracy of the data on the basis of which inter-plan comparisons are made [27,28]. Further, few systematic evaluations have been made of the effectiveness of these agencies in delivering such services, or the extent to which outreach efforts have been integrated with their basic preventive services delivery mechanisms.

An additional aspect of public health outreach traditionally performed in health department clinics is enrollment of families in other entitlement programs. In many health department facilities, counselors provide information or even registration opportunities for the Women, Infants, and Children (WIC) program, Aid to Families with Dependent Children (AFDC), food stamps, and other social services. If families enrolled in managed care organizations no longer have need to visit these health department clinics for care provision, new efforts for program enrollment and education must be developed. It is unlikely that responsibility for these types of outreach efforts would be transferred to managed care organizations.

9. Assuring quality of preventive services

The assurance of the quality of preventive services delivery is important, but not an effort done with great care under the present systems in the US [29]. Managed care organizations are expected, in most markets, to report data pertinent to the HEDIS criteria from which the proportion of specific services provided to their enrolled populations can be ascertained. These data, especially for such services as childhood immunizations, may be used by employers and patients at the time of open enrollment and opportunities for plan shifting to distinguish one plan from another.

In any new system involving managed care and public health agencies with regard to prevention, efforts must be expended to develop a means of monitoring the quality of preventive services targeted by the new arrangement. For example, standardized chart auditing protocols must be developed by which the records of expectant mothers and infants could be recorded and inter-plan comparisons be made. These data should be collected according to a coordinated method from each health plan and local health department participating in the program, with results and observations made public.

10. Mandated public health reporting requirements

Whether or not a separation of preventive and curative services is attempted for Medicaid-eligible populations in North Carolina or any state, there is a need for standardized reporting of population-based access to basic preventive health services and their utilization, especially for expectant mothers and children. To some extent this occurs annually on a population-wide basis through the cooperation of public and private agencies. For the past 3 years, the North Carolina Institute of Medicine, in cooperation with the Division of Women's and Child Health of the

North Carolina Department of Health and Human Services, has developed a North Carolina Child Health Report Card. This document contains summary statistics on the number of women receiving prenatal care in the first trimester, the number of children younger than 2 years of age receiving all recommended vaccines, etc. Yet, currently there is no system in North Carolina for collecting information by plan or provider through which to compare the success of either public or private sector organizations in meeting basic prevention goals. Such a system needs to be given careful consideration as one element of a comprehensive reassessment of preventive services provision in the state, whether or not there is to be a change in the assignment of responsibility for the provision of these services.

11. Coordination of service delivery to vulnerable populations

At the present time, there is a disappointing level of coordination between private sector and public health providers of preventive and/or curative child health services in the US. This lack of private-public sector coordination is of variable significance from one jurisdiction to another depending on the leadership of local medical societies and public health agencies. One reason these problems of coordination are so difficult to overcome involves the absence of effective child health information systems through which the care provided by either public- or private-sector providers can be reported and shared. Although efforts are underway in many US communities to address these informational needs, especially for childhood immunizations [30], few (if any) communities or states have successfully implemented a comprehensive information system that assures that services provided by both public and private sector providers will be reported in a single information system using a common data format [31]. Moreover, the absence of such information systems has made it practically unfeasible for providers in either system to use data collected as a basis for monitoring the preventive services needs of children under their care. As a result, problems of both under-provision of services and over-provision (or duplication) occur [32]. For example, because providers in one sector do not know the immunization status of their patients and have no reliable way of ascertaining whether providers in the other sector have given a particular vaccine, a child may receive an additional, duplicative dose, especially when school entry immunization verification is required.

12. Conclusion

The challenge of developing an effective system for the delivery of preventive services to economically disadvantaged populations is vexing. Examining systems of care from other countries may be helpful in learning about strategies that have been successful or have failed. In any assessment of the exportability of programs from countries however, the programs must be viewed through the societal and cultural perspective of the 'importing' country. No matter how successful a program may be

in one country, some modifications will likely be necessary to make it acceptable to the societal norms of another country.

In this example, it is unlikely that the effective Israeli system of *Tipat halav* could successfully be imported into the US. Three factors account for this (1) current political imperatives/trends, (2) accepted patterns of care delivery, and (3) structure of managed care delivery.

In the US today, both major political parties are accepted the notion that government should play less of a direct role in the lives of citizens. Increasingly, government agencies at both the state and federal levels are defining a regulatory role for themselves rather than that of service delivery. Additionally, patients in the US are accustomed to a system in which primary and curative services are delivered jointly. The concept of a ‘medical home’ defines the field of pediatrics and family medicine. Separation of preventive and curative services would undermine a dominant paradigm of health care delivery. Finally, the structure of managed care delivery in the US has been developed to include both preventive as well as curative services. Interestingly, variations of these very issues are now being faced by Israel as they struggle with the new political imperatives of an increasingly market-driven economy.

North Carolina and other states must take deliberate steps to ensure that a shift of responsibility for preventive services targeted to disadvantaged populations is handled appropriately. Regulation of the managed care organizations receiving the contracts for such service delivery will be crucial to ensure both that children benefit from the services and that taxpayer funds are spent responsibly. The question remains however, whether the government should retain responsibility for outreach efforts.

An economic paradox exists for managed care companies who receive a capitated payment for each enrollee regardless of the quantity of services delivered. No incentive exists for them to engage in outreach efforts. In fact, the incentive is just the opposite. New payment structures must be instituted to create incentives for managed care organizations to seek to deliver preventive services to an increasing percentage of their enrollees.

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