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ABSTRACT

This report documents the speeches and recommendations made at the conference on Health Promotion and Health Education in Early Childhood. An introduction, which discusses the purpose of the conference, is followed by a speech entitled, "Community and Professional Responsibility for Health Promotion in Early Childhood." This speech focuses on a system for preventive services for young children and community intervention. "A Systems View of Intervention and Its Implications for Promoting the Health of Young Children" defines the systems view and than goes on to relate it to the health of young children. The next speech is entitled "An Ecological Approach to Promoting Dental Health in Young Children." "The Psychosocial Basis for Health Education of Young Children" touches upon three areas: systemic models, a gap between psychosocial concepts and the area of general health behavior, and a theoretical paradigm known as the health belief model. This is followed by "Building Community Programs to Promote Child Health Through Multidisciplinary Teams." The final speech predicts what the current directions in educational programs for young children will be like. A summary by the conference chairman is included followed by recommendations obtained at the conference regarding health education. (SK)

Health Promotion and Health Education in Early Childhood

Proceedings of a Conference
July 31 — August 1, 1975
Ann Arbor, Michigan

"It is recommended that a series of national and regional conferences be held to (1) identify leadership in the health education, parent education, and early childhood education fields; (2) determine present and future health education needs and interests of preschool children; (3) more fully describe existing health educaiton programs for preschool children; and (4) explore ways to chart new directions for legislation, program development and research to assure that preschool children and their parents are involved in expanding health education programs."

—*The Report of The President's Committee on Health Educaiton, Washington, D.C. 1972*

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Health Promotion and Health Education in Early Childhood

Proceedings of a Conference
July 31 — August 1, 1975
Ann Arbor, Michigan

Scott K. Simonds, Dr. P.H.
Conference Director

Sponsored by
The Program in Health Education
Department of Health Behavior and Health Education
School of Public Health, University of Michigan
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and in cooperation with the
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Contents

Preface

This report of the conference on Health Promotion and Health Education in Early Childhood held in Ann Arbor, Michigan, July 31–August 1, 1975 has been prepared as a final commitment to the participants and to those interested individuals who were unable to attend. The report faithfully documents all of the proceedings and recommendations except the presentation of Dr Eli Bower of the University of California, Berkeley, whose remarks on The Rushing Torrent of New Knowledge. Directions for Professional Education were given as a banquet address without a prepared text (The conference agenda appears in Appendix A.) It is hoped that the report will serve not only as a documentation of what occurred, but also as a compendium of ideas for the future and as a challenge to continue the work that has been initiated among those who attended.

The conference is one of a series of activities being carried on by the Program of Health Education, University of Michigan, School of Public Health as part of the Project on Early Childhood Health Education supported by the Lattman Foundation The generous support of the project and of the conference by the Lattman Foundation is gratefully acknowledged.

Special mention must be made of the contributions of three individuals who have served as Lattman Fellows on the Early Childhood Health Education Project—Karen Haller, who served as assistant conference coordinator and who handled so many of the important details which make a conference like this effective. Suzanne Gilbert, who collected project and preconference planning data, and who helped in organizing and preparing the recommendations emerging from the conference, and Kathleen Zaveia, who helped in preparing special materials needed in the project and who served as a recorder for the conference.

Thanks go also to Winnie Willis, Harry Dalsey, Max Alderson, and Dolores Malvitz who served as discussion leaders for the conference, and to Ruth Simon, Mary LeDuc, and Jane Osburn, who served as group recorders

No conference is held, nor the proceedings prepared, without the continuous and sustained support of a secretarial staff, and these proceedings are no exception. Appreciation is expressed here for the very fine contributions of Alice Ellsworth and Deloris Keefer.

Scott K. Simonds, Dr.P.H.
Conference Director

Introduction

by

Scott K. Simonds, Dr.P.H.
Professor of Health Education
School of Public Health
University of Michigan

As director of the conference, I would like to welcome you and, in the few moments available to me, provide a background view of the conference. How did it come about? Where do we hope to go during the day and a half we have together?

In large measure, the idea of this conference has grown out of the work of the President's Committee on Health Education. When the Committee filed its report in 1972, it recommended that a series of national regional conferences be held to identify leadership in the health education, parent education, and early childhood education fields, to determine present and future health education needs and interests of preschool children, to more fully describe the existing health education programs for preschool children, and to explore ways to chart new directions for legislation, program development, and research to assure that preschool children and their parents are involved in expanding health education programs. Not only do I fully subscribe to this recommendation, but I am also well aware of many of the needs and problems on which it is based.

In my capacity as chairman of the Subcommittee on Education of the President's Committee, I had an opportunity to talk with health education and early childhood specialists around the country and to listen to many who described problems in implementing service and educational programs for preschoolers at the community level. Many of the salient issues which must be addressed were summarized for the President's Committee in an outstanding working paper entitled "Health Education of Preschool Children and Their Parents" prepared by Anne E. Impellizzeri and Lynne Bernstein of the Health and Welfare Division, Metropolitan Life Insurance Company, in their capacity as staff to the Subcommittee. You will find a copy of that working paper in your conference packet which we hope will be a useful reference for you.*

*Additional copies are available from the Society for Public Health Education, Great Lakes Chapter, through the University of Michigan School of Public Health, Ann Arbor, MI 48104.

From the work of the President's Committee and from Mrs. Impellizzeri's report there emerged the clearer picture that health education of young children and their parents was a generally neglected focal area in the health education field. Therefore, we were challenged at the University of Michigan to examine this area more closely and to attempt to bring our resources to bear on the problems. To hold a conference seemed most compatible with the interests of our Health Education Program in the School of Public Health. I feel most fortunate that we were able to secure financial support for this venture from the Lattman Foundation, which has also been very helpful in providing support for selected students whose special interests are in this area. We are particularly appreciative of the Lattman Foundation's interest in health promotion in early childhood.

Perhaps the most important reason why this conference has come about, however, is that as a society we have much further to go to make childhood what it is supposed to be—a chance for maximum growth and development in a climate of support and nourishment. That there are some children in many instances who do not have the benefit of such a climate is obvious to everyone here today. Hopefully we will come away from the conference with some ideas about how we can do a better job on behalf of young children when we return to our jobs.

We are indeed a cross-disciplinary conference as you will note by referring to the list of participants.* We have physicians, psychologists, nurses, nutritionists, educators, social workers, dentists, dental hygienists, health educators, child welfare workers, extension agents and early childhood educators. We have people from state, federal, and local agencies, voluntary as well as official. It seems to me that we are representative of practically every discipline that has some concern with young children, and the promotion of health and health education among young children and their parents. It seems to me also that we have something else in common, the interest and commitment to early childhood and an interest and commitment to health. Hopefully all of us here want to find new ways to look at some of the problems with which we deal, as well as to find some of that proverbial help to solve old problems that plague us. Perhaps with the counsel of our speakers and our fellow participants, we can begin to develop a much larger perspective within which problems may be handled. We may begin to see alternative ways of dealing with our problems, for example, and perhaps begin to identify other disciplines that might be helpful to us.

With so many different disciplines represented in this conference, should we anticipate communication problems? Since this may be a question you are raising in your own minds, I would like to establish a few

*See Appendix B for a list of participants.

ground rules. First, we must all accept that no one person or discipline has *the* answer. There are multiple answers and multiple definitions. Second, we should be searching to enlarge our visions and understandings, not constrict them by imposing a framework. We are quite willing to have multiple views discussed. Third, we are not trying to achieve concensus on recommendations, but rather are looking for options. We hope in your discussions of recommendations that you will provide us with as many options as possible. Finally, at a cross-disciplinary conference like this, it is necessary that the material presented be broad enough to include us all. I hope that you will find that our speakers will provide a number of conceptual umbrellas under which we all fit comfortably.

Let me say a few words now about the agenda.* We are going to have several speakers, each of whom will make a presentation for approximately forty minutes during a general session, after which there will be fifteen minutes or so for audience response. As conference participants, we should use this brief time to gain clarifications from the speaker or add comments of our own since there will not be further opportunity to talk with the individual speakers in our small group sessions. We hope that, while in small groups, we can move beyond clarification of what the speaker has said. There are two small group discussion periods scheduled, although we recognize that they will likely be insufficient for a group as diverse as this with so much to discuss. Nevertheless, the small group sessions have been planned to give us a chance to react to the ideas presented by the speakers, to see how they fit into our own communities or our own discipline, and to help us share with each other problems that we are facing in our communities. Out of these interactions, we may find assistance in looking at these problems or in the actual handling of them in new ways. The small groups are also asked to make suggestions or recommendations for follow-up activities.

I think it is important for us all to know that this conference has not been planned in a vacuum, but rather has been designed as an important step for a number of organizations to learn about health promotion and health education in early childhood and to develop follow-up activities. We have, therefore, three special sets of people here with antennae out to discover what is relevant to them.

First we have the Committee on Preschool and School Health Education from the Office of Health and Medical Affairs, Governor's Office, State of Michigan. This committee will be meeting immediately after the conference to discuss recommendations that are made by participants and prepare a report for Governor Milliken. This committee will be meeting not only right after the conference, but once or twice again before presenting

*See Appendix A for the agenda.

its final report by the end of 1975. You can be assured that the committee members in each of the small group sessions will be listening very carefully to the suggestions you have.

Secondly, we have many members present from the Society for Public Health Education Great Lakes Chapter, the organization that has been very helpful in assisting with the conference and helping with the publication of the working paper. This SOPHE Chapter has also been planning its own follow-up of the conference through a meeting of its Early Childhood Education Committee to review the recommendations that are made.

Thirdly, those of us from the Health Education Program in the School of Public Health also have a responsibility for follow-up activities. We are planning post-conference visits to those of you who came in teams of three or more. These visits will be to provide both evaluation and consultation. We also plan to make the proceedings of the conference available for those who were interested, but could not attend.

We are looking forward to a very productive session and hope that you will participate with us in this dialogue to share some of the ideas which you have and some of the problems with which you struggle.

Community and Professional Responsibility for Health Promotion in Early Childhood

by

Ruben Meyer, M.D., M.P.H.
Professor of Maternal and Child Health
School of Public Health
University of Michigan

If I am not for myself—
Who will be for me?
If I am for myself alone,
What am I?
If not now—when?

Talmud

In the United States communities have for many years provided numerous safeguards for the health of the newborn and the school-aged child. A variety of legislative and institutional controls assures the child at birth of a clean delivery room in hospitals licensed by state law, staffed by reasonably competent professional attendants. They also mandate preventive measures against gonorrheal ophthalmic infection and require screening for certain brain-damaging metabolic disorders amenable to early therapeutic intervention.

Most states have on the books variably implemented laws that demand health examinations and immunization against communicable disease designed to protect children when they enter school. Pennsylvania has even enacted legislation creating more-or-less comprehensive health delivery systems in the schools.

However when one examines the system for preventive services for young children far less community intervention is apparent. The young child in the pre-school years has been the responsibility—with relatively little community support—of individual parents and families economically socially and educationally capable of providing the resources to promote and protect the health of these children. Health departments have been traditionally supported for well child care by federal funds and technical support during the golden years of the Children's Bureau of the Department of Health Education and Welfare. These programs are

generally restricted to low income children and limited in scope of services. The tendency to provide inadequate support for ministries or departments of health is a world-wide phenomenon. Even in countries where public programs offer personal health services they are, in general, inadequate and used exclusively by the poor.[1]

The importance of environmental influences on the early years of childhood development has long been recognized. That change in many human characteristics (related to health) becomes more and more difficult as the characteristics become fully developed was documented by Benjamin Bloom in 1964.[2] He emphatically stated that the promotion of child development is clearly a social responsibility. The most sensitive and critical years for health promotion are those for which the community has assumed least responsibility.[3]

The health professions have usually been quite passive in the development of preventive health care. Individual professionals in association with parents and families have performed recommended procedures in their private practices, but these activities have largely been directed toward limited nutrition education and communicable disease prevention.

Since accidents are the leading cause of death in children beyond the first year of life, some professional associations (e.g. the American Academy of Pediatrics) have, through their individual members, developed accident prevention and poison control programs. They have also successfully campaigned for specific legislation such as laws requiring safety glass in doors, the Flammable Fabrics Act and the Poison Packaging Law. These activities, however, have for the most part been sporadic and limited.

The agenda for health professional groups to exert pressure for legislative action that will promote and protect the health of young children is far from complete. Education through the provision of information alone is not enough. There is urgent need for the creation of resources and organized services that facilitate parental motivation at the community level to improve the health of young children utilizing our best technology available and accessible at all social levels. These services can be delivered in a variety of settings such as day care centers, nursery schools, community human service centers, and pediatric and family health clinics, private and public.

It should be noted that demonstrable need does not produce programs. Unless effective demand can be created by social and political action, important health needs will not be resolved. The key to conversion of need to demand resides in the community's value system, and this is traditionally heterogeneous in the United States. It takes concerted action by highly motivated special interest groups, often in coalition, to effect political action for legislative response, and this is especially difficult in the case of

social programs The difficulty is compounded when the needs are for health promotion and prevention that have traditionally occupied a relatively low priority in the American health system Acute crisis-oriented, episodic needs more readily activate demand for action

One should not take too seriously the current myth that we have a child-oriented society or one with a deep and abiding concern for its children Fritz Redl addressed this question quite forcefully first in 1962,[1] and again in 1966,[2] when he described the United States as Underdeveloped Country, Type II, which he defined as a country in which the services for children are sorely underdeveloped but that haven t the slightest excuse for that sordid state of affairs In his view we have a long experience in planning and organizing extensive resources for public action and service that have been clearly effective in a variety of other fields Communities can bring change through political and legislative action when they are motivated and organized to do so

We have the technology and we have the experience Some of our services are the best a society can produce However, the facts are we have done less well for children in recent years, especially in health-promoting and health-preventive activities, than we have for older people. This trend does not suggest to me a very meaningful affection for children.

Within the context of community and social action what is the responsibility of health professionals? The social and health programs of the 1960 s certainly did not fulfill the resolutions produced by the White House Conference on Children in 1960 We heard the same needs restated in 1970 and special mention was made in regard to young children and their health needs In order to coordinate and consolidate categorical programs federal agencies moved in the direction of block grants and revenue-sharing These trends have not produced more or better programs for young children

The values and attitudes of the general public and their legislators will not respond to current need unless special interest groups such as health professionals aggressively participate in activities that influence the attitudes of those individuals in our society who have the power to generate legislative action

Professionals in concert with parents have on occasions influenced legislative, judicial and bureaucratic actions in behalf of children Some victories, however small, were achieved in the states of Washington, Pennsylvania, California, Michigan and others. As Lowrie and Berlin have stated, Public Health objectives require political action.[5] Support for new programs depends on legislation at the state and federal levels. The need for health promotion for young children will be met by effective demand only when an informed community in concert with professional groups develops a value orientation generating the necessary pressure for

change. Progress in public health from sanitary laws to immunization programs and water fluoridation have been the outcome of combined community and professional action fulfilling their responsibilities. When society and the professions assume the responsibility they should for producing the resources for promoting the health of young children, we will be capable of developing effective programs that will provide the necessary services.

Footnotes

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A Systems View of Intervention and Its Implications for Promoting the Health of Young Children

by

Ann Hartman, D.S.W.
Professor of Social Work
School of Social Work
University of Michigan

In some ways my topic today—a systems view as it relates to health promotion in young children—is already expressed in the assumptions which must have guided the planning of this conference. Calling together a group of professionals from many different disciplines and specializations demonstrates a belief that our diverse interests are truly interrelated. And those who answered the call to attend this conference must have done so out of some conviction that an approach which cuts across disciplines, which adopts a comprehensive view of the health of children, has value. In that sense my guess would be that you all, on some level, hold what I call a systems perspective although you may not identify it as such.

What then is this systems view? This question is not an easy one to answer. Systems theories and I use the plural advisedly, have had their impact on almost every profession and on the social and physical sciences. Systems jargon is everywhere, and the use of terms like "throughput" and "entropy" guarantees that one is on board in our electronic age. This proliferation of systems theories and the many different ways the term is used make it mandatory that I attempt to spell out what I mean by a systems point of view.

For the sake of our discussion a systems view is a way of thinking that focuses on the transactional relationships among entities rather than on a view of the essential atomistic nature of things. It is a highly relativistic view which is suspicious of absolutes, of partialization, and of single cause explanations. It is a comprehensive view which attempts to take account of and organize all of the elements transacting in a situation and the nature of those transactions.

A systems perspective in medicine is one which focuses on the whole person, upon all the systems in the body and the way each system's

functioning transacts with other systems. As a matter of fact, in medicine, we see two opposite trends creating considerable tension in education and in the delivery of health care services. The knowledge explosion and other variables have led to a proliferation of medical specialties and subspecialties to the point where four-fifths of American physicians practice as specialists. On the other hand, the move toward comprehensive care attempts to find some way to put the person, like Humpty Dumpty, back together again, either through the development of a generalist specialty or through various methods of integrating single patient care by many specialists.[1]

In applying a systems view to our concern for the health of young children, I would like to extend the boundaries of our concern even further. I would like to define our concern not only as the whole child but as the system which includes the child and his total life space. If we define our domain in this way, the science of ecology provides a useful metaphor or conceptual model. Ecological study focuses on the organism in its life space and on the delicate adaptive, supportive, and mutually enhancing balance that must exist between living things and their environments. It seems to me that this is an appropriate metaphor for the consideration of the health of the young child.

What might the adoption of such a stance mean in actual practice? First, and most importantly, an ecological systems perspective views the child and his environment as a single system, and the health and welfare of the child is understood in that context. In the mental health field, this view has been expressed in the family therapy movement where the child's behavior is increasingly seen as an expression of the dynamics of the total family system. According to the family systems clinicians, schizophrenia, rather than being seen as a disease process intrinsic to the nature of the individual, is seen as an adaptive response to family communication patterns. Implications for intervention are revolutionalizing child psychiatry. The traditional model was to see the child as ill and to treat him with a variety of psychotherapeutic methods. However, as the child's symptoms were an important part of the maintenance of the family system, a change in the child was experienced as a threat to the family. Often the child was caught between the therapist's effort to help him change and the family system's unconscious requirement that he remain the same.[2]

If an ecological systems stance is adopted as we view the health of children, what is included in the life space, in the environment?

First, of course, the child is a biological creature that must be nurtured by a physical environment which is congruent to his needs. By this I mean much more than pure air and water, sunlight, shelter, and nutritious food; I mean also the more subtle requirements explored by Rene Dubos, requirements of place and space, of silence and variety, of access to intimacy

with nature ' Obviously considerable dysjunction exists here as people are biologically adapted to the world in which they lived for thousands of years but not to the technological world created in the past two centuries Major health problems may be seen as a result of this dysjunction

Secondly human beings are social beings and have developed an elaborate social environment through which their needs are met and with which complementarity and mutuality must be maintained This social environment includes the intimate environment family and friends the intermediate environment neighborhood school place of work and recreation and that relatively recent development the extended environment. the massive economic social and political structures that have a steadily increasing impact on all of our lives The health of the child is absolutely dependent on the existence of a nurturing and enhancing mutuality between the child and that fragile and overtaxed social system the family The child s welfare is also affected by the extended environment both directly and through the impact on the family

Finally people are symbolic creatures They live in an environment of meanings and values. they respond to their environment selectively in relation to culturally determined variables that have considerable influence on adaptation on health and even on how health is defined

To continue our application of an ecological metaphor to a comprehensive view of health promotion in young children what is pollution? Pollution as we all know. are those elements in an ecological system that undermine the delicate complementarity between the living organism and the environment destroying the organism s potential for growth. health. and self-realization

We are accustomed to thinking about technological pollution about the discharge into our life space of the various byproducts of an overcrowded. industrialized society In our extended view it is important to also think about other kinds of pollution—of psychological social and cultural pollution which undermine the health and limit the potential of our children

Psychological pollution can be seen in the development of alienation and suspicion as the dehumanizing conditions of human life violate people s deep needs for human relatedness and sow the seeds of violence and fear It can also be seen as a sense of helplessness and despair overwhelms those who have limited opportunities to experience effectance. to transact meaningfully and competently with the environment Norman Polansky s study. *The Roots of Futility*. explores what he calls the futility syndrome in poor Appalachian families. demonstrating the connection of these deep feelings of hopelessness to inadequate child care [4]

Signs of social pollution exist throughout our society Racism and sexism lock people into stereotyped roles and out of opportunity Crowding takes its emotional and. in all likelihood. biological toll Clogged and

poorly functioning social service and health delivery systems rise, as Edgar Auerswald has said, like windowless skyscrapers, massive, rigid, bureaucratic structures, incapable of an individualized response.[5]

Cultural pollution can be seen in the standardized electronically transmitted entertainment that fills empty hours, promoting passivity, masking boredom and sapping creativity. Epidemiologists have been exploring the effects on health of physical inactivity. Cultural pollution can also be seen in our distorted values and jaded tastes which lead us to fast food stores, and an over consumption of fats, sweets, and overprocessed, prepackaged foods. Our widespread nutrition problems among the middle class in our society are probably largely a function of socio-emotional and cultural variables.

An ecological system view would thus be that health, in all its aspects, can only be understood in terms of the complex system that includes a multitude of transacting physical, social, cultural and psychological variables. An approach to health promotion which does not take account of these variables is reductionistic and will achieve only limited success. In fact, partialized reductionist approaches which fail to attend the many forces active in a situation can have iatrogenic effects. For example, in the illustration of the young child identified as the sick member of the family and placed in individual psychotherapy, not only does the burden for changing the whole family system rest on the child, but the child is also labeled as "sick," which not only reinforces the family's scapegoating of him but also may have the effect of a self-fulfilling prophecy in terms of impact on the child's image of himself.

I would like to illustrate an ecological systems approach by examining a serious health problem which threatens the welfare of many of our very young children, particularly in the inner city, and that is the problem of chronic and or acute lead intoxication.

Lead poisoning in children is a social, psychological, economic, cultural and even political disease. Starting with the immediate problem, dangerously high lead levels in the blood, and following the complex variables that have influenced this serious development lead us into many aspects of the life space of the child and demonstrate how comprehensive are the boundaries of our concern.

Johnny has elevated lead levels in his blood. To a large extent this is related to the fact that he eats paint chips that contain lead. Although controversial, it may also relate to the amount of lead that he breaths from the air, contaminated with the exhausts of automobiles that use leaded gas. Inner city children, in whom a high incidence of lead poisoning is found, sit on curbs and play at the edge of city streets in dust that is heavy with lead. The lions in the Central Park Zoo in New York City got lead poisoning from licking their coats.

However although leaded gas may well be a contributing factor the ingestion of chips of leaded paint is generally considered to be the major variable.[3] But this is only the beginning. Several questions immediately arise. Why does Johnny eat paint chips? Why does his mother allow him to eat paint chips? Why is the paint chipping? Why does it contain lead?

First, why does he eat chips? Because of some nutritional or emotional deprivation? Because they are sweet and taste good? Because they are crunchy? Opinions seem to differ. Why doesn't his mother prevent this? Because she doesn't know it is dangerous? Perhaps she feels it's all right to eat paint. A recent study in Cleveland discovered that the incidence of lead poisoning was much higher in Black families recently emigrated from the South than for other groups living in the same kind of housing and similar economic conditions. The authors speculate that that subculture may be a facilitating agent in that they found that southern blacks tended to be more permissive in terms of oral behavior and to define many "nonfood" items as edible.[4]

Perhaps Johnny's mother has some awareness of the dangers, but she is too overburdened or apathetic to give him the kind of supervision the situation requires. Of course, this line of inquiry leads to an examination of the stresses, frustrations, deprivations and demands that characterize Johnny's mother's life and interfere with her ability to mother. It leads to a concern for the many factors contributing to the breakdown of the family and to a recognition that a child's physical and emotional health depend on the fortunes of that fragile human system.

Of course once Johnny has begun to be affected by the poison, his irritable and unpredictable behavior can intensify the problem as his mother feels more and more overwhelmed by the irascible child. She may withdraw from him, grateful when he is at last quiet and entertaining himself in a corner. However, the entertainment he has found is, in all likelihood, working away at the chipping paint.

But why is the paint chipping? Why does it contain lead? First, because the building is old, as lead ceased to be extensively used in paint many years ago. But beyond that, the building is also in decay. This leads us to the more extended political, economic, and social environment and to the situations that not only permit but force children to live in dangerous and dilapidated housing. Herbert Gans, in a recent article on the positive functions of poverty, has written that one of the major functions of the poor is to utilize inferior goods and services that otherwise would be unused or discarded.[5] This has been exposed in the fact that poor quality food is sold at the same or higher prices in slum neighborhoods. Certainly substandard housing is occupied by the poor to the benefit of all those who profit by its use. We must ask the political question, who would lose by the destruction of such housing? Who would have to pay for major repairs?

An ecological analysis of Johnny in his life space is an effort to understand the variables that have brought about high lead levels in his blood [illegible] far and wide Economic social cultural political psychological [illegible] play a part Various analysts will emphasize the importance of one or another of the above described factors What may well be the case is that lead poisoning is a result of the transaction of several of these variables and that the likelihood of high lead levels increases in proportion to the number of the above conditions present

An ecological systems approach not only expresses the complexity of a situation but also can guide us in thinking about intervention Some major practice principles emerge from adopting a systems view First, a major principle of systems theory is that as every aspect of a situation is interrelated A change in one variable will have an impact on every other variable. Accessory to this is the principle of equifinality which states that several different approaches or inputs into the ecosystem will end up with similar results - or in plain language there is more than one way to skin a cat. The principle of equifinality is basic to a multidisciplinary approach. It transcends competition about which profession has *the* answer and pointless arguments about which one intervention will work

In exploring the example of lead poisoning, the full range of multidisciplinary public health interventions can be envisioned. Such interventions are extended in time primary, secondary, and tertiary, and may involve any aspect of the ecological system including threatened children and their life space Tertiary intervention would include readily available and accessible treatment for affected children Such intervention would depend on an educational program directed to treatment personnel I just read of a case of a severely poisoned child in the inner city who was vomiting and suffering from cough fever and lethargy and who was taken to hospital emergency services twice and to a neighborhood health station twice, but the condition was not correctly diagnosed until the mother s fifth attempt to get help By this time he was having seizures This was despite the fact that his mother had reported that the child had this strange habit of eating paint!"

Secondary prevention would, of course, include early case finding and the identification of populations at risk perhaps in relation to the above factors through the utilization of screening procedures to surface potential problems Primary prevention could be directed at many variables in the situation A major intervention could be educational with efforts to increase the threatened families knowledge of the dangers involved in toddlers eating paint chips and to give families concrete suggestions as to how they could protect their children from the menace Group meetings, published information, posters, radio, T V , all of the varied educational media could be utilized Although educational intervention puts the bur-

dent's responsibility and action on the individual rather than the faulty housing situation is perhaps the first line of defense for children currently threatened.

In many overwhelmed families filled with hopelessness and futility situations that intervention would probably not be sufficient. A program directed toward relieving some of the stress for such families for connecting them with community resources and supports would be appropriate. Such support could aid them with the care and supervision of the children provide increased financial aid for house repairs, etc. If these supports and resources were not available or were withheld, family advocacy would be an appropriate intervention with change efforts directed toward the welfare department and other service agencies charged with the responsibility of providing basic care for families with dependent children."

With some malfunctioning families unable to make use of resources available for help with the care and protection of their children more intensive and individualized support might be needed. It may well be that inadequate supervision of children is often associated with social pathology with marital breakdown, drug addiction, and alcoholism.

However, interventions on all of these levels are basically residual in nature as they expect the individual to make an adaptation to the noxious environment.

Intervention on the level of neighborhood, community, and larger systems as they impinge on this problem would in the long run provide truly primary prevention. Programming could include a community development project where families and public health workers pool skills, resources, and labor in a self-help effort to improve housing and cover dangerous walls. Out of such a community based self-help program not only comes improved buildings—the major goal—but also the development of leadership, social skill, communication, and a sense of commonality among the members of the community. The development of these natural systems of mutual aid tends to break down the social isolation and alienation which abounds in the inner city and develops community organization which may be a resource for further intervention into other common community problems."

Another target for change must, of necessity, be the landlords. In the short run, volunteer self help efforts to improve buildings raise the value of the owner's property, and it is not unheard of that such efforts are followed by rent raises, penalizing the very tenants who improve the dwellings. Community action should enlist or, if necessary, force landlords to make needed improvements through the use of campaign or conflict strategies (i.e. public exposure, rent strikes, etc.). Finally, community action may focus on the legislative and law enforcement agencies, and advocate for improved housing, government controls and protection, and subsidies for

improvements.

The adoption of an ecological stance leads us to identify some of the variables that contribute to this health problem in young children. It also leads us to consider a wide variety of interventions that could be developed. What criteria should be utilized in selecting which road to take? Certainly, very practical considerations such as cost, availability of resources, staff skills are important. However, some other criteria flow from adopting an ecological systems point of view. Interventions should be as close to natural systems as possible. For example, if a family is unable to provide adequate child care or supervision, ways should be sought to support and strengthen the family or find resources to supplement child care rather than, as has been done far too often, removing the child and breaking up the natural system.

Interventions should be carefully monitored in terms of a variety of outcomes. When professionals enter a situation, they become a part of the system and their inputs reverberate throughout the system with the potential of producing unintended consequences.

Finally, value judgments are perhaps the controlling factor in the fashioning of interventive programs, although they are often implicit or hidden. In the example of lead poisoning, do we place the burden for adaptation and change on the threatened family or on the landlords and larger systems? This question surfaces the major value conflicts which exist between emphasis on human rights and emphasis on property rights.

A systems analysis of the health problem of lead poisoning, complex as it is, is relatively simple compared to some other problems we might examine. For example, perhaps we can take a few minutes to think about another health problem in young children from an ecosystems point of view, a problem which many researchers believe is one of the major threats to the life and health of children. I'm talking about the abuse and severe neglect of children.

In the past ten years, a great deal of publicity, as well as governmental attention and legislative activity has been focused on this problem. This concern has taken a route so familiar in our dealings with social problems! Once again, our national focus has been on detection, not prevention. The major expenditure of resources and legislation has been addressed to finding and identifying the abused child and his parents or caretakers with rather minimal attention to understanding the nature of the problem and devising preventive or interventive plans. Child abuse has been treated as a social control or protective problem rather than as a health problem or a symptom signaling that much is amiss in our world.

There has also been a tendency toward highly reductionistic explanations of the phenomenon—primarily that the parent is "sick," that the source of the problem is located within the individual and due to some

inner defect Intervention when there is any, tends to be a referral for psychiatric treatment for the parent A commonly held explanation, which has been considered an undisputable truth, has been that abusing parents were themselves abused as children although Kadushin reports that research fails to bear this out Such individualistic and reductionistic explanations of a problem serve to blame the victim, as we blame the poor for poverty and to get our malfunctioning social institutions off the hook.

An ecological systems analysis moves us away from such reductionist explanations It requires the use of a wide angle lens which brings into focus the many variables that could be transacting to bring about the disastrous breakdown in that vital relationship between parent and child. Perhaps we can speculate on what a few of these might be.

First, we live in a violent society, a society which not only allows, but sanctions violence—even against children Think of our nation s violence against the children of Viet Nam I don t think we can really measure the impact of this upon us all Our televisions broadcast a steady stream of violence both in newscasts and in so called entertainment, and our national policies and cops and robbers shows are built on the same premise—that force, threats of force, and violence are suitable and effective problem-solving methods This is coupled with an almost universal acceptance of the use of violence in child training as we continue to say, spare the rod and spoil the child

The many variables that are leading to the breakdown of the family also relate to child abuse, which is a symptom of that breakdown, Economic pressures and insecurity, loss of support of neighborhood, community, and extended family place increasing responsibilities on already strained nuclear families The increasing mobility in our society with resulting rootlessness, alienation, and isolation play a part One factor that appears to be associated with child abuse across socioeconomic lines is social isolation.

One could speculate that the impotent and denegrated role of women may have an impact as women, many of whom continue to find themselves locked into situations with little opportunity for self expression or gratification, build up feelings of anger and despair

National social policy fosters the neglect of children and adds to family stress for example, through inadequate AFDC grants and the poor distribution of needed services to children and families Despite verbiage to the contrary, our priorities as expressed in the way we use resources, demonstrate that the welfare of children is far down on the list. The tenure of Casper Weinberg, penny watcher par excellance, as secretary of Health, Education, and Welfare, is a case in point His function was clearly to dismantle rather than to extend, remodel and enhance social programs.

The family as a system requires nurture, protection, and support from its environment Its members require opportunities for enhancement and

[illegible] Family breakdown and child abuse can be seen as symptoms [illegible] increasing social, psychological, and cultural pollution which is destroying the delicate balance within family systems and between family [illegible] living space.

[illegible] focused primarily on the family in thinking about child abuse today, we must not forget that children are perhaps even more vulnerable [illegible] the very institutions society has set up for their care. Fortunately, one aspect of the concern about child abuse has been the surfacing of widespread institutional abuse and neglect.

Applying an ecological view demands a tremendous breadth of knowledge and requires interventive skills that no single profession can master. Perhaps the ecological systems perspective can provide us with a framework and help us integrate the wealth of knowledge and skills we [illegible] from many different areas of expertise. Perhaps it can provide a common language and conceptualization which can aid communication [illegible] Part of such integration and enhanced communication can [illegible] a comprehensive understanding of the needs of children and [illegible] multilevel interventions focused on the promotion of their well-being.

Footnotes

[illegible] discussion of this see David Mechanic, "Ideology, Medical Technology, and Health Care Organization in Modern Nations," *American Journal of Public Health*, Vol. 65, March, 1975.

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[10]Chatterjee *op cit*

[11]See Ellen Manser ed. *Family Advocacy, A Manual for Action* New York, Family Service Association of America 1973

[12]For an example of this in the Community Mental Health field see A H Collins Natural Delivery Systems *American Journal of Orthopsychiatry* Vol 43 January, 1973

An Ecological Approach to Promoting Dental Health In Young Children

by

Joanna Jenny, Ed.D.
Associate Professor
Division of Health Ecology
School of Dentistry
University of Minnesota

[illegible] health in the United States is experienced by nearly [illegible] at a postsecondary age. Dental decay has been identified as the most [illegible] physical defect in school-aged children, and it was the most [illegible] disease seen in Head Start preschoolers.

Dental decay begins in the primary teeth in early childhood. Surveys of the dental condition of preschool children indicate that soon after the [illegible] of teeth, dental caries begin.[1] One study found that 20 percent of [illegible] and two year old children were affected by dental caries. At the age of [illegible] the proportion of children with dental decay jumped to over 60 percent.[2]

Dental decay having begun in the primary teeth, progresses to the permanent teeth in the school-age child. Ninety-five percent of school-age children are affected by some degree of dental caries[3] with the average child entering school with three decayed teeth.[4]

[illegible] experience reaches a peak in adolescence and early adulthood.[3] The average 16 year old in the United States has had more than one tooth extracted, has 10 untreated decaying teeth and only one and a half teeth filled.[5]

In adulthood periodontal disease, the major cause of tooth loss after 35,[6] takes over and surpasses the toll exacted in earlier years by dental caries. The final result of uncared for dental caries and advanced periodontal disease is edentulism or the loss of all the teeth.[7]

According to the Public Health Service much, if not most, of the nearly $6 billion spent annually by Americans on dental care goes to correct conditions which need never have developed at all or which could have been arrested at an early stage.[8]

Preventing the initiation of dental disease is the much-hoped-for goal of the group of dental professionals that has embraced prevention as the ideal solution to an otherwise insurmountable but intolerable dental health problem

Many providers of dental care place the responsibility for oral health and the prevention of dental diseases on the family and on the individual. Crest's slogan in professional journals echoes this view. "Teeth don't just die naturally, your patients kill them."

Educating the public to carry out oral hygiene procedures at home and to eliminate sweets between meals have been widely advocated by the dental profession as effective measures for the prevention and control of dental disease. These practices, however, have not always been demonstrated in natural populations as being either as effective or as practical as claimed.[9,10,11]

Dental researchers have presented scientific evidence of the contributions of sucrose in the diet and bacteriological plaque to dental disease in laboratory animals.[12,13] However, the direct application of laboratory findings to the public's dental health has not been entirely successful. Many factors such as genetic inheritance, amount and types of foods ingested, and utilization of dental services which affect an individual's susceptibility to dental disease can be effectively controlled in a laboratory setting. In a natural setting, however, where such factors cannot be controlled, expected relationships derived from theory and the laboratory cannot be easily demonstrated.

A broader approach to prevention of dental disease than dependence on personal oral hygiene and individual diet control must be embraced both by the public and the dental profession. Today I would like to share with you a model for preventing dental disease in children.[14] This model utilizes an ecological approach in order to broaden the definitions for what are legitimate means for the prevention of dental disease. The ecological approach which will be presented seeks to describe the influence on oral health of the environments surrounding the oral cavity—the individual level, the family level and the community level.

First I'd like to describe briefly the model as a whole. Then I will discuss each of the factors individually in relation to the three ecological levels.

In Figure 1, at the center of the model, within the oral cavity, there are the etiological factors contributing essential components for oral health or oral pathology. These are the diet, oral hygiene, oral bacteria associated with dental disease, and genotypical characteristics which might increase susceptibility to dental disease. Also included as a factor within the oral cavity is dental treatment, an essential contributor to dental conditions within the oral cavity.

Factors intrinsic to the three ecological levels, three environments relat-

An Ecological Model for Preventing Dental Disease in Children*

FIGURE 1

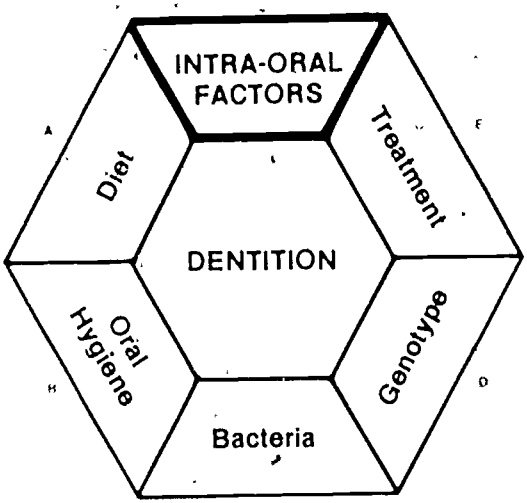
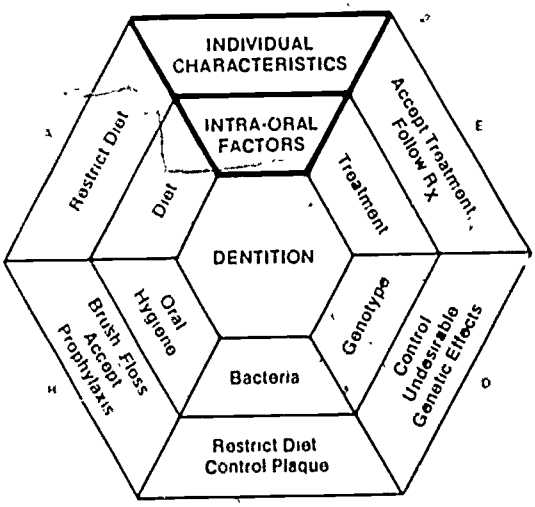


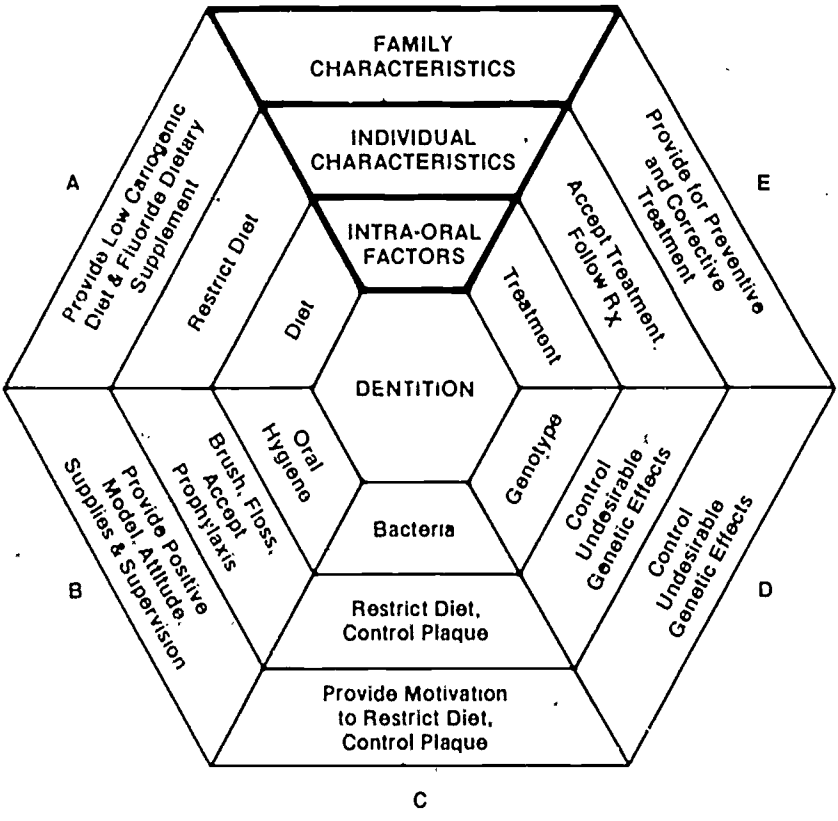
FIGURE 2



ing to and affecting the health of the dentition are those of the individual child his family and the community These environments contribute either pos t ely to enhance dental health or negatively to facilitate the initiation of diseases Examples within each of the three ecological levels which would contribute to dental health are shown in Figures 2, 3 and 4

An Ecological Model for Preventing Dental Disease in Children*

FIGURE 3



Model 3 Intraoral factors individual and family characteristics affecting children's dentition

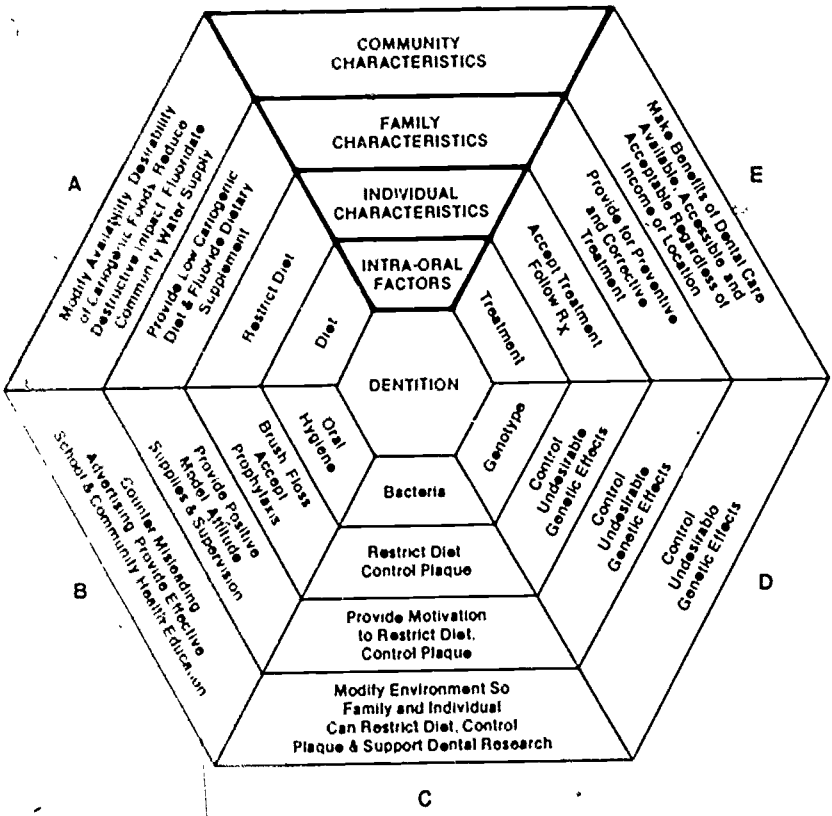
At this point I would like to explain the ways in which environmental factors located within the ecological levels of the child, the family and the community relate to and influence specific intraoral factors to enhance or threaten dental health

One intraoral factor which is intrinsically involved in the processes of dental pathology is the diet. An abundance of refined carbohydrates—cariogenic foods—contributes to a child's susceptibility to dental caries. The types of food a child chooses to eat and the patterns of when and how often he eats can modify his oral environment in ways which provide either a positive or negative influence for oral health.

The younger the child, the greater is the influence of the family on his

An Ecological Model for Preventing Dental Disease in Children*

FIGURE 4



Model 4. Intraoral factors, individual, family, and community characteristics affecting children's dentition.

diet. The child's oral environment is directly affected by the types of food provided by the family for meals and snacks. When parents serve sugar-containing foods infrequently, when they do not bribe or reward children with sweets, and when they do not allow the child to eat whatever and whenever he wants, they help eliminate one of the specific etiological factors necessary to the initiation of dental disease.

The so-called nursing bottle syndrome can cause rampant dental caries in the young child. Parents who put their children to bed with a bottle filled with soft drinks, fruit juice, sugar water, and even milk can contribute to the rampant decay of the primary teeth. Nursing bottles are often used as pacifiers at bedtime by children who are much beyond the bottle-feeding age.[9,10]

In order for the family to provide diets for their children which are conducive to good dental health, the community—including health professionals—must ensure adequate education regarding the dietary aspects of dental disease and appropriate attitudes toward foods. However, food preferences and eating habits are socially conditioned. Community factors such as breakfast cereal advertising affect the food preferences of very young children.[11] Advertising in homemaking magazines describe the ideal homemaker as one who keeps her family happy by serving desserts. Sociability and hospitality are associated with the sharing of food often cariogenic in nature. In these ways the community contributes to family behaviors which provide the refined carbohydrate diet conducive to dental disease.

The most important element in the diet relating to prevention of caries is fluoride.[12] Fluoridation of the community water supply reduces dental caries in children by 60 to 65 percent. The ecological level at which children's dentition can best be protected by fluoride is at the community level. The addition of 1 part per million of fluoride to community drinking water offers more protection against caries than fluoride in any other form.[13]

Water fluoridation at the community level provides the most effective, the least expensive, and the most practical means for ensuring that children ingest desirable amounts of fluoride as their teeth are developing. Both fluoride tablets or drops prescribed by the pediatrician or dentist and applications of fluoride applied topically in dental offices are less effective.[14] These forms are available within the community, but their utilization depends upon the ability of the family to obtain them. Utilization of fluoride supplements in forms other than those provided by the community requires knowledge and financial resources not equally shared by all families and therefore unequally available to all children.

Oral hygiene is another intraoral factor necessary to the processes of dental disease. Inadequate oral hygiene allows food debris to stagnate

around teeth and in pits and fissures. There the oral microorganisms metabolize the food components producing sufficient amounts and concentrations of acidic products to destroy adjoining tooth structures.[20] The child's task in oral hygiene is to prevent food from stagnating in or about the teeth and to keep bacterial deposits at low levels through the use of toothbrushes and dental floss.[21] A child must have the ability to clean his teeth effectively as well as the motivation consistently to perform this task each day. Whether or not a child is capable of consistently performing rigorous oral hygiene measures depends on individual factors. For instance the younger the child, the less motor control he will have. Willingness to comply with adult demands would also affect a child's personal and oral hygiene routine.

The younger the child the greater the responsibility the family bears for the provision of a good model in their own oral hygiene habits, for the provision of oral hygiene supplies, and for the supervision of their children's oral hygiene procedures. In order that parents may be capable of fulfilling these responsibilities for their children's oral hygiene, they would have to be convinced themselves about the importance of dental health. Parents would need to understand the nature of the interaction between bacteria and food debris in the mouth and its relationship to dental disease.

It would seem that in the case of young children that the major responsibility for their oral hygiene should be borne by parents. Unfortunately, factors at the community level do not always support effective oral hygiene practices either by the individual child or by the family. Effective dental education of both children and parents is lacking. Perhaps the 15 percent of Americans who routinely receive professional care do receive such education from their own dentists.[22] The majority, both those who do and those who do not receive education from their dentists, are bombarded by mass media advertising which makes no mention of the use of dental floss for removing plaque daily and suggests that mouthwashes, breath mints and chewing gum are effective substitutes.[23]

School dental health instruction has traditionally given children health information but such instruction—even school programs presently widely marketed in many states such as Toothkeeper—have not resulted in improved oral hygiene behaviors.[24,25,26]

In any case personal oral hygiene programs have not been shown very effective as public health measures for the meaningful reduction of dental disease. For one thing, the number of Americans susceptible to prevention via plaque control—that is, daily flossing and brushing—is rather small and is drawn from a segment of society which has the fewest unmet dental problems.[27]

Caries-conducive bacteria residing in the oral cavity are also an essential factor in the production of dental decay. Efforts at the child's level and

at the family level today can only center on dietary restrictions and in increased efforts to control bacteria by brushing and flossing.

Really effective measures to control or prevent dental disease in children and in adults will most likely be found at the community level through dental research. It is anticipated that in the future practical chemical measures can be developed which will control the impact of bacteria associated with dental pathology. Some research at present involves the use of antibiotics to control caries-conducive bacteria.[27] Research efforts in England have produced some reported success in immunizing laboratory animals against dental disease.[28] Still other efforts revolve around reducing the impact of refined carbohydrates through the use of food additives.[21]

Yet another factor in the model affecting the host's resistance or susceptibility to dental disease is an individual's genetic makeup. The hereditary characteristics of each individual affect oral health. Such genetically determined properties of the host as the morphology and structure of the oral tissues may affect an individual's susceptibility.[29,30] Other genetically determined characteristics affecting susceptibility are an individual's sex and rate of physical maturation—females and early maturers show higher caries experience.[31,32]

Although genotype can be an important factor in the predisposition of a child to dental pathology, other than in their initial contribution at conception, parents have no further direct genetic influence. However, social influences introduced by the community combine with genetic characteristics to produce gene-linked behaviors. In some cases, the community acts indirectly to produce these behaviors by influencing the family to produce in their children socially desirable gene-linked behaviors. For instance, in our culture different behaviors are expected of boys and girls. Parents reward girls for being docile and compliant—characteristics which might explain why females brush more often and make more dental visits. These behaviors might also be explained by another cultural expectation set up by society and implemented by family attitudes—the expectation that girls should be beautiful.[33]

In at least one instance—gene-linked behaviors related to racial characteristics—the community operates at a level beyond the influence of any particular family or individual. Black Americans have been found to underutilize dental services, a fact which can be partially explained by causes that are gene-linked. The community has responded with systematic bias toward specific racial characteristics to produce minority racial groups with lower economic position and, therefore, less income available for the purchase of dental care.[34] Educational levels, as well, also related to utilization of dental services, are systematically affected by racial prejudice in the community.[34,35]

Dental treatment is the final factor included at the center of the model which affects dental condition within the oral cavity. The making of regular periodic visits beginning in early childhood and continuing throughout an individual's life is essential for the maintenance of dental health.

The chronic characteristics of dental disease demand a lifetime of regular dental visits that include preventive and restorative measures. Today the quality of dental treatment is not available to millions of American children. Eighty six percent of children under five years of age has never had a dental visit.[36]

Society at large should understand and accept the need for, and benefits of, dental visits and treatment. Young children, however, are dependent on their families efforts to obtain treatment for them.

When family actions must be relied upon to provide an optimal environment for children's dentition, many children fail to receive treatment. Some families whose attitudes toward dental health and whose previous dental experiences orient them to provide regular, routine and continuous dental attention for their children are able to function in ways that foster dental health.

However, many parents are unable because of physical, intellectual, emotional, social or economic reasons to provide dental treatment for their children. A picture of families inability to provide adequate dental treatment for their children can be drawn through the presentation of two statistics regarding dental visits and expenditures for dental care. A 1964 survey showed that 270 million dental office visits were made. However, less than 3 percent of American families accounted for 25 percent of all visits. Expenditures for dental care followed a similar pattern.[35]

While economic inability to purchase care acts as a major deterrent for many families in their seeking of dental treatment, other factors also are associated with not obtaining needed treatment. Lack of acceptability of dental services may affect family utilization of dental services. Many parents, especially those from less well-off families, express negative perceptions of the dentists and his staff and lack of confidence in his professional competence.[37]

Parental ignorance regarding the need for treatment—the importance of regular dental care for deciduous teeth, for instance, or even the realization that natural teeth should be able to last a lifetime—affects family decisions about how often children should make dental visits.[37]

Past dental experiences filled with anxiety or pain as well as culturally transmitted folklore about dentists and dental treatment may predispose parents to put off making dental appointments.[37]

Families are not equally competent in dental health matters and, therefore, are unequally capable of meeting the responsibility imposed by ex-

pectations at the community level that they provide fully for their children s dental health That they do not equally manage to provide essential dental services for their children cannot solely be attributed to their neglect of duty Much of the responsibility for the fact that some families cannot provide dental treatment for their children must be blamed on factors within the community

Among the barriers to adequate access to dental services are the characteristics of the dental care delivery system provided by the community One of the outstanding characteristics of the current dental care delivery system is the almost complete autonomy of dentistry as a profession and the dentist as a practitioner [38]

The American Dental Association acknowledges that the United States, of all the well developed countries of the world, is the only one which does not now have a dental care program for children in operation."[4] The Association does place a high priority on the funding of a comprehensive dental care program for children. The program proposed by the dental profession recommends that preschool and school children through the age of 18 should be included in a program which would preserve the integrity of today s dental practice system by maintaining family responsibility for children s health and private practice, fee-for-service dentistry on a usual and customary fee basis.[4]

However, such a program could not function well for many families. Even the Association recognizes that a large segment of the public would need to be educated to the concept and value of dental health maintenance [4] Again, the family—a relatively weak link in the efficient provision of routine dental care —would bear the major burden and responsibility for optimum care

Prevention of communicable diseases such as tuberculosis or polio was early accepted as a responsibility of the community because control could most efficiently be exercised at the community level. The same should be true in the control and prevention of dental disease.

Evidence from an empirical study which tested the usefulness of parts of the ecological model presented in this paper supports the conclusion that the community contributes more to explain the variance in children's dental condition than do either the individual or the family. The intraoral factor which best explained the condition of children's dental health was dental treatment. Dental treatment was more important than either diet or oral hygiene.[39]

Dental programs operating in other countries can provide an example of the types of services provided at the community level which significantly improve the dental health of children The regular care that New Zealand's children receive from the country s School Dental Nurse Service, established more than 50 years ago, has significantly improved their dental

health status. Dental nurses serve both the preschool and the school-age population. The program has been so successful that a very large proportion of school children between the ages of two and one-half and 13 now receive most of their dental care from dental nurses in clinics located on school grounds.

In New Zealand care of adolescents aged 14 to 16 who are eligible for the School Health Service is provided by private dental practice at no cost to the patient. Free care is available for all children. The program is entirely voluntary and has achieved the full acceptance of children, parents, the government and the dental profession.[40]

Sir John Walsh, as Dean of the University of Otago Dental School in New Zealand, remarked that countries which rely on the parents seeking and paying for the professional services of the private dentist in order to meet the dental needs of children lag far behind countries which have an organized program of child care based on cooperation between state and professional sources. The only countries, according to Walsh, which can match the standard of dental care of the children in New Zealand are the Scandanavian countries which provide school-based dental services for children by salaried dentists.[41]

The concept of a school-based dental service for children in the United States is not new. Dental health care programs have been in operation for American Indian children for many years.[42] These Indian Health Service programs are especially effective when school based via the use of a mobile dental facility.[43]

In 1972 Dr. John Ingle, then Dean of the School of Dentistry of the University of Southern California, presented to the dental profession a plan designed to deliver preventive and therapeutic dental care to the children of America. The plan was designed along the lines of the New Zealand program. It was to provide a school-based program in prevention and therapy which was to start with children at the age of three and continue through adolescence after which children's dental needs were to be cared for in private offices or dental clinics—presumably under one of the national health insurance plans presently under congressional consideration.

Dr. James Dunning of the Harvard School of Dental Medicine commented about the need for such a plan as that advocated by Dr. Ingle. "Despite the environmental and cultural differences between New Zealand and the United States," he wrote, "one conclusion seems clear. Any large scale plan for young children, if it is to succeed, must be brought to them in their schools."[44] This concept, Dr. Dunning writes, implies the unsuitability of private dental offices alone for a nationwide program.

Although the New Zealand School Dental Program is relatively successful in drawing preschoolers into their school-based clinics, dependence on parents making the effort to bring their school-age children to the

school-based dental clinic accounts for a 35 percent difference in utilization of the services While 95 percent of the school-age children receive routine dental care only 60 percent of all preschool children receive care which may or may not be routine.[44] Nevertheless, utilization of dental services for preschoolers in New Zealand far surpasses that for the United States where only 14 percent of all children under the age of five has ever made a dental visit.[45]

To obtain the highest level of dental services on a regular basis for all children from the age of three to eighteen, the most effective method is to bring the services to where the children are The ideal place to provide preventive and restorative dental services to preschoolers would be in a preschool

Proposals have been made in the United States to provide day care for all preschool children The need for day care programs in the United States has been testified to by a number of witnesses appearing at hearings of the 92nd Congress Figures were cited regarding the number of working mothers with preschool children By 1980 it was estimated that the labor force will include 5 million mothers with children under age five. At present about one-third of all mothers with children under the age of six are workers The number of children involved is 6 million.[45]

The Comprehensive Child Development Act of 1971 proposed day care services which were to provide each family in the nation a full range of child development services Children from all socioeconomic backgrounds were to be eligible with fees based on a sliding scale according to ability to pay Comprehensive services were to be provided including health nutrition education social and other services deemed to be necessary for full cognitive emotional, and physical development for each participating child Had this act been implemented, preschoolers' dental health needs might have been met on a routine basis with preventive procedures carried out at the most opportune state of development for each child.[45]

Very young children whose teeth are developing could receive the benefits of fluoride during the period when it is most effective. Sealants could be applied to deciduous molars before the onset of decay and checked at regular intervals The dental personnel associated with each center could be available to parents and the community for dental health information and education programs If a school-based dental care service could be maintained throughout the school years, the benefits derived from regular preschool dental care could be continued to early adulthood. Such a program would achieve a significant improvement in adult dental health since much of the elaborate dental treatment needed by adults, such as crowns and fixed bridges is the result of inadequate preventive and restorative care during childhood

An ecological approach to the promotion of dental health cannot support the current approach which accepts the individual and the family levels as the primary locus for responsibility and which identifies diet and personal oral hygiene as the chief preventive measures for achieving dental health. The ecological model described in this paper indicates the pervasiveness of factors contributed by the child, the family and the community which relate to the susceptibility, control and prevention of dental disease.

An empirical test of the contributions of various elements in the model, as well as data from other studies, indicates that factors at the community level can have far reaching effects on the dental health of a community's youngsters. The availability of dental services to children on a regular and continuous basis has been shown to be a vital element for achieving and maintaining dental health.

The lack of a well-articulated and comprehensive dental care program for children in the United States, even though its need is recognized, can be explained by the existing social, political and economic forces in the nation which affect beliefs about who should get what kind of care, whose responsibility it is to provide it and how it should be delivered. The promotion of dental health at all ages will require the active involvement of all American citizens and their representatives at all levels of political responsibility.

The ecological model presented in this paper was developed to demonstrate the need for expanding the definitions of what are legitimate approaches to the prevention of dental disease. The preventive potential of each sector of the model must be engaged, especially those at the community level in order to raise the level of dental health for all Americans.

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The Psychosocial Basis for Health Education of Young Children

by

David S. Gochman, Ph.D.
Associate Professor
Raymond A. Kent School of Social Work
University of Louisville, Ky.

Since I have achieved marginality now in at least three different fields—psychology, public health and social work—it is an especial pleasure to speak to such a broadly interdisciplinary and multidisciplinary audience. The anxieties of marginality are many. one is often uncertain whether one is fish or fowl. One's material is regarded, for example, as having too much health content for the straightforward psychological journals and too much psychological content for the health journals. Other times the benefits outweigh these, and one of the benefits is the satisfaction of building research bridges and conceptual highways between traditionally compartmentalized areas. The title of my remarks today reflects an attempt at such a structure.

Let me share with you some introductory materials to provide a context for my presentation. The research to be described and its implications derive from three basic concerns: systemic models, a gap between psychosocial concepts and the area of general health behavior, and a theoretical paradigm known as the health-belief model.

First let's talk about systemic models. Today, everyone's "into systems." References to systemic frameworks and systemic models have become a sine qua non in planning and policy making discussions. The word "systems" generally conjures up technological imagery, computers, mechanical devices, and the myriad attendant paraphernalia equated with the cybernetic revolution. But there are broader and at the same time simpler usages. The essence of systemic models is their attention to "wholeness" and to the relations that exist between the organization of internal parts and the system's functioning.

For organization we can substitute the term "structure" or "arrangements"; for functioning we can similarly substitute the terms "action" or

behavior. Lest I appear a "Johnny come lately" jumping upon this year's bandwagon, my theoretical and research interests in systems models extends back to 1958 and systemic models and systemic thinking have been part of theorizing in psychology for an even longer time. Those of you with backgrounds in psychology and related social science disciplines might readily see systemic history most prominently in the gestalt theory of perception, in Lewinian field theory and in the organismic theories of Goldstein and Angyal. Systemic models are proposed to have universal applications, they attempt to deal with all levels of phenomena.

A crucial systemic concept is interdependence. Interdependence refers to the degree to which the articulated parts of a system engage in relations with one another. Do parts of the system communicate with one another? Do they co-vary or otherwise affect one another? Systemic thinking maintains that interdependence has important implications for functioning. For example, systems that are highly interdependent often show greater adaptive behavior and greater flexibility than systems with a lesser level of internal organization.

Let's leave this basic overview of systems and look, for the moment, at a scientific paradox, a somewhat diminishing but nonetheless large gap between psychological concepts and health behavior in general. It has only been during the last 15 to 20 years that *general* health behavior has become of interest to psychologists. The paradox is found in the enormous interest that psychologists have had in something that for want of better phrasing has been called "mental health and mental illness," and also in those dramatic physical symptoms whose roots are embedded in psychic stresses and which are termed "psychosomatic." But until recently, more mundane health behaviors such as periodic dental visits, routine immunizations and preventive screenings have not commanded either conceptual or research energies. Yet it can readily be assumed that health behavior does not occur in a psychological vacuum, and a greater understanding of health behavior and, with it, increased effectiveness of programs are contingent upon discovering its psychological ecology.

The health belief model developed largely by Rosenstock and his associates was a pioneering effort to account for existing knowledge and to generate predictions of health behavior. The initial domain of the model was the prediction of specific preventive behaviors in the absence of symptoms, on the basis of a person's beliefs about his susceptibility to some disease, the seriousness of that disease, and the benefits of taking on a specific health action. The 1960's saw a mushrooming of research based on the health belief model, and it remains a heuristically powerful conceptual tool. The health belief model suggests that the likelihood of a person taking preventive action is a positive function of, among other factors, the degree to which he sees himself as susceptible to some disorder...

These three concerns have been the context for research on children's health-related beliefs and behaviors which has both occupied and preoccupied me for the larger part of the time since 1967. The rationale for this research is implicit in the preceding material. In addition, children offer attributes for any researcher. In school settings they can—to a greater degree than adults and possibly college students—be found in large natural groups amenable to research questioning. They are generally friendly. They prefer to do whatever you're doing with them rather than most academic tasks. They also have the potential for showing us the periods or grades at which some adult beliefs and behaviors appear to attain stability.

What then would we wish to learn from some group of youngsters? What might we wish to assess? I could not and would not attempt to identify the most relevant of the psychosocial characteristics relevant to health education and programs for young children that might possibly capture our attention. Instead, I have selected two that are of particular interest to me. One of these is noted in the health belief model is perceived vulnerability. Most typically defined as the degree to which a person believes he is susceptible to or might encounter health problems, illnesses or accidents. Questions then arise about the development of such beliefs. Do these beliefs show developmental changes? Are they related to sex or socioeconomic factors? Other questions about these beliefs derive from the systemic model. How do these beliefs behave in relation to one another?

The second psychosocial characteristic is health motivation. Although motivation has long been an important concept in psychological theory, its role in the area of health behavior is more often assumed than it is empirically delineated. Briefly, the concept of motivation denotes priorities within the person that activate and direct goal-oriented behavior. Although acceptable measures of many human motives are available, measures of health motivation are not widely found. However, the recent development of the mouth-appearance-pictures (MAP) permits the reliable assessment of health motivation. One assuredly would wish to know whether health motivation shows developmental changes and whether it too is related to sex or socioeconomic factors.

Perceived vulnerability and health motivation serve as two basic anchors for this research, and an additional question arises about the relationship of these characteristics to one another.

With such questions in mind and with the encouragement and stimulation of faculty at the University of Michigan School of Public Health, the University of Michigan School of Dentistry, and the London Hospital Dental College, and through excellent cooperation and coordinated efforts of the Flint, Michigan community school system, two extensive studies were

designed implemented and conducted to completion One was a cross-sectional study of four classes at each grade level from third to ninth representing both inner-city and non inner-city schools There were a total of 774 youngsters ranging in age from 8 to 17 This was Sample I The second study was longitudinal and followed 24 classes of third graders and 24 classes of seventh graders for a two-year period observing them at five semi-annual sessions There were a total of 686 third graders at the start, coming from school districts that could be classified as representing neighborhoods of low middle and high socioeconomic level The average age was 8 years This was Sample II The 655 seventh graders came from schools representing low low-middle and high-middle socioeconomic levels The average age was 12 years This was Sample III In Samples II and III the socioeconomic levels were based on census data for parental income and education

Perceived vulnerability to health problems was assessed through the responses to a series of fifteen expectancy type questions such as What chances are there of your getting the flu during this next year? The other 14 problems dealt with were a bad accident, a rash fever having a tooth filled a sore throat a toothache a cold bleeding gums, an upset stomach missing a week of school because of sickness, a cavity a bad headache breaking or cracking a tooth and cutting a finger accidentally

For each item the youngster was instructed to select one response from among seven alternatives that best expressed his own expectancy, ranging from no chance to certain These were scored from 1 to 7 The items and response alternatives selected were those that pre-tests had proven appropriate for the entire age range The instructions were designed so that even the youngest child understood the task and the continuum of responses The mean of a child s score on these fifteen items was used as a measure of perceived vulnerability

A previous study had indicated that health was not especially important or generally motivating but those data were based on a free-response format which did not focus specifically on health Forced choice techniques however seemed to offer a methodological alternative particularly appropriate for assessing one motive in relation to others Accordingly the mouth appearance pictures were devised These comprise a set of nine color pictures and require a child to choose between a more attractive, less healthy mouth and a less attractive but healthier mouth, by circling the one mouth in each pair that he would like to have There are three degrees of attractiveness (straight moderately crooked and severely crooked teeth) and three degrees of health (two five and eight cavities) Considerable care was taken in the drafting of the pictures to eliminate apparent racial characteristics in the lip contours As an additional precaution, the pictures were printed on buff tone paper to minimize clues for racial identifi-

cation. Appearance choices were given a score of one; health choices a score of two. The mean of each child's nine responses was used as an overall measure of the relative strength of his health and appearance motivation.

The questions were combined into a single instrument that was group administered during regularly scheduled class time. To deemphasize the achievement test atmosphere that attends any such administration within a classroom, each page of the questionnaire was prepared on different colored paper. The potential subjects were assured of confidentiality and anonymity. They were also assured that there were no right or wrong answers and that the questionnaire was not a test. They were permitted to decline to participate if they wished. In all classes, to insure standardization, each item was read aloud. The sessions generally lasted from about 35 minutes for the higher grades to 55 minutes in the lower grades.

In Sample I, perceived vulnerability was found to increase developmentally until about age 14 and then decrease. Among respondents younger than 12, inner city youngsters had significantly lower levels of perceived vulnerability than non inner-city youngsters, but among those 12 and older these socioeconomic differences disappeared. Females had significantly higher levels than males. In Sample II, levels of perceived vulnerability increased over the two year period and were also directly related to socioeconomic levels. In Sample III, perceived vulnerability decreased over the two year period, and females generally had significantly higher levels than males. No socioeconomic effects were observed.

The significant age-related changes bear further scrutiny. The youngest group in Sample I, those aged 8 and 9 years, had a mean score of 3.74. The highest score, that of the 12 and 13 year old, was 4.26. In Sample II, the means progressed from 3.49 to 4.21, and in Sample III from 4.34 to 4.23. Clearly these hover around a point of neutrality. In relatively natural environments these beliefs do not change appreciably by themselves. Change in the direction assumed most desirable by health professionals is more likely to occur prior to age 14 or so, than later, but the degree to which it does occur, while significant, is still minimal. By the time the youngsters had reached our sample, they had already acquired relatively stable beliefs about being vulnerable to health problems.

Socioeconomic effects warrant some discussion, too. These occur only among the youngest respondents, where those from the inner-city and lower socioeconomic levels do not believe themselves as vulnerable as do those from non inner city areas and/or higher socioeconomic levels. But among older respondents no such effects were observed. Some of the myths that have become part of the saga of the "culture of poverty" would lead us to believe that persons in the lower socioeconomic levels do not

have beliefs appropriate to taking preventive action The evidence suggests that among older children—and by inference adults— this is not true While cultural norms and or socioeconomic factors may account for differences in beliefs in early childhood the cumulative acculturating effect of increasing exposure to the larger community and to the media soon eliminates these differences

The significant sex differences do not perplex us The socialization process of our society makes females more aware than males of a variety of potentially distressing environmental and experiential encounters, and more comfortable about admitting anxieties and concerns about bodily danger

So much for the demography of perceived vulnerability In what way are beliefs about vulnerability interdependent? Statistical analyses on these data as well as on those from earlier studies reveal that significant correlations exist among the individual expectancy scores

A youngster who has a relatively high expectency of encountering some one health problem has relatively high expectencies of encountering others The young person who believes he is almost certain, for example, to have bleeding gums during the coming year will be likely to maintain a similar belief about an upset stomach Conversely, a child who believes there is no chance of getting a rash will be likely to have a similar belief about the flu These relationships hold regardless of age, sex, socioeconomic status, race, time of year, health problems selected and item format They are not spurious! They argue clearly that within an individual child s belief there are relationships among expectancies about health problems, illnesses and accidents, that there is, in fact, interdependence among these beliefs In short they argue that beliefs about vulnerability behave as a system

There is another way in which we can observe interdependence. Each of the samples can be categorized into subsamples in terms of age, sex and socioeconomic level There were sixteen subsamples in Sample I, eight in Sample II, and six in Sample III For each subgroup, the mean scores for each health problem were obtained These means were then ranked An analysis of the similarity of these rankings reveals that they are highly and significantly correlated Across six, eight or sixteen groups, those problems that are least expected in one group have similarly low expectancies in other groups, those that are most expected in one group have similarly high expectancies in others Markedly similar rankings are observed regardless of notable demographic differences This clearly argues that a sample s belief about health problems constitutes an invariant pattern or hierarchy or in other words a set of ordered relationships, or organization, or interdependency exists In short, they behave as a system of norms

There are some important implications of these findings for health educators and planners. First, left on their own, youngsters' beliefs about vulnerability will not move away from a neutral and possibly maladaptive level. To the degree that later preventive and adaptive behaviors depend on beliefs about vulnerability, such behaviors may not occur. A major thrust for concerned health professionals should be shaping more appropriate levels of perceived vulnerability in younger populations.

Second, approaches to inducing change in levels of perceived vulnerability have too long and too often centered on a single target belief. The systemic characteristics of vulnerability beliefs argue the contrary. Individual beliefs are notoriously difficult to change because the other beliefs to which they are related anchor them and give them stability. Health educators and their colleagues should begin to devise and implement programs that are multitargeted, dealing with perceived vulnerability to a number of problems.

Third, much of our thinking and energy is perhaps inappropriately focused on specific problems rather than on a comprehensive view of health. For example, we have dental health education units isolated from general health education programs. Yet beliefs about dental problems are systematically integrated with beliefs about nondental problems. Perhaps our efforts would be more effective if our energies were less compartmentalized. Programs then ought to be more comprehensive than they now are.

Let's return to health motivation. In Sample I, health motivation was found to decrease significantly and linearly with age. Among respondents younger than 12, those in the inner-city have significantly higher levels than those from non inner-city areas. This socioeconomic difference disappeared after age 12. In Sample II, health motivation also decreased significantly and linearly with age and was also inversely related to socioeconomic status. In Sample III, among low and middle socioeconomic-level females, health motivation decreased significantly and linearly with age. No socioeconomic effects were observed. No consistent sex differences were observed in any sample.

Again, it's appropriate to take a closer look at the data. Only among the very youngest respondents, those 9 or younger, is there even a relative preference for health over appearance, i.e., a mean score greater than 1.50, and this decreases markedly with age. Health as we've measured it is not a strong motive in these samples, certainly not as strong as appearance, and by inference not a strong motive in adult populations. But among the very young, health professionals may find a rare opportunity to engage health as a stronger motive, an opportunity absent in other target populations.

When we look further at the socioeconomic effects among the younger

respondents the challenge becomes more clearly defined In Sample I, among 8 and 9 year olds and 10 and 11 year olds, the inner-city respondents had significantly higher mean scores than those in non inner-city areas In Sample II scores were significantly and inversely related to socioeconomic status Clearly health motivation is strongest in the most socioeconomically deprived and youngest segments of the populations sampled To the degree that motivation energizes directs and organizes behavior educational programs that assume and are based upon the existence of strong health motivation should be most effective in these groups.

Many professionals in health and other fields find these observations discordant Typically they've responded by stating that they know that the poor and the structurally deprived do not value health because the poor and deprived do not utilize health services The fallacy in such thinking rests in the ad hoc equating of motives and behaviors and in inferring the former from the latter Utilization of services is determined by a complexity of factors important among them economic ones, but the present research findings measure motivation independently of behavior, and the results may be disquieting to a number of professional stereotypes.

With older populations programs based on the existence of strong health motivation may not be as effective as those based on other motives, such as concerns for appearance or for one's image as an attractive sex partner But the precise content of such program appeals is of less concern to an audience such as this The greater importance of the findings to you is their suggestion that in the absence of evidence we should not assume anything about existing motives in our target populations An important task for health educators and planners is the development of a broad knowledge base about the real motives and values of target populations, regardless of age The development of measures of such motives in very young children is a great challenge These would assuredly have to be nonverbal and possibly pictorial or game-like in character. And the need for such an instrument has to be impressed by professionals like yourselves upon agencies which through their funding policies, control the directions in which research is conducted

Since perceived vulnerability and health motivation are themselves part of the youngsters cognitive system—i e that larger psychological component containing beliefs and values among other things—the relationship between them is of immediate interest A significant relationship was observed between perceived vulnerability and motivation in samples I and II but only in sample II was there any apparent linearity, increasingly high vulnerability scores were associated with decreasing levels of motivation. In sample I low and high levels of perceived vulnerability were associated with higher health motivation levels the middle range of perceived vulnerability with relatively lower levels of health motivation. No relationship

was observed in sample III.

The data thus indicate that beliefs about vulnerability and health motivation are two distinct psychological characteristics, although at early stages of development there may be some inverse relationship between them.

Just as nonsociologists overemploy and otherwise misuse terms like "role" and "status," so too do nonpsychologists abuse the term "motivation." Motives are *not* synonymous with beliefs, intentions or incentives. Yet many health professionals who conduct psychosocial research sometimes broadly group all psychological characteristics under the rubric of motivation. "We have to motivate them" is a phrase too often heard in planning and developing programs.

The findings thus support the argument that it is necessary for professionals to distinguish clearly between these two psychological characteristics. Perceived vulnerability refers to a system of beliefs about a person's chances of encountering health problems; health motivation refers not to a system of such expectancies but to a system of preferences. In populations where the existence of certain psychological characteristics is erroneously assumed by professionals, educational and delivery programs based on these assumptions run a risk of being ineffective. For example, in very young, low socioeconomic populations, programs that assume both relatively high levels of perceived vulnerability, consistent with high unmet health needs, and also relatively low levels of health motivation, consistent with the impoverished mythology of the "culture of poverty," would not be congruent with the real psychological status of the population. Similarly, among older populations where relatively high levels of perceived vulnerability may in fact exist, programs that also assume that health motivation is itself relatively high would be inappropriate.

The three concerns that generated these research findings have thus lead to some relevant implications for professionals interested in early childhood health education. In summary, these professionals are strongly urged to:

- Focus on molding appropriate beliefs about vulnerability to health problems.
- Treat these beliefs as a system. Be multitargeted and comprehensive.
- Question critically the validity of all assumptions about the psychological characteristics of target populations.
- Clarify in their own minds the specific psychosocial characteristics with which they deal, taking great care not to blur the lines between them.

Building Community Health Programs to Promote Child Health Through Multidisciplinary Teams

by

Beverly Ware, Dr. P.H.
Assistant Professor of Health Education
School of Public Health
University of Michigan

We will begin the sessions today with a journey over territory familiar to all of you, for being a team member or working in community programs is what we've all been doing. I will spend a little time reviewing what a team is and specifying the several dimensions which have significance for effective team functioning. Then I will present some strategies for working in a community and assess each one in terms of use by a team interested in child health promotion. Finally, I will suggest a few directions and cautionary caveats about building community programs in child health through the use of multidisciplinary teams.

Before launching into the definition of a team and its operation in child health promotion, we may find it useful to step backward and ask, first of all, why teams? It seems that most of us have grown up in our professional fields with an implicit understanding that functioning in teams is an integral part of our activities. But why? It may be because the team concept has been around a long time, especially in public health. Coulter,[1] in one of the early books written on the team concept as it applied to the nurse, cites five events which have been of importance in the development of teams in public health. These include the multidisciplinary nature of health agencies in bringing together various types of health workers in one agency, the emergence of well-defined techniques to guide group work, the renewal of faith in the democratic process, advances in the medical and allied professions which have been both highly technical and highly specialized, and the delineation of specific activities and responsibilities to different professional disciplines.

While these reasons may have been the rationale for team work twenty years ago there are likely to be many other reasons for its use presently. Some of these might be 1) the complexity of problems being dealt with currently, which are multi causal in nature and affect many aspects of the person—his

social, psychological, physical, and cultural nature and many systems—educational, social welfare, health, and recreational; 2) a renewal of interest in comprehensive delivery of services; 3) a need to better utilize resources of time, money, personnel, and equipment as efficiently and effectively as possible; and 4) the highly specialized nature of professional development and service delivery.

It would be possible to spend considerable time and effort to develop further the rationale for the use of teams in the area of early childhood health education. But no further comment seems necessary since you would not be here today if you were not interested in, and in some cases, already committed to the team approach.

What is it then, that we are talking about when we so readily say a team approach may be a fruitful direction to pursue? At its simplest a team may be thought of as a group of individuals who have found it more expedient to work together than to work alone. A more refined definition of a team offered by Richard Beckhard is that it is a group with a specific task or tasks, the accomplishment of which requires the interdependent and collaborative efforts of its members.[2] Both definitions indicate generally what a team is, yet in each case the definition is followed by a lengthy discourse on the nature and characteristics of teams, illustrating the need for an explanatory as well as operational definition.

Dimensions to the Use of a Team

There are a number of dimensions to the use of a team, and within each dimension there are a number of issues that seem relevant to consider. These dimensions are the key to effective team functioning. In presenting these dimensions, I will be speaking of those which are early considerations, in contrast to those which may become important as the team begins to work together.

Formation of a Team

Any chronicle of team development usually begins with the group coming together. But how does it come together? Is it done, as is the case of this conference, by suggestion of conference leaders who have a grand design for developing a team approach to an area which is of interest to many different kinds of professionals?

Ronald Lippitt and Eva Schindler Rainman[3] pioneered the concept of Team Training for Community Change in Riverside, California simply by requiring that teams of people could be enrolled in training programs, not individuals. Nursing staffs within an institution or agency ordinarily form teams to carry out activities.

How the team is formed, whether by choice or by mandate, is of importance because of the implications for the future development of the team. If it is

mandated action that has caused the formation, the levels of commitment and interest to the team may be quite different among its individual members. If, on the other hand the team is formed by persons wanting to use the team approach there well may be a better environment at the start for future team development I also recognize that there may be many problems in forming a team such as the need to open channels of communications, to develop viable connections and to be willing to risk a new venture But I wouldn t be here today if I didn t think there s much more to gain than to lose in a team approach

Type of Team Formed

In addition to how the team is formed, consideration must be given to the type of team formed Teams may be composed of persons in the same professional discipline and with the same status, for example, all public health staff nurses form the same department A variation of this team is one with all staff nurses but from different parts of the same agency or from different agencies in the community Also possible is a mix of status within one discipline such as some staff level nurses and some at administrative levels.

A team may be multidisciplinary that is, there are members from different disciplines such as a social worker, health educator, and nurse. While multidisciplinary teams always include professional personnel of either the same or different disciplines, they may also include paraprofessionals or consumer members Multidisciplinary teams may be formed within one agency or with membership from different agencies. Multidisciplinary teams may have a distinct advantage over other variations of team formation in that they best typify the notion of a team By way of contrast, consider a football team with only guards

An additional factor in team formation which is likely to affect all aspects of team functioning is that of size A general rule of thumb used in group work is the smaller the better Most teams reported in the recent literature number no more than five members,[5] but there have been many instances of larger sized teams Many teams in neighborhood community health centers that provide comprehensive care were composed of eight to ten persons plus additional back-up support [6] In deciding size of team, one should give consideration to the time available for team activities, the geographic distance among team members, the ability of teams to make use of ad hoc consultants, and the general purpose for having a team.

Establishing a Common Goal and Common Objectives

It can be said hopefully that everyone in this room this morning is for development of early childhood health education, that s why we are all here Yet how do we who have come here as part of a team, translate our

common goal into a series of activities or tasks toward which we direct our efforts?

The process of setting specific objectives can be frustrating and time consuming. It involves data collection not just from the members of the team but from other forces existing that may have a potential effect on our projected goals. What if team members have differing perceptions of what is to be done? To the degree that the team is successful in identifying common goals, objectives or tasks, there is also success in the acceptance by the team of the need for joint planning and decision making. Freeman[7] emphasizes the need to balance one's goals with those of others, focus on the commonly agreed upon goals, and subordinate personal interests to the welfare of the group.

Developing the Ability to Work Together

Rubin and Beckhard[8] reporting on the effectiveness of health teams in a New York City Health Center, indicate that a crucial aspect of such a group is its ability to manage itself. The ability to work together is demonstrated in the emergence of mutual respect and confidence among team members, the ability to clarify role expectations and activities, and to accept working as a member of a team.

In task-oriented teams who early determine a specific set of objectives, clearly defined, there may be little effort made to establish a good working atmosphere. Attempts directed toward this end usually take the form of identifying the particular areas of interest of each person with emphasis on the resources each one brings to the situation, with little attention to personal values or expectations.

Sometimes team members have worked together under different kinds of situations, or have a variety of past experiences in groups. These are part of what a person brings to each new group. Teams that take the time to clarify the expectations of each team member—in terms of roles to be carried out and work to be done—will find they have a more tangible basis from which to both clarify differences and work toward achieving a recognition of mutual need and collaboration.

Instituting Methods of Team Functioning

It does seem somewhat artificial to separate this dimension from the previous one. Yet there is a difference that occurs within a group that is solely task oriented and one which pays attention as well to the process going on within the group in carrying out the task. In many instances, a team may develop the ability to work together by instituting minimal methods for team functioning. For example, setting agendas, transmitting minutes, and developing a plan for operation are all valuable aspects of team functioning.

There are in addition group maintenance issues that should be addressed as part of the team functioning. These include issues relating to leadership decision making, communication and norms. Acts of leadership are necessary in any group situation Is there to be a leader, selected or elected who will perform these team functions, or are they to be shared, either through a system of leadership rotation or through a system that divides and assigns tasks among all team members? How decisions are to be made should be articulated early Is there to be consensual or majority decision making? Is there to be voting each time? The decision-making process chosen has a decided effect on communication patterns. To arrive at a consensus ideas must be shared, listened to, addressed. Members must actively participate More formal decision making may result in a more formal kind of communication pattern, where feelings never get expressed

Finally an awareness of the explicit and implicit norms governing the group behavior may also affect team functioning. The implicit norm established in a team to defer to the physician, to treat that member as "special", may be detrimental to the ability of the team to function effectively.

Monitoring and Evaluating Team Activities

A team should keep track of its own progress. Periodically, the team may want to treat itself as the patient and determine how it is carrying out its tasks or objectives There should be a self regulating mechanism within the groups so that members are kept aware of each other s activities, coordination of efforts can be assessed, and need for specialized training or for different roles can be determined. Such periodic review can serve to assist members in evaluation, both of individual performance as well as that of the total team

Personal and Professional Development

The experience on a team should contribute to the development of the individual members The team provides a learning situation—a time for sharing, for defining and perhaps redefining roles—to gain insights into a problem solving process, to further develop skills, and to work independently as well as interdependently It should make us in the future better able to link with the people and systems that are part of our working environment

Freeman[1] provides a capsule summary of what being a member of a team is all about the willingness to listen as well as contribute, to learn as well as to teach to lead as well as to follow, and to share authority as well as work with it

Operation of Teams in Community Settings

[illegible] have been discussing the dimensions of effective team [illegible] including the issues that are of importance in team development [illegible] of concern also is the use particularly of multidisciplinary [illegible] building community programs. It is most feasible to consider the [illegible] of teams within the context of developing community programs as a special application of the use of teams. Often the community assessment a team becomes the responsibility of the health educator or the public health nurse rather than the total team. As we examine the use of teams in building community programs we will do so in the context of the total team becoming active in the community.

My example is that of a multidisciplinary team of three persons from the same geographic location in Michigan all of different disciplines and employed by different agencies. They have not worked together previously but share an interest in the development of early childhood health education programs. By now these three know something about being a team, but what do they do when they return home?

First and obviously they must begin to start functioning as a team. In doing so they will inevitably get to the problem of defining what it is they want to do and for whom. If the team is attempting to develop a program or program directed at a specific target group within a community, or even at the total community, it must be concerned not only with program goals, but also how to reach these in terms of the larger problem of organizing a community.

The [illegible] community has a structure. It may be a nonstructure in that what holds the community together is that it happens to be a defined geographic area for that certain persons all send children to the same day care center. A critical matter in community organization is not in the defining of the target group or community of choice, but rather what is implied in the term. Community organization as an entity is a method of intervening through planned action to influence social problems.[10] It is the notion of planned action which indicates that a team working to direct efforts to a community must not just plan but also act.

The team begins its work in the community with a planning process that is quite familiar to all of you. It includes those activities most professionals engage in with respect to planning, but in this case done within the context of the defined community and as part of the process the team used to develop itself. The basic elements of planning for community actions include identifying problem areas, diagnosing the readiness, potential, capability, resources, and motivations for addressing the problem; and then setting goals.

The process of acting emphasizes the coordination of team members and their functioning independently and interdependently. The actions in

a community organizing effort also require a basic operational strategy to underly everything undertaken There are a number of models for community action, and community workers tend to be wedded to specific ones.

The team must decide what strategy or strategies of action it will adopt. There are a wide variety of choices, some strategies have been around for a long time Collaboration is one of these, the joint working together of professionals and the community

Collaboration is utilized in the planned change model of community organization It stresses a sequence of activities undertaken systematically in collaboration with a client system, which may be a person, group, community or agency It begins with identifying with the target and the need for change, moves to diagnosis and planning, and then to action taking. The team which utilizes this strategy would function as a facilitator of change [11]

A more traditional collaborative strategy is based on the community development model of community organization Here the effort is directed toward getting the community to work on a problem already identified by those wanting to collaborate with the community. The team in this case would function as catalysts, experts, and planners [12]

A campaign is a second major strategy used in community activites. There are variations to this general strategy For example, the team could decide to have representatives of the community come together with them to collect and analyze data concerning problem areas and plan for what should be done This is typical of community council activities where a few are planning for many Imaginative methods for gaining acceptance must then be employed in the action phase, and the team must develop ways of reaching the community at large

The campaign strategy has a certain amount of appeal. It brings together representatives of agencies with the team to plan for the development of promoting child health The team, however, must address the implementation in terms of waging a campaign based on persuading the community.

However, there are some newer strategies beginning to take hold as effective ways to build community programs One is the strategy of *training*. The hypothetical team I have been addressing might go home and become the basis for developing training for a variety of teams in their geographical area

The team might adopt the strategy of moving itself into a new and exciting activity In this instance it is a *catalyst for the development of community self-help groups* It may seem to be a return to an older day, but why not develop groups which like Alcoholics Anonymous, take on the responsibility and maintenance of the group for its own ends? Why not self-help groups to promote child health? There are many precedents already for the formation of such groups in the health field around areas of interest and concern [13]

Similarly the concept of reaching out to already existing natural groupings of friends and relatives has also been suggested as a strategy for developing community programs.[14] This strategy emphasizes finding naturally-occurring support systems to utilize.

There is yet another strategy that has developed recently with the proliferation of both agencies and professions and the dissolution of the traditional community. This is a strategy for finding ways to *link the many separate parts and groups in a community*.[15] The team itself brings together persons interested in promoting child health as well as bringing together like-minded groups in the community.

I have not yet mentioned the *social action* strategy as being feasible for teams. Social action implies the use of confrontation to produce changes quickly. Experience with such a strategy in promoting the fluoridation of water supplies and sex education programs in schools indicates that considerable caution is needed. Social action relies very heavily on a well-trained community organizer to direct the efforts of the team and a heavy involvement on the part of the target group or community.

To be effective, teams must use a combination of strategies which accommodate the nature of the community, the problems being addressed and the resources of the team.

In Summary: Some "Do's" and "Don'ts"

- Don't expect the team to be able to function without someone taking responsibility for team coordination.
- Don't neglect the process aspects for group functioning. Look at the way the team is working.
- Don't adopt strategies you are not able to carry out fully.
- Do use a team approach when diverse interests need to be focused on a common problem.
- Do define specific objectives and identify the resources in the team early.
- Do clarify role expectations of persons joining the team.
- Do agree on decision-making and problem solving processes to be instituted.
- Do address individual value differences; don't bury them or pretend they don't exist.
- Do identify team capabilities and areas of interdependencies.
- Do utilize outside resources as needed.
- Do realize the team is bigger than the sum of its components.

And finally, do bring a renewed interest in teams back to your own communities.

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Current Directions in Educational Programs for Young Children

by

Jane Schwertfeger, Ph.D.
Professor of Education
School of Education
University of Michigan

For those interested in the education of young children, the 1970's is a period of contemplation and assessment. I say this because after more than a decade in which we have focused upon early childhood, we are aware of certain issues and problems, and pause to assess what we have learned. It is a difficult, but important, time. Some of our thoughts are satisfying and positive, others disappointing. All are challenging. The period from 1960 to the present has been one where social crises and conflict have combined with breakthroughs in learning in all disciplines to energize a renaissance within the field of early childhood education. Such breakthroughs in philosophy, practice and theoretical research about the development and education of the young child brought us through an exciting period. Among these influences were new concepts of the nature of the development of the learning of the infant, new insights into the ways children develop thought processes and environmental influences on learning,[1] new interpretation of the structure of knowledge and early learning,[2] greater understanding of the effects of the family upon achievement,[3] and new data on the effect of early stimulation upon later life.[4]

These intellectual breakthroughs coupled with events on the national scene—such as efforts to improve the life of the impoverished and neglected child demonstrated by Head Start and the war on poverty, the presence of anxiety about school achievement demonstrated not only by low income parents but because of the economy, by those in middle and upper income brackets as well; the women's movement dependent upon the school for child care; and the lure of child care and education as an area for private enterprise—have provided a credible rationale for educating children under the previously accepted age of six years. From these events arose national, state and local involvement in terms of influential

policy decisions as well as money expansions of early education as a profession as well as a business enterprise and a general acceptance that young children should be educated in groups in their home or someone else's

These forces explain the reasons behind the early education movement. They also explain some of the conflict disappointment, and strength arising from it in relation to educational programming They especially have affected the beliefs we have about who should be educated and what such programs should involve including specific curriculum and methodology, and who should serve as teacher or caretaker They strongly affect the necessary allotment of funds and policy decisions Often they have blinded pressure groups to all but their own needs, closed communication and cooperation and at times brought about efforts that benefit all except the child

The Educational Program

In certain ways we have improved the learning experiences for chidren, in others we have become so enmeshed in developing programs which are innovative or demonstrate the idealogical or philosophical needs of planners that they are inappropriate to the development of the child and how he learns Anxiety about achievement and the problems of accountability, and the lack of understanding of the child have brought about the use of drill on formal reading and math concepts with three and four year olds. Highly structured package programs have also been introduced which ignore what we know about cognitive and physiological growth and downplay a chance for the child to be creative or develop the social and emotional skills so important at this landmark-stage of development. Many programs impose negative influences on learning and omit opportunity for expression of feelings

On the positive side, we have curriculum models based upon sound psychological theory These may be duplicated by the theoretically uninitiated for we have field tested, evaluated and improved them. And because of this we have trained professionals who understand that program planning evaluation and high teacher involvement and motivation are imperative to program success We have influenced attitudes toward the learning of younger children even infants," and effected changes in the elementary programs which follow

Effect of Early Enrichment Programs

There is evidence that by giving a child a positive, well planned and carried out group experience during his third and fourth year, he will improve in language learning and improve scores on intelligence tests. This change will best be demonstrated by children who have had impoverished

or unusual learning opportunities in their homes. Such gains appear to maintain throughout the next three or four years in elementary school and at times help these children succeed better in the tasks of reading and mathematics or steer them to more positive school placement with accumulative positive effects.[4] Similar gains by children without a preschool experience after entrance to school at five years, or by children with enriched primary school programs, have dampened the optimism of supporters who earlier proclaimed early enrichment as a panacea for all of the ills of society. It has even caused some to ask the hard question "If we can get similar gains by improving elementary programs alone, why preschool programs at all?" The suggestion that we reach young children with enrichment programs at an earlier age developed greater interest in infant programs, but even these have not, to date, demonstrated solid evidence of their value in permanently changing cognitive strengths. Continuation of a stimulating learning experience into the early elementary years is now being evaluated by federal Follow-Through Projects.[5] Furthermore, the field has turned to evaluation of the methodology as well as to a further search into gains in socialization and emotional development resulting from early enrichment.

Disappointment with certain findings has caused us to look toward curriculum and method as important variables. We are continuing to question whether a better or different educational program, or whether a continuation of enrichment into the primary grades, will improve or maintain learning gains.

Effects of Specific Curriculum and Method

The urgent need to justify expenditures of funds and to show concrete changes in achievement to meet current demands for accountability has brought forth a host of curriculum models and methods, many of which are in direct opposition to each other in structure and content. Such models range from those with a theoretical base such as a Piagetian-based curriculum[6] to mere suggestions that later reading achievement will be improved by early reading to a child, while holding him on your lap, or through the use of learning materials such as Montessori equipment or educational television.[7] A spectrum of language programs demonstrated by highly structured drill in Distar,[12] tutorial methods,[7] and an approach derived from formal conceptualization of human psycholinguistic processes and intelligence as in the Peabody Language Development Kit[13,14] have developed. The mystique of Piagetian thought (impressive, but descriptive of extremely dense conceptual framework, both arduous and subject to error) has influenced the development of a number of curriculum models which propose to develop the child's intellectual competence through self activity and questioning.[15,16] Structured, theoretically

based activities where children are active participants in their own searching of multiple and varied learnings describe the Cognitively Assembled Curriculum.[14] The English Infant School approach described by those anxious for a more child centered curriculum and the Montenssori approach have been used successfully by persons who wish to free the child from adult-imposed structure.

As is evident there is a method for all men. In this context, my earlier remarks about program sponsors make even more sense in that each model is developed and carried out to fit the values and needs of a particular group. And that is probably as it should be. For example, Montessori enthusiasts seek a benignly organized, status-imposed, curriculum for those who are comfortable with a defined, proper environment. Currently in the United States Montessori programs are sought by middle class, upwardly mobile, white families. Those parents and teachers who are anxious about later school achievement, whether they see it as a way to help their children fulfill the American dream of success or merely to show academic or intelligence gains in order to justify demonstration or research funds, seek theoretical constructs and most often a formal, organizational structure in order to develop proficiency in concept building and language. Those seeking alternative models to current public school experiences value open organization, child centered, not teacher-centered learning and opportunity for child and staff to do his own thing. The single parent family under stress to find all day care for a child and the child care director facing budget pressures often stress that they do not want a learning program, only safety and kindness, therefore, there is *no* need for professionally trained staff.

It is apparent that the current state of education of young children, as with most educational levels, results from a complex decision-making process, often thoughtful and rational, but perhaps recently influenced more by intuitive feelings about what young children need—highly personal needs and values—than social, cultural and economic events. And all of this operates in a field of education which because of lack of previous public commitment has exploded in size and scope. A major weakness has been the lack of a well informed understanding of and commitment to child needs among those who have undertaken responsibilities in the early childhood field.

Planners now appear to be more acceptant that there is not one best model or curriculum, but we still are confused about content (what we stress) and method (how we will present it). Aside from survival skills, cues derived from developmental psychology seem most promising.[15] Certain projects have demonstrated that if we have clear goals for what we wish to teach, a structured organization in which to present material, and a highly motivated and resourceful staff plus parent contacts, the use of a particu-

far model does not matter in terms of changes in intelligence scores and language development."

To summarize at this point we know that there are measurable benefits to young environmentally impoverished children in terms of increase in intelligence scores and language skills but we are at a loss to explain why such gains are not more evident after a period of time when children in early enrichment programs are compared with those who were not. Those who work with such children cannot help but be aware of other benefits such as improved motivation to learn or social skills but we still cannot demonstrate this by other than individual examples.

We know that the many new curriculum models are helpful to teachers and planners especially the untrained, but that singularly no one model meets criteria of excellence for all situations. And, the majority are best used for specific children when chosen by knowledgeable staff. It is most unlikely that one model will meet the needs of all the children in a setting. What we need is personnel able to prescribe and carry out developmental, individually planned programs.

The teaching programs now stressing only formal learnings, especially formal reading for two three and four year olds are ignoring the developmental understandings we have. Some young children are reading formal material and need support and help but the majority are not, and this is especially true in groups where there are children who have not been raised in a stimulating learning atmostphere. These children need a host of language and concept-building experiences, not teacher imposed, vicarious learning tasks plus opportunity to enhance the positives of self motivation and creative learning. Public funded enrichment programs, especially appear to extend experiences appropriate for six and seven year olds downward. Large group instruction, teacher imposed, and highly structured methods are not appropriate for the majority of preschool age children. And the absence of creative experiences—art, music and expressive movement which should be a major part of any program—is evident. The use of play as an important means to present concept understanding and creative expression is too often ignored.

I understand the anxiety which supports formal instruction and the security it gives adults, and I am not saying that planning, attention to content and active teacher participation are not necessary, but they should take the form of planning which attends to each child's abilities, puts emphasis upon concept understanding coming from active (not vicarious) involvement and considers the development of each child. A good learning experience provides and supports a rich and varied learning environment; it does not impose it."

Issues Affecting Program Quality

Individual staff must design program goals. Most probably such goals

are based upon individual and group values and motives This process is confounded by the culture and strongly by the idiosyncrasies of the child himself—his physiological emotional and cognitive equipment and his life experiences plus the social values of his family We are challenged to match the goals of a society and a family, and those of a staff, especially the teacher to the personal development and personal capabilities of the children

Planners must be cognizant of how children develop and learn, and must be informed about the curriculum choices, the staff, materials and environment they can provide Since planning is not a task with simplistic answers decisions are best arrived at by a total staff It is probable that selection from many curriculum approaches, by thoughtful, informed persons is best for the majority Well informed, highly motivated teachers are major persons they are informed of the issues of learning, know the children, and must carry out the directives

Providing a quality educational program for young children demands staff who understand the complex issues I have described and who are knowledgeable about how humans grow and develop. Also, they must be motivated to work in a field demanding thoughtful preparation and decision making based upon knowledge They must be able to work productively with children and adults at the physical tasks which groups of children require I am describing persons who have chosen to work in this area of education and thus have prepared for it, and who have the wisdom and commitment which come from seeing the issues change and develop. Such persons may come from paraprofessional ranks or they may come from disciplines related to education, but they will seek to become knowledgeable in the areas in which they will work

There are circumstances in Michigan which currently do not enhance educational programs or even support quality staff The issues they raise are important to all programs and need action in terms of disagreement or support

The Michigan State Legislature does not appropriate any funds to the State Department of Education for supervision, maintenance or evaluation of pre-primary programs There is no state aid given to local school districts presently operating such programs. Nationally, eleven states offer state funds for this purpose [1] There are funds for kindergartens, enabling legislation Act #88, Michigan Public Acts of 1972, allowing local or intermediate school districts to provide funds for local programs, and there is approximately $155,000,000 of Federal Funds provided for Title I and Head Start programs Of this only $72,241 is marked for professional development of staff

Currently, there are no agreed upon state guidelines for professional qualification of teachers or other staff in early childhood education. The

most appropriate certification includes a State Elementary Provisional Certificate with a Z endorsement in Early Childhood Education. Currently, only four of the state training institutions are allowed to use the Z code. Others are debating training or training on a pilot program status. Confusion, competitiveness, and duplication of programs come from this. Although a State Office of Education appointed task force is working on this issue, the situation causes training programs, teachers in preparation, and children to suffer.

There are not appropriate guidelines for those preparing to work with young handicapped children in the rapidly developing programs for this particular group. In order to receive funding, project teaching staff must hold an Elementary Provisional Certificate with Special Education Endorsement. There is no suggestion that such training includes preparation in the understanding of the development or education of the young child, especially the landmarks of normal development.

Presently, the Department of Social Services of the State of Michigan has in preparation guidelines pertaining to the Requirements of Child Care Organizations in the State of Michigan. These were authorized by Act No. 116 of the Public Acts of 1973. Hearings for these requirements will be held in the fall of 1975. Representation of the child care community has generally improved these guidelines for those caring for young children. But there are important deterents to improving the educational aspects of such programs. Two of particular concern are as follows.

1) All groups, whether educationally oriented or not, will be designated as *child care facilities*. This ignores the concept that many groups are organized for specific educational purposes and that in all centers, education (good or poor) is taking place.
2) Proposed staff qualifications necessary for licensing designates that the director or one person on a staff will have two years of post high school training including twelve hours of child development or early childhood education.

These two proposed guidelines are not supportive of quality developmental programs. In fact they move directly in opposition to that by title and these staff and program guidelines. The encompassing term "child care" is a misrepresentation of the goals of an educational experience. And although an effective care program may come from uninformed staff or by trial and error, duplication of mistakes does also. Appropriate curriculum planning and awareness of effective programming more often come with understanding the interactions of theory and content. Not all staff must be fully trained, but this suggestion that only one staff person have minimum training in early childhood education or child development is inadequate for large centers.

The confusion inherent in current certification requirements is clearly

discriminatory for persons working in the early childhood field The attainment of professional preparation is difficult because of the complex demands of multiple and often inappropriate certification, and there is confusion about what is appropriate training. Those developing training programs are held from offering appropriate credentials by unclear policy. The demand for multiple certificates special education, learning disabilities for example plus early childhood endorsement, penalizes students trying to outguess future job requirements. Often teachers are not credited for work toward a permanent credential and, as a general rule, comparable or even better trained persons work at a severe financial disadvantage when compared to those at other education levels.[20]

For young professionals trained in early childhood education, it is nearly impossible to break into the public supported preschool positions, because of current economic pressures on job security and tenure commitments to elementary and other staff

There needs to be appropriate rewards for those working with young children recognition that this is a professional area of education needing the supervision involvement and funding awarded other areas, and clarification of the role of the Michigan Department of Education and the Department of Social Services in licensing, funding and certification of staff

The educator should be a part of a multidisciplinary team who works closely together Training of all disciplines should emphasize a strong and cooperative relationship, and training should provide knowledge of each of the other disciplines

This description of the current state of a rediscovered area of education has stressed the importance as well as the complexities of the early childhood education field It may often appear to be a simplistic and emotional, not rational area of professional concern Attention to its importance and especially support for it as a recognized area of education is much needed. It is one of the areas in which various disciplines have cooperated successfully in the past for human support there still is tremendous potential for that It is an area where the subjects appear less complex because they are small in stature and where we have all intermingled myth with emotions because of our feelings for the young In reality, however, it is a field where the questions demand even more thoughtful and rational consideration in order to develop a sound base for important future decisions.

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Summary

by

Scott K. Simonds, Dr. P.H.
Conference Director

As I look back on the time we have spent together, I think it has been profitable. Extraordinarily thoughtful ideas have flowed from the papers presented by our speakers and from the discussions of our small groups. I found Dr. Bower's allusion to Greek mythology and the predicament of Hygeia a provocative allegory. In Hygeia's inability to promote health despite vast curative powers, we are reminded of the opportunities and promises of public health education and preventive medicine which have been treated so shabbily and second rate in our health care system for too long. It is time for a change to occur! I sense this from my recent work with the National Conference on Preventive Medicine. I believe we have come to a turning point as a nation as we near the end of what has seemed like almost limitless resources. No longer can we afford to be extravagant and wasteful. The need to preserve our resources and the concommitant need to conserve our limited funds require that great attention be paid to preventive approaches to solving problems, including those which fall within the parameters of the human services professions.

In view of this professional challenge, I have been stimulated also during our conference to think about my personal and professional responsibility. Dr. Meyer's quotation to use from the Talmud seemed to sum up this predicament in a profound way. If I am not for myself, who will be for me? If I am for myself alone, what am I? If not now—when?

As I reviewed the papers which were presented, I wondered, as our banquet speaker did last night, how will we personally integrate this knowledge? for there has been a small explosion of knowledge right here in our midst. Those of use in the health field have been reaching into the field of early childhood education to understand the point of view and theoretical assumptions on which child development is based. And those of use in the early childhood education field have been reaching across into the health education field to understand some of its premises and

E. Bower, Dr. P.H. The Rushing Torrent of New Knowledge. Directions for Professional Education. Banquet Address.

or factors [illegible] ways we could put ourselves under the [illegible] more comprehensively for both health [illegible] education. But I wondered again as our [illegible] knowledge hold together? He asked the question, "How [illegible] weave this knowledge into a form that will [illegible]?"

On the one hand I heard us talking about the need to change the environment to provide [illegible] supportive and stimulating one. On the other hand I heard us talking about the need to stimulate changes in the individual and his family. We talked about inputs that ranged from intervention that [illegible] system requiring broad scale political action to interventions [illegible] communications with individual children or groups of children and their parents. I sensed as we went through these [illegible] together that there was controversy over whether we should [illegible] social and societal issues or whether we should put our [illegible] classroom into individual interventions with children and [illegible]. It seems to me that these questions do not pose an either or [illegible] but rather a matter of priority at any given point in time. It seems that we must plan individual, group, and family interventions that [illegible] growth but also simultaneously work at the broader social and community level to accomplish the changes that [illegible] to attain improvement of services and support systems. For the most part I think that we as a group of people in this conference [illegible] have been better at the former than at the latter. We have not been very sophisticated at social action.

As I went through the conference I heard a remarkable array of issues raised [illegible] punctuated by a pearl of wisdom. For example, most of us [illegible] to educate most young children merely through the provision of some program [illegible] regardless of whether we are going to work at the individual, family, or community level. There must occur the creation of resources and the organization of services that will facilitate [illegible] to improve the health of young children.

We also see the necessity for health education of individuals and families [illegible] specific personal and community health problems, for example, [illegible] and to improve dental health. And we see the need for health education of the community to bring about change, as well as understanding. Much was emphasized in the early part of our conference about the [illegible] community education to provide needed services. Along the way the question was raised as to whether to direct efforts to educate these children to adapt to a polluted environment, for example, or to attack the polluted environment through community

action—is less than the former. It also requires an organized educational effort of the individuals and groups who must support change if it is to be lasting. We have learned that flouridation and lead poisoning are still problems largely because the community has not been adequately educated or motivated to change. The issue of health education for-what-purposes more basic questions about the role of education in society and ideologies and value systems than anyone discussed in depth. It deserves our greater thought however.

In our discussions on the need to work for community action and public responsiveness it seemed to me came the notion that we had to work much harder at cross-disciplinary and cross-agency communication and collaboration. It is all too obvious that if we are all going in different directions nothing will be accomplished. Yet with a concern such as early stimulation education child development workers and health personnel must begin to listen to each other to find some grounds for the necessary working relationships.

I believe that everyone at this conference sees the needs for working in community settings. While it is clear from Dr. Ware's presentation that this need is greater now than ever before because of the complexity of community problems, the renewal of interest in comprehensive delivery of services, the need to make better use of our limited resources, and the increased specialization of training that each of us receives as professionals, the concern of participants has been how? One of Dr. Ware's major points was the determination of goals within the parameters of a common concern—in our case, the concern for the health of young children.

It is particularly important in this regard that we recall Dr. Hartman's discussion of equifinality, the principle that indicated several different inputs will produce the same result. This is something that I think most of us will accept at an intellectual level but really do not believe at an operational level in the community. Most of us operate as professionals as if only our discipline could accomplish what needs to be done. I recall also that Dr. Bower reminded us that we tended to define knowledge as something that "I know and you don't." Somehow our understandings and feelings about what we know must begin to be shared in new collaborative experiences.

I believe our discussions in small groups helped us to see how important it is for us as individual professionals to begin to shed some of our titles. Someone pointed out, for example, that we should take the capital D out of dentist, the capital H out of health educator, and capital E out of early childhood educator. The human problem (and the key issue) is how to think of professionals as individuals with skills needed to work on problems, rather than as individuals representing disciplines, and then to bring them together as a group on this basis. Can we do this by developing teams in our communities? Dr. Ware emphasized that the most important part of

team building is developing trust, that sense that individuals working together feel when they are accepted regardless of the discipline from which they come.

A question was discussed both in the plenary sessions and in the small groups about how much health education should be taught to whom and in what way. How much should be presented directly to small children? How much is needed to be taught to parents? How much health content needs to be taught to professionals who are going to work with them? Discussions ranged from the specifics of how you teach kids to wash their hands in a child care center to the generalities of an approach to teaching concepts of good health rather than mere disease control. Dr. Gochman's research clearly shows the need to be more comprehensive in our views of teaching about health. He urged that we be far more specific about our objectives because we can have no real evaluation without this and, thus, no way of truly knowing what we are accomplishing. He stressed that we should have to teach something about feelings, that is, how children feel about health matters, since talk about mechanics, such as tooth brushing, is not enough. In general, we were agreed that no teaching of young children would likely be effective without the support and understanding of parents.

Several models were presented of newly formed or forming, community groups to work on early childhood programs and services. The Ingham, Michigan County Health Department, for example, has just formed an Office of Young Children to work collaboratively with agencies in the community concerned with the health, growth and development of young children. The Livonia Michigan School system has stimulated the development of the Livonia Community Coordinating Council for Early Childhood Programs and Services. (See Appendix C for a description.)

It would appear that these new community coordinating mechanisms are providing useful ways for concerned professionals, parents and citizens to collaborate in their local communities to increase communication and to begin to work together to solve some of the care and nurturing problems of the very young.

While our focus in this conference has been the young child and the promotion of his health through education and services, our conversations have ranged to some of the broader social, health, and educational issues that create the settings in which we must work. Although much lip service is given to the needs of early childhood, we are basically a youth-oriented society, and the early childhood period is badly neglected. And although all of us here share concern for the rights of young children for health services, education, and adult supervision, the society in which we live has a long way to go to live up to anything near a children's bill of rights. Not only must we recognize the reality of this, but we also must rec-

ognize that the resources available for human services will likely not increase very much. In fact, they will probably decrease over the coming years. Since we cannot expect to go on forever expanding services, we must find better ways of making use of existing services and to face head on the priorities in our local communities.

There is one opinion that seems to have dominated all our discussions and most of you seem to share it. It is that if we are going to get needed services for young children raised to a higher level of priority within our communities, we must undertake stronger advocacy roles. That thought, alone is a heavy burden for us all. In conclusion, may I say I sincerely hope that our coming together to listen and to share will have given both of us just a bit more courage, just a bit more inspiration.

Recommendations

The recommendations which follow evolved during several workshop sessions in which conference participants, in groups of twenty-five, shared experiences and reactions related to material which had been presented by conference speakers. The diversity of background of participants provided a broad base for discussion and exploration of the topics. Each group developed its own systems view of early childhood health promotion and health education.

In the spirit of the conference, the recommendations represent options rather than complete consensus. They have been assembled under nine headings which reflect the major elements of the constellation of influences which contribute to the development of the health attitudes and behaviors of the young child. The first five headings encompass activities which must be implemented in order to provide a supportive framework within which organization for early childhood health education can take place. These activities range from an initial, but recurring, requirement to develop an awareness of the need for programs in this field, to the reality of dependency on financial support for their initiation and success. The second four headings encompass modes of presenting early childhood health education. They take into consideration that educators must be prepared to provide programs in community and school settings and that parents and young people as future parents, must be helped to understand the importance of the parenting role. Furthermore, they suggest ways in which health care professionals and support persons contribute to the child and family's orientation to health matters, and finally they stress the important role of the media.

Some of the recommendations will be acted upon by the Michigan Committee on Preschool and School Health Education of the Governor's Office of Health and Medical Affairs. Others will be implemented by the Great Lakes Chapter of the Society for Public Health Education. The Health Education Program at the University of Michigan School of Public Health will also provide follow-up activities. It is hoped that these recommendations will encourage other organizations and groups to take further interest in the field of early childhood health promotion and heath education in the form of follow-up research, policy development, and the provision of much needed resources and services.

I. Advocacy and Consumer Participation

Conference participants emphasized advocacy and consumer participa-

tion as among the essential elements for the development of an early childhood health education movement Activities were suggested for persons on the local state and national levels who work in some capacity with young children and their parents It is recommended that

1 Child health and education professionals develop an advocacy philosophy which defines the terms child health education and promotion of child health and which states their importance

2 National child-oriented organizations develop and support a national plan for child-health advocacy

3 Professionals working with young children consider health in a comprehensive way which includes the World Health Organization definition of health as a sense of well being over and above narrowly defined physical health

4 Health professionals consider health promotion in a family setting and avoid categorizing the family into units (such as maternal and child health) which artificially ignore other aspects of the family s environment

5 Child health and education professionals develop and support a system of family advocacy which emphasizes the needs of both the family as a group and its individual members in the context of the family

6 Those who work with or for children help to educate the community about the value of childhood health education in order to create community support for programs and involvement Community organizations must be approached to lend support Groups such as PTA s JC s women s groups and fraternal organizations should be contacted because they have impact not only locally but also nationally through their national affiliations

7 Local advocates of early childhood programs make communities aware of national advocacy activities such as those of the health and education sections of the National Council of Organizations for Children and Youth in Washington D C

8 Public and voluntary agencies encourage more consumer participation in local community programming for young children

9 Child health education and child care professionals encourage support and accept input from concerned citizens in the community and work with them to build local programs in early childhood health education Input should be sought not only from adults but from children as well

10 Advocates of early childhood programs influence the states to build health education into their day care licensing measures

11 State and local school systems advocate parenting education both for young people and for persons who are already parents

12 Community spokespersons and advocates be sensitive to the need for change in content and approach of health education activities for the young child so as to maintain their relevance

II Communication and Coordination among Organizations and Disciplines Concerned with Early Childhood Health Education

These recommendations highlight the need for comprehensive, unified activity on the part of the many organizations and professions which are interested in the well-being of the child It is recommended that.

1 Organizations which work with children develop a more coordinated and comprehensive rather than fragmented approach to early childhood services and education

2 The Department of Health Education and Welfare s Office of Child Development provide for nationwide communication, resource identification and coordination of agencies organizations which provide or have interest in early childhood health education This would facilitate cooperation and point out duplication of effort

3 State level agencies such as the Michigan Community Coordinated Child Care Agencies (Four C s) act as a clearinghouse for information on what s going on at the national state and community levels regarding programs health services and education for young children. Such a clearinghouse would encourage utilization of existing resources such as HEW s Office of Child Development county health departments, local Four-C s and relevant voluntary agencies

4 Concerned groups at the community level bring together those professionals and consumers interested in health promotion and health education in early childhood The convenor might be a health service agency, an early childhood education group a school, a Four-C organization, a health department or a voluntary agency This would facilitate identification of resources and community needs, and the development of plans and avenues for funding The Office for Young Children, recently formed by the Ingham County Health Department (Michigan) could serve as a model for communities interested in coordinating activities of day care agencies and other groups concerned with the young child This Office also serves as an informational resource for community education activities and involves consumers as well as agency personnel

5 Local child health and education organizations coordinate work of multidisciplinary teams in communities in order to develop strategies for early childhood health education These teams must work to overcome professional polarities and to be open and collaborative.

6 Community Coordinated Child Care agencies (Four-C s) widely publicize their purpose and programs

7 Four-C s and other agencies share more information. Health educators should be placed on mailing lists of local and state Four-C's organizations

8 School systems coordinate their services to expand school and preschool linkages and resources

9 Private practitioners of medicine as well as public health workers and other clinicians collaborate in health education activities in the community

10 Participants of this conference and other persons interested in early childhood health education have an ongoing (semi-annual) meeting in order to maintain contact and interaction

III. Diffusion of Information and Bibliographies

Conference participants widely recognized that there is a wealth of information on topics related to early childhood health education, but that it is not adequately organized or available for use by persons in child health and education positions It is recommended that

1 Early childhood health and education professionals obtain an updated print out of information on early childhood studies for health professionals and about child health for early childhood educators from the Education Resource and Information Center (ERIC)

2 HEW's Office of Child Development or a national voluntary organization which focuses on young children develop a bibliography which identifies resources and gaps in a) relevant research and demonstration projects b) audio-visual materials for parents to use with their children or in training of personnel c) sources of funding

IV. Areas for Research and Evaluation

The need for investigation into the many factors related to the health education and well-being of the child and family received considerable attention Participants stressed the need for applied social research which can be organized on the federal, state or local level It is recommended that

1 Psychologists sociologists physicians and child growth and development specialists undertake research to determine what factors are most critical in the physical social and emotional health of the young child

2 Child psychologists and appropriate specialists research how and when the young child established attitudes which affect healthy activity.

3 Researchers explore the utilization of the following possible educational intervention opportunities for children and or their parents. a) while the mother is with the newborn in the hospital. b) while the child is in a preschool setting c) while the child is in a day care home. d) when the child enters kindergarten e) during the child's years in school. f) during adult education programs in the schools

4 Researchers more clearly describe early childhood health education in regard to content methods and child's age at presentation.

5 Early childhood educators continue t direct research toward development of curriculum and evaluation of results of child care programs so that nformation and rationale can be used for the continuing development and operation of child care programs

6 Child growth and development specialists and early childhood educators develop a model health education curriculum which joins child development theories with manageable health concepts. The curriculum should include interesting play activities which can be incorporated into the home environment and day care center operations. The activities should motivate the child to become interested in his/her health and encourage positive health behavior

7 Early childhood educators and day care workers administer demonstration programs with careful evaluations, in order to determine the effectiveness of health education programs.

8 HEW s Office of Child Development support mini-grants to encourage community agencies to assess the effectiveness of programs and services for the preschool child and parents, including skills in parenting with a major emphasis on the affective, socialization process.

V Funding Mechanisms for Early Childhood Health Education

The development of funding sources was found to be a major priority in the establishment of early childhood health education programs. The following are strategies for both the location of existing support and the building of new financing channels It is recommended that.

1 Interdisciplinary teams of professionals in child education and health locate sources of funds for support of early childhood programs, such as revenue sharing

2 Child and family advocates build a public support base for early childhood health education sufficient to place it in the permanent budgeting process of local governmental units state or federal government.

3 Child health and education agencies on the federal and state levels initiate more downward communication regarding their sources of funding for community programs

4 Civic groups, parent groups, and others identify and communicate with decision makers on the local level regarding needs for funds for early childhood health education programs

5 Advocates of early childhood health education make sure that funding mechanisms are specified in federal and state legislation which mandates health education in the schools Otherwise, appropriate legislation cannot be implemented due to lack of funds

VI. Professional Preparation and Continuing Education

The education and training of personnel was regarded as a fertile opportunity for development of attitudes and skills which can promote early

childhood health education. Participants were interested in providing personnel with health education skills and also with creating among personnel an interdisciplinary approach to their work. It is recommended that

1. University curricula and training programs for persons in early childhood education emphasize the concept that the child makes contact with many different professionals, and that in order to have an impact, professionals from different fields must work together and learn from one another. This interdisciplinary appreciation should be developed from the initiation of a person's training so that he/she will be more receptive to seeking resources, sharing information, and working collaboratively with others.

2. Educational programs for persons in child-related disciplines facilitate the development of an awareness of one's values and biases which underlie professional activity.

3. Training for child health and education personnel enable participants not only to develop their talents, but also identify and admit their limitations. Professionals should be encouraged to dissolve professional barriers.

4. University student teams from different disciplines have joint field work placement programs to provide team experience in working with persons from other fields and to emphasize the commonality of all human service work.

5. Health educators receive more preparation in early childhood growth and development and educational methods appropriate in early childhood.

6. Preservice and inservice education programs prepare teachers of preschool and later levels to teach health education. Teachers must realize that they can use basic educational principles to relate health matters to everything they teach, so as not to segregate "health education" activities from other routine or special happenings in the classroom.

7. Educators, psychologists, and health professionals specify the health content of training programs for preparation of early childhood educators. It is suggested that training programs include: a) the teaching of positive health attitudes; b) how to make social, emotional and physical health a part of the child's daily environment; and c) knowledge of normal child development and how to view the normal aspects of all children including the handicapped.

8. School systems and universities develop educational opportunities for paraprofessionals involved in childhood education.

9. State boards of education develop certification standards for persons who work with children in day care programs so as the ensure that they are familiar with the total needs of the young child—physical, as well as psycho-social.

VII. New Directions in Parent Education

The need for resources for parents as well as for those young people approaching such an age was identified The objective of such parenting education would be the development of a healthy, nurturant, parent-child relationship which enhances the fulfillment of family life. It is recommended that

1 Early childhood educators plan ways to utilize effectively parental influence on the formulation of child behavior. Parents need to be involved in the educational programs for their preschool children so that they can provide reinforcement of program activities. Parents must be made much more aware of the impact which their modeling has on their children.

2 Community-based programs focus on parents in order to ease and facilitate parent-child interactions. Through meaningful parent-child relationship the child may learn at an early age how eventually to become a responsive parent

3 Health agencies provide early infant stimulation using specific personnel and materials to make home visits to families which request such services or are referred This service is a method of providing parents with activities they can perform with their infant which enhance growth and development and may improve the parent-child relationship.

4 Community mental health personnel provide services for families of infants and young children which focus on developmental guidance, parenting guidance, and family-child therapy as necessary. An ongoing research project at the Child Development Project at the University of Michigan Department of Psychiatry, Selma Fraiberg, director, is exploring methods

5 School systems develop programs in family living and education for parenthood in consultation with HEW s Office of Education program, Education for Parenting Such family health education should occur at all grade levels and should focus on how to function as a healthy family member Such a course of study should not be limited to one class in high school

6 Health professionals join with educators to promote education for parenthood through the schools as an appropriate, preventive measure to make students more aware of their current and future roles and responsibilities

VIII. Educational Opportunities in the Health Care Setting

The importance of the relationship between the family and the health care setting has not received adequate attention. The following focus on approaches for educational and effective intervention by members of the health care team. It is recommended that

1. Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) services be utilized for health education because they develop an awareness in the parent and child of the need for health information and further positive actions. It is an education for both parent and child. Such a health service and education program should be available to all families, particularly the working poor.

2. Health planners and citizens advocate publicly-supported health care which is not fragmented like current programs which include some family members and exclude others. Services must be made available to the total family. Health services should not be planned in a vacuum but should be coordinated to provide for the family's physical, social and emotional needs.

3. Health care providers and health educators develop more humanistic preventive health care in the public and private setting and improve methods of informing people of what treatment and care measures they must take for illness.

4. Pediatricians, family physicians, and their health care teams view the parent of the child as an integral member of the health care team because the parent is the implementer of prescribed actions. Health professionals should be supportive of the parent-child relationship.

5. Physicians and other members of the health care team should: a) recognize that the family has specific needs, b) make the family's experience in the health care system a positive one, c) and educate both child and parent about child health activities so the child can learn from the health care provider in the office and from the parent at home.

6. The health care system ensures that well-child medical supervision occurs on a minimum of once annually from age one to five, preferably every six months for families who need more guidance. Health supervision includes guidance and education individualized to the family.

IX. Role of the Media

Utilization of the mass media and citizen involvement in determing health topics and program content should be increased. It is recommended that:

1. Health educators employ the media for the promotion of preventive health measures.

2. The national media organizations and local affiliates give more attention to health programming for young children.

3. Health educators work with citizen groups to determine how to effect changes in local programming and publishing.

Appendix A: Conference Agenda

July 31

8:00 am Registration and Coffee

9:00 General Session

Welcome and Introduction to the Conference

9:15 Community and Professional Responsibility for Health Promotion in Early Childhood

10:15

10:45 A Systems View of Intervention and Its Implications for Promoting the Health of Young Children

11:45

1:30 pm

An Ecological Approach to Promoting Dental Health in Young Children

2:30 The Psychosocial Basis for Health Education of Young Children

3:30 Group

Group I
Anne Wells, Leader
Ruth Simon, Recorder

Group II
Mary Dabney, Leader
Mary LeDoux, Recorder

Group III
Max Robinson, Leader
Kathy Zahn, Recorder

Group IV
Dolores Mary, Leader
Jane Isbister, Recorder

5:00 Adjournment

6:30 Social Hour

7:30 Banquet

The Rushing Torrent of New Knowledge. Directions for Professional Education
Paul Saltman, Ph.D.
Associate Dean, Graduate Division
Director, Health and Medical Sciences Program
University of California, Berkeley

August 1

9:00 am General Session

Building Community Programs to Promote Child Health Through Multidisciplinary Teams
Beverly Watts, Dr. P.H.
Assistant Professor of Health Education
School of Public Health
University of Michigan

Discussion

10:00 Coffee and Discussion in Groups

12:00 Lunch

1:30 pm General Session

Current Directions in Early Childhood Education
Jane Schweinhart, PhD
Professor of Education
School of Education
University of Michigan

Discussion

2:30 **Conference Summary and Plans for Follow-up**
Scott K. Simonds, Dr. P.H.
Conference Director

3:00 Adjournment

Appendix B:
Conference Participants

Max Alderson
Michigan Dept of Public Health
3423 North Logan
Lansing, Michigan

Billie Anderson
Region II Community Action Agency
Box 1107
401 S Mechanic
Jackson, Michigan

Carolyn Arad ne
Child Development Project
201 East Catherine Street
Ann Arbor, Michigan

Merrily Baldwin
Cooperative Extension Service
P O Box 507
Roscommon, Michigan

Debra Barker
Washtenaw County Health Dept
City Hall
Ann Arbor, Michigan

Harvey Beaver, D D S
Michigan Dental Association
20630 Vernier
Harper Woods, Michigan

Diane K Bert
Parent Readiness Education Project
Redford Union Schools
18499 Beech Daly Road
Detroit, Michigan

Robert Blett
Kent County Health Department
1619 Walker NW
Grand Rapids, Michigan

Sylvia Blett
Kent County Health Dept
1619 Walker NW
Grand Rapids, Michigan

Karen Brantley
Shared Health Education Program
Metropolitan Hospital
1800 Tuxedo
Detroit, Michigan

Harriet Buck
Wayne-Westland
Early Childhood Education
4119 Hayes
Wayne, Michigan

James L Budd
Health Officer
City of Atlantic City
City Hall
Atlantic City, New Jersey

Pauline Carlyon
505 N Lake Shore Drive, Apt. 3609
Chicago, Illinois

Phyllis Cebula
Cooperative Extension Service
P O Box 550
Wayne, Michigan

Myriam Costabella
1700-9 Murfin
Ann Arbor, Michigan

Harry Dalsey
Shared Health Education Program
Metropolitan Hospital
1800 Tuxedo
Detroit, Michigan

Betty Dawson
Akron Health Department
Akron Ohio

Barbara Deisle
Washtenaw 4C
3550 Pittsview
Ann Arbor Michigan

Jean DeMoines
Oakland Livingston Human
Service Agency
196 Oakland Avenue
Pontiac Michigan

Elizabeth DeRath
Community Mental Health Board
300 N Washington Square
Lansing Michigan

Gladys Dillard
Child Care Coordinating Council
Wayne County
Herman Kiefer Complex
151 Taylor
Detroit Michigan

Dachrohi Djuph
536 S Forest #190
Ann Arbor Michigan

John A Doherty
Michigan Health Council
1407 S Harrison Road
East Lansing Michigan

Martha DuShaw
Troy School District
4173 Fieldbrook
Orchard Lake Michigan

Joseph G Dzenowagis Ph D
Michigan State University
Department of H P R
East Lansing, Michigan

Kyle Euckert
Community Mental Health Board
300 N Washington Square
Lansing Michigan

Pamella B Field
American Cancer Society
Kent County Unit
326 East Fulton
Grand Rapids Michigan

Jane M Flipping
Project Head Start
32 N Massachusetts Avenue
Atlantic City New Jersey

Don Friedricks
Livonia Public Schools
15125 Farmington Road
Livonia Michigan

Mae Geisler
Head Start
5084 Niagara
Wayne Michigan

Suzanne S Gilbert
1467 University Terrace, Apt 1313
Ann Arbor, Michigan

Joan M Goff
Wayne County
Department of Health
7442 Highview
Dearborn Heights, Michigan

Evelyn Griffin
Willow Run Community Schools
2171 East Michigan Avenue
Ypsilanti, Michigan

David Groves
Community Mental Health Board
300 N Washington Square
Lansing, Michigan

Donna Habenicht
Andrews University
Berrien Springs, Michigan

Herald Habenicht
Andrews University
Berrien Springs, Michigan

Frances Harmon
Model Cities Child Care
625 North Main
Ann Arbor, Michigan

Mary Claire Heffron
No. California Head Start
Resource Center
San Francisco State University
1600 Holloway
San Francisco, California

Carol Hillard
Livonia Public Schools
15125 Farmington Road
Livonia, Michigan

Anne E. Impellizzeri
Health and Welfare Division
Metropolitan Life Insurance
One Madison Avenue
New York, New York

Carol Jensen
Ingham County Health Department
Box 1406
Lansing, Michigan

Wanda Jubb
Department of Education
State of Michigan
Box 420
Lansing, Michigan

Barbara Kar
Washtenaw County Health
Department
County Building
Ann Arbor, Michigan

Jeanette Klemczak
Bureau of Maternal and Child Health
State of Michigan
17288 Bentle #17
Detroit, Michigan

Marland Koomsa
Chief, Health Education Branch
Indian Health Service
Department of Health, Education,
and Welfare
Parklawn Building
Rockville, Maryland

Mary Longe LeDuc
Region II Community Action
Box 4107
401 S. Mechanic
Jackson, Michigan

Dorothy Lesher
Dental Division
Michigan Dept. of Public Health
3500 North Logan Street
Lansing, Michigan

Mary S. Lewis
Dept. of Health, Educ., and Welfare
50 Fulton Street
San Francisco, California

Sarah Mack
Community United Head Start
2388 Unwin Road
Cleveland, Ohio

Faith Mainzer
Community Day Care and
Preschool Center, Inc.
1611 Westminster
Ann Arbor, Michigan

Dolores Malvitz, Dr. P.H.
Program in Dental Public Health
Universty of Michigan M5515
Ann Arbor, Michigan

Nellie Manley
Oakland Livingston Human
Service Agency
196 Oakland
Pontiac, Michigan

Gerri Matelski
Michigan Dental Association
230 N Washington
Lansing Michigan

Edwin J McClendon Ed D
School of Education
University of Michigan
Ann Arbor Michigan

Bill McDermott
Community Day Care and
Preschool Center Inc
1611 Westminster
Ann Arbor, Michigan

Beverly McGurk
Dept of Social Services
Roscommon County Building
Roscommon Michigan

Florine McNary
Office of Child Development
Room 107
Dept of Health Educ and Welfare
San Francisco California

Roger Mead D D S
Michigan Dental Association
3106 Swede
Midland Michigan

Joan F Meisenhelder
Child Care Coordinating Council
71 E Ferry Street
Detroit Michigan

Paula Meister
Head Start
32 N Massachusetts Avenue
Atlantic City New Jersey

Beverly Mercill
Michigan Heart Association
P O Box LV-160
Southfield Michigan

Judith R Miller
American Academy of Pediatrics
P O Box 2042
Seattle Washington

Rita E Miller
Ingham County Health Dept
6589 Cutler Road
DeWitt, Michigan

Faren Mitman
Akron Head Start Program
Akron Ohio

Dorothy N Moore
Hewitt Research Foundation
Box 179
Berrien Springs Michigan

Raymond Moore
Hewitt Research Foundation
Box 179
Berrien Springs, Michigan

Jane Morrison
Berrien County Health Department
1130 Salem
Benton Harbor, Michigan

Jane Osburn
Washtenaw County Health Dept.
County Building
Ann Arbor, Michigan

Cindy Quackenbush
Community Day Care and
Preschool Center, Inc
1611 Westminster
Ann Arbor, Michigan

Marianne Reinhalter
Little Red School House
2012 La Forge Road
Ypsilanti, Michigan

Norbert Reinstein
United Community Services
51 West Warren
Detroit, Michigan

Marian Roberts
Washtenaw County
Dept of Social Services
120 Catherine Street
Ann Arbor, Michigan

Barbara Robinson
Michigan Dental Association
1475 Ravenwood
Ann Arbor Michigan

Janice Ruff
Office of Health and Medical Affiars
Lewis Cass Building
Lansing Michigan

Jan Schumacher
Wayne-Westland
Early Childhood Education
26086 Continental Circle
Taylor Michigan

Steven Schwartz
Laidlaw Brothers
Thatcher and Madison
River Forest Illinois

Rebecca Sherman
American Academy of Pediatrics
Head Start Consultation Program
330 South Wells St Room 1022
Chicago, Illinois

Ruth Simon
Ingham County Health Department
403 West Greenlawn
Lansing, Michigan

Samuel Thorpe, D D S
Michigan HMO Plans Inc
660 Jones Street
Detroit Michigan

Susan Tober
Shared Health Education Program
Metropolitan Hospital
1800 Tuxedo Avenue
Detroit Michigan

Mike Trout
North Central Michigan
Mental Health Center
221 East Chapin
Cadillac, Michigan

Douglas Vilnius
Wayne County Health Department
Merriman Road
Eloise, Michigan

Judy Walker
Wayne-Westland
Early Childhood Education
627 Darwin
Westland, Michigan

Graham Ward
National High Blood Pressure
Education Program
National Institute of Health
Room 1105 Landow Building
Bethesda, Maryland

Shirley Ward
Out Wayne County Head Start
28515 Tavistock Trail
Southfield, Michigan

Donna Warner
College of Human Medicine
Michigan State University
B209 West Fee Hall
East Lansing, Michigan

Pat Watkins
Roscommon County Health Dept.
Roscommon County Building
Roscommon, Michigan

Mary Wehking
Little Red School House
2012 LaForge Road
Ypsilanti, Michigan

Winnie Willis
Maternal and Child Health Program
University of Michigan
School of Public Health
Ann Arbor, Michigan

Karen WoodBury
Maternal and Child Health Dept
University of Michigan
2410 Arrowwood Trail
Ann Arbor, Michigan

Beverly Wuckert
Region II Community Action Agency
Box 1107
401 S. Mechanic
Jackson, Michigan

Kathy Zavela
679 North Renaud
Grosse Pointe Woods, Michigan

Appendix C: Livonia Community Coordinating Council for Early Childhood Programs and Services—A Description

Introduction

The following is a statement of belief and purpose designed to serve as a guide to the organization and activities of a community-wide coordinating council for early childhood education during the preschool years. It was prepared by a small group of interested parents and professionals concerned with maintaining and improving the quality of public and private services to the preschool child and his parents in Livonia, Michigan.

Philosophy and Objectives

The development of the whole child, physically, socially, emotionally, and intellectually, is the foundation for all programs involving services to children of preschool age. These aspects of child development cannot be isolated or separated from each other if the full potential of every child is to be enhanced. The balanced development of each child also requires input and cooperation from specialists in every field.

During recent years, public concern for children's growth and development during the first five years of life has been growing steadily, reinforced by the results of research covering areas of nutrition, intellectual stimulation, sequential stages of development and learning. In addition, revolutionary changes in the structure of our society have made care for children outside the home a crucial component of community planning.

In Livonia, it is proposed that a community coordinating council for early childhood programs and services be established to share information, study common problems, support and strengthen existing programs, and act as a coalition for initiating actions where needed.

The Livonia Community Coordinating Council will be composed of an interdisciplinary group of professional child care workers, including agencies, the public schools, and private operators, as well as parents and interested citizens. The Council will bring together health, education, regulatory, and advocacy personnel in the area of children's services to share the perspective of their individual agencies as an integral part of a Livonia-based group of concerned parents and citizens. It will provide leadership in coordinating and developing a network of services to pre-

school children and parents using existing resources where possible that contribute to the development of the total child

Goals for our Council in an effort to meet the responding needs should be to

1. Involve parents, both as policy makers and resource consultants
2. Publicize programs and services now available
3. Assist in an overall assessment of the area to ascertain what is needed and wanted.
4. Share information about current legislation directly or indirectly influencing early childhood programs.
5. Assist in locating funds and other resources for early childhood programs
6. Raise public awareness of children's needs and rights
7. Involve existing child care centers, day care homes, public schools, federal educational programs, mental and physical health programs in a community-wide coalition to maximize the potential outreach to all preschool children and their parents

Summary

In summary the Livonia Community Coordinating Council for Early Childhood Programs and Services is structured to take an active role as a supportive and advisory consortium of interested persons and agencies to provide a number of alternative programs to meet the needs of all children and families within the specific area of Livonia.

It is the Council's function to see that emphasis during the early years is placed on the development of the total child rather than placed abnormally in the stimulation of one area over another, to see that maximum use is made of existing facilities through cooperative efforts, and to insure the involvement of parents