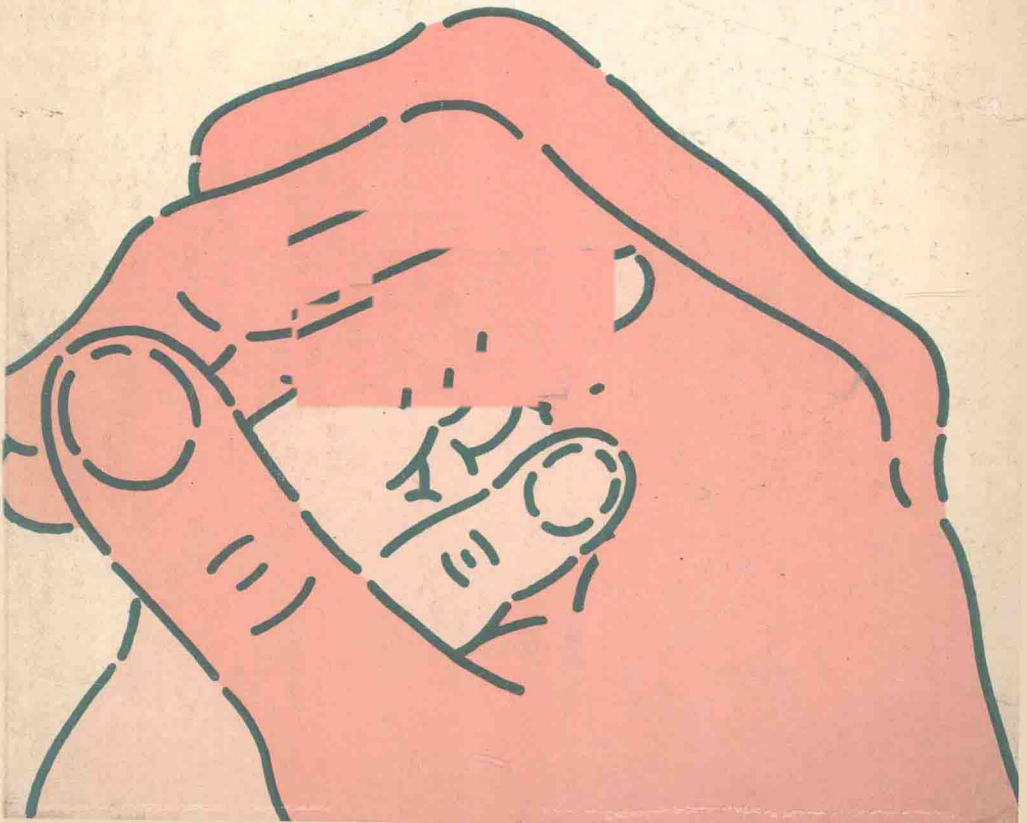
BASIC PEDIATRICS FOR THE PRIMARY HEALTH CARE PROVIDER

Catherine DeAngelis, M.D., R.N., M.P.H., F.A.A.P.



Basic Pediatrics for the Primary Health Care Provider

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This book is dedicated to the butterfly, who escapes the ugly cocoon to become a thing of beauty in flight; and to the bee, who also flies despite science which proves that she cannot; but especially to my parents who have taught me the importance of such things.

Preface

The common goal of all textbooks is to impart knowledge in a particular field. This textbook fulfills that function in a special way.

Several excellent pediatric textbooks now exist which contain a good deal of the material in this text and much more that is not in it. However, they have been written explicitly for and by physicians. This text has been written by a pediatrician who is also a nurse. Its goal is to impart *specific*, *pertinent* knowledge carefully selected from the broad field of pediatrics.

Its intended audience consists of nonphysicians who function as primary health care providers, in particular nurse practitioners and physician's assistants. In addition, medical students and interns may find much of the material a useful foundation on which to build a more sophisticated knowledge of pediatrics.

Certain areas, such as clinical nutrition, growth and development, and health education, are presented in depth. Whenever possible, physiological processes, behavior problems and diseases are explained from the developmental standpoint. Other, more esoteric areas are presented incompletely or have been omitted. The physiological rather than pathological aspects of common pediatric problems are emphasized. The material is organized into four general areas:

Part I involves data base material; i.e., history, physical examination, screening tests and the problem-oriented record. This includes data that will provide a general picture of the child's life from the health standpoint.

Part II involves therapy, nutrition, immunizations, diseases, and medications.

Part III discusses signs, symptoms, and diseases. Most material on diseases is organized by organ systems. There are however, three special

chapters on allergies: acute, benign, communicable (ABC) diseases; and streptococcal illnesses and complications.

Part IV considers problems of behavior, including those of childhood and adolescence.

References and selected readings for all parts have been chosen for their relevance to the primary practitioner's role. It is hoped that this textbook will be useful in the training of primary practitioners and will also serve as a reference work in the clinical setting.

Acknowledgments

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Dr. Frank DeCicco provided the medical artwork. The photographs are from Dr. Bertram Grebin's slide collection. Drs. Russell Asnes, Richard Behrman, John Bryant, Susan Gordon and Bertram Grebin, my colleagues at Babies Hospital, provided invaluable moral support for the final draft. The frontispiece was painted by Anita Lorenzo.

The second draft was used as a textbook for the first pediatric nurse practitioner class at Columbia. The following contributed enthusiasm and many suggestions that expedited the revision of the final draft: Phyllis Autotte, Ellyn Bell, Ivy Buchanan, Doris Conner, Margaret Healy, Mary Jones, Nancy Jones, Carol Pafundi, Helen Place and Daisy Scully.

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C. DeA.
New York

Introduction

THE PEDIATRIC PRIMARY HEALTH CARE PROVIDER (THE PRIMARY PRACTITIONER)

The deficiencies of health services for children have been documented repeatedly. A few of the more obvious results of these deficiencies include the following: among twenty advanced nations of the world, the United States ranks fourteenth in infant mortality;[1] approximately one-half of American children in the 1- to 4-year age group have not completed basic immunizations and in urban poverty areas 40% to 50% of children have received no immunizations;[2] health facilities and personnel are nonexistent or barely evident in many sections of our country, especially those inhabited by the poor; and the discrepancy in morbidity and mortality of poor versus nonpoor children is dramatic.[3]

Many of the problems relating to these health provision deficiencies have to do with health manpower. They involve insufficient numbers of qualified personnel to provide health care,[4] maldistribution of personnel by specialties and geographic location[5] and inefficient utilization of existing personnel and facilities.[6]

Several mechanisms have been implemented recently to alleviate the health manpower problems. They include programs to increase the number of medical schools and numbers of medical students in existing schools; the revamping of physician training programs to give greater credibility to nonspecialized and preventive care; development of the National Health Service Corps of physicians to provide care in understaffed areas; and the training of nonphysicians to provide primary health care.

The last-mentioned programs provide the possibility of educating

large numbers of qualified individuals who are oriented specifically toward general care, are willing to live and work in geographic areas presently lacking health personnel and who will free the physician to perform functions requiring the more sophisticated knowledge and training that only he or she possesses.

WHO PROVIDES PRIMARY CARE?

PHYSICIANS

By tradition, the physician is essentially responsible for all *medical* care for children, utilizing the assistance of nurses, social service workers, nutritionists and others in secondary roles. But the medical profession has been changing under the necessity of delivering care based on evolving scientific and techological advances. The emphasis has been toward specialization; at the end of 1971, only 19.2% of the 344,825 physicians in the United States were involved in general practice.[1] This trend toward specialization may be offset somewhat by the increasing emphasis now placed on general and family practitioners. However, it is not likely that enough generalist physicians will be available to provide good health care for *all* American children. In addition, this arrangement would not be economically sound in our present system.

NONPHYSICIANS

The two major types of nonphysician primary health care providers are the physician's assistant or the family nurse practitioner, whose duty is the provision of health care for all age levels, and the pediatric nurse practitioner, whose duty is the provision of health care for children.

PHYSICIANS' ASSISTANTS (P.A.'S)

The concept of the physician's assistant has been extensively reviewed by Sadler et al.;[7] much of the information presented here derives from their work. Essentially the concept of the physician's assistant derives from the belief that many tasks traditionally performed by a physician can be assumed with equal competence by an individual with much less training. The role of the P.A. is a direct extension of that of the physician. Training programs involve preparation for performing medical procedures that do not require the skill

of a physician. Consequently, the physician is free to spend more time caring for patients whose problems require a more sophisticated knowledge of medicine. Most P.A.'s have been military corpsmen and some are registered nurses.

The first physician's assistant program was developed in 1965 at Duke University by Dr. Eugene Stead. The concept has become very popular, and there are now at least 80 P.A. programs in various stages of development. The training period ranges from the four-month health assistant programs, through the fifteen-month MEDEX program, to the two-year physician's associate and the orthopedic assistant programs.

As of July 1972, 24 states had legislation providing for certification and regulation of physician's assistants. In almost every state, the regulatory power lies with the state medical board. All states require supervision of the P.A. by a physician and many imply that a physician, rather than an institution, shall be the employer.[8]

The physician who employs a P.A. may be a generalist or specialist. The P.A. works with him in the office, clinic, patient's home, hospital, operating room or any other medical setting. The physician can delegate any procedure that he feels the individual P.A. is competent to perform. Many if not most P.A.'s are presently employed by specialists because the pay scales are significantly higher than those offered in neighborhood health clinics.[7] However, some P.A.'s work with general practitioners and pediatricians in settings where they are responsible for primary health care of children.

NURSE PRACTITIONERS

The concept of the nurse practitioner probably originated in the roles assumed of necessity by public health nurses and frontier nurses. Impetus to expand the roles of many more nurses has come from many sources. In 1963, a report of the Surgeon General's Consultant group on nursing suggested the baccalaureate level as the minimum educational level required for nurses to assume leadership. In 1964, the Nurse Training Act provided monetary backing for collegiate nursing education. In 1965, the American Nurses' Association position paper "Educational Preparation for Nurse Practitioners and Assistants to Nurses" divided nurses into two categories: *technical* nurses, including practical nurses, graduates of the three-year diploma programs and the two-year associate degree programs; and *professional* nurses, those with a minimum of a baccalaureate degree.

An unfortunate side-effect of this categorization is that only 15% of the 700,000 nurses now practicing in the United States qualify as "professionals."[10] This "nonprofessionalism" issue combined with the general dissatisfaction with their traditional roles has stimulated many nurses to seek advanced education. However, many nurses with baccalaureate degrees still have not found satisfaction in their roles and are also pursuing more fulfilling means of practicing nursing.

Further impetus for expanding the roles of nurses came from the medical profession. In the mid-1960s the American Medical Association discussed plans to specially train 100,000 nurses to assume an expanded role as physician's assistants. It officially adopted a proposal to do so in June 1970, but the proposal was rejected by the nursing hierarchy who believed it to be a unilateral decision and an attempt to meet the physician shortage by compounding the nursing shortage.[9] However, a joint American Nurses' Association and American Medical Association practice commission was formed to resolve the conflicting opinions and establish optimum working relationships. It was evident that cooperative efforts of both professions are essential for good health care provision.

In 1971, the pediatric nurse practitioner or associate concept was formally adopted by a joint agreement between the American Nurses' Association and the American Academy of Pediatrics.[11] This cooperative venture resulted from the work initiated by individuals like Dr. Henry Silver, who established the first formal training program for pediatric nurse practitioners in Denver in 1967.[12] As the value of nurse practitioners becomes more and more evident, the number of training programs increases. In July 1973, 56 such programs were included in the American Nurses' Association and American Academy of Pediatrics' cumulative listing.

WHAT IS THE ROLE OF THE PEDIATRIC PRIMARY HEALTH CARE PROVIDER?

The pediatric primary health care provider is a key member of a coordinated health team. Good health care involves a wide range of skills from the relatively simple task of teaching a mother the essentials of infant feeding to the complex performance of brain surgery. Consequently no one individual can feasibly meet all the health care demands of our complex society. Therefore the team concept be-

comes imperative. A pediatric health team might include physicians (including generalists and specialists), nurse practitioners, physicians' assistants, social service workers, nutritionists, health aides, community agency representatives or any other individuals whose contribution to the team would provide better health care for children.

The primary health care provider is the team member who first evaluates the child by interviewing, performs an appropriate physical examination, arranges for laboratory screening tests, immunizes, provides health education, refers the child to other team members when appropriate and assists the child and family in understanding the recommendations and treatment advised. When the primary practitioner is a nonphysician, only children with minor illnesses can be treated. Others must be referred to a physician.

The final, and vastly important, function of a primary practitioner is to assist the child and family in coping. To paraphrase Webster, coping means struggling with a problem on fairly even terms with some hope of success. Coping with health problems includes managing acute problems, like a fever, which can be alleviated with relative ease. It also includes managing long-term or chronic problems for which there is no solution, so-called learning to live with it.

SOME PROBLEMS OF THE TEAM APPROACH

The multidisciplinary team requires the cooperation of all its members, even if the "team" does not function in the same physical environment. Some problems have already become evident; they have evolved primarily from misunderstanding of roles and inexperience with the relatively new health providers. They include:

1. Some physicians view nurse practitioners as *mini-doctors* whereas the nurse practitioners view themselves as *nurses* with expanded roles. The problem may be in part semantic; however, a mutual understanding of function is essential before an acceptable working relationship can be established.

2. The salary differential between nurses, nurse practitioners, physicians' assistants and physicians must be established. Ideally, each team member should receive a salary that is commensurate with his relative input. The patient, in turn, should be charged a fee commensurate with the care received and the cost of the provider who rendered the care.

3. The placement of the nurse practitioner and the physician's assistant in the health team hierarchy has caused no small flurry; For example, the controversy over whether a nurse is legally or ethically bound to carry out an order written by a physician's assistant acting as a direct extension of a physician.

4. Several medical and legal questions affect nurse practitioners and physician's assistants providing health care. Exactly what functions can be performed without the direct supervision of a physician? What *is* direct supervision? Must the physician be in the same room? The same building? How much treatment can be rendered by standing orders? What kind of licensure or certification should be effected?

These and other problems that are certain to become manifest must be evaluated and resolved. This will require flexible, mutually acceptable and expeditious management. In essence, the successful provision of health care lies in the resourcefulness and conscientious effort each individual on the health team is willing to expend to share in the skills and knowledge of all members of the team so the best possible health care can be available to all children.

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